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Automated Report

Technical Report for

Arcadis

National Grid, Philly Coke, Philadelphia, PA

B0036790.0001.00002

SGS Job Number: JC86406

Sampling Date: 04/15/19

Report to:

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Syracuse, NY 13202
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ATTN: John Brussel

Total number of pages in report: **2068**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Mike Earp
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July 15, 2019

Mr. John Brussel
Arcadis U. S.
1 Lincoln Center,
110 West Fayette Street Suite 300
Syracuse, NY 13202

RE: SGS – Dayton, Job # JC86406 – Reissues

Dear Mr. Brussel,

The final report for SGS job number JC86406 has been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached.

Specifically, the Method Detection Limiting has been reporting to meet project's requirement. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc.

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SGS North America Inc.

Sample Summary

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC86406-1	04/15/19	10:55	EG	04/16/19	SO	Soil	S-108(2-4)
JC86406-2	04/15/19	11:05	EG	04/16/19	SO	Soil	S-108(8-10)
JC86406-3	04/15/19	11:20	EG	04/16/19	SO	Soil	S-108(15-17)
JC86406-4	04/15/19	00:00	EG	04/16/19	SO	Soil	SO-DUP-0415
JC86406-5	04/15/19	12:15	EG	04/16/19	SO	Soil	PCTP-17R(5-6)
JC86406-6	04/15/19	12:20	EG	04/16/19	SO	Soil	PCTP-17R(7-9)
JC86406-7	04/15/19	12:30	EG	04/16/19	SO	Soil	PCTP-17R(9-11)
JC86406-8	04/15/19	12:45	EG	04/16/19	SO	Soil	PCTP-17R(18-20)
JC86406-9	04/15/19	13:05	EG	04/16/19	SO	Soil	PCTP-17R(24-25)
JC86406-10	04/15/19	13:45	EG	04/16/19	SO	Soil	S-114(2-4)
JC86406-10D	04/15/19	13:45	EG	04/16/19	SO	Soil Dup/MSD	S-114(2-4)
JC86406-10S	04/15/19	13:45	EG	04/16/19	SO	Soil Matrix Spike	S-114(2-4)
JC86406-11	04/15/19	13:55	EG	04/16/19	SO	Soil	S-114(8-10)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC86406-12	04/15/19	14:00	EG	04/16/19	SO	Soil	S-114(14-15)
JC86406-13	04/15/19	14:10	EG	04/16/19	SO	Soil	S-114(23-25)
JC86406-14	04/15/19	15:20	EG	04/16/19	SO	Soil	S-109(2-4)
JC86406-15	04/15/19	15:30	EG	04/16/19	SO	Soil	S-109(8-10)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Arcadis	**Job No**	JC86406
Site:	National Grid, Philly Coke, Philadelphia, PA	**Report Date**	4/30/2019 4:48:51 PM

On 04/16/2019, 15 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC86406 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: SO **Batch ID:** V3V1778

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-10MS, JC86406-10MSD were used as the QC samples indicated.
- JC86406-1: Confirmation run.
- JC86406-14: Confirmation run.
- JC86406-14 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- JC86406-1 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- JC86406-2 for Cyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-2 for Methylcyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-10 for Cyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-6 for Cyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-11 for Methylcyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-6 for Methylcyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-11 for Cyclohexane: Associated CCV outside of control limits high, sample was ND.
- JC86406-10 for Methylcyclohexane: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VD10643

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC86424-5MS, JC86424-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Toluene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC86406-8: Diluted due to high concentration of non-target compound.
- JC86406-8 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC86406-8 for Acetone: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VD10644

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-3MS, JC86406-3MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for 1,2-Dibromoethane are outside control limits. High percent recoveries and no associated positive reported in the QC batch.

MS Volatiles By Method SW846 8260C

Matrix: SO **Batch ID:** VD10644

- Matrix Spike Duplicate Recovery(s) for Carbon disulfide are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike Recovery(s) for Carbon disulfide are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC86406-12: Diluted due to high concentration of non-target compound.
- JC86406-5: Diluted due to high concentration of non-target compound.
- JC86406-1: Confirmation run.
- JC86406-3: Diluted due to high concentration of non-target compound.
- JC86406-14: Confirmation run.
- JC86406-12 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC86406-3 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC86406-12 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.
- JC86406-5 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC86406-5 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.

Matrix: SO **Batch ID:** VI9093

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86863-3MS, JC86863-1DUP were used as the QC samples indicated.
- Blank Spike Recovery(s) for 1,2-Dibromoethane are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- RPD(s) for Duplicate for Acetone are outside control limits for sample JC86863-1DUP. Outside control limits due to sample non-homogeneity.
- JC86406-1 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- JC86406-14 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.
- JC86406-1 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.
- JC86406-4 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.

Matrix: SO **Batch ID:** VY8016

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86717-12MS, JC86717-12MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 1,2-Dichlorobenzene, 1,4-Dichlorobenzene are outside control limits. Outside control limits due to matrix interference.
- JC86406-9 for Freon 113: Associated CCV outside of control limits high, sample was ND.
- JC86406-15 for 1,1,2,2-Tetrachloroethane: Associated CCV outside of control limits low.
- JC86406-15 for Freon 113: Associated CCV outside of control limits high, sample was ND.
- JC86406-13 for Freon 113: Associated CCV outside of control limits high, sample was ND.
- JC86406-9 for 1,1,2,2-Tetrachloroethane: Associated CCV outside of control limits low.
- JC86406-7 for Freon 113: Associated CCV outside of control limits high, sample was ND.
- JC86406-13 for 1,1,2,2-Tetrachloroethane: Associated CCV outside of control limits low.
- JC86406-7 for 1,1,2,2-Tetrachloroethane: Associated CCV outside of control limits low.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO **Batch ID:** OP19810

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-1MS, JC86406-1MSD were used as the QC samples indicated.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Chrysene, Pyrene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC86406-12: Dilution required due to viscosity of the extract matrix.
- JC86406-12 for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JC86406-12 for 2,4-Dimethylphenol: Associated CCV outside of control limits high. Estimated value, due to corresponding internal standard failing low.
- JC86406-12 for 4-Chloro-3-methyl phenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-12 for Phenol-d5: Outside control limits due to dilution.
- JC86406-12 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC86406-14 for Dibenzo(a,h)anthracene: Associated CCV outside of control limits high.
- JC86406-14 for Indeno(1,2,3-cd)pyrene: Associated CCV outside of control limits high.
- JC86406-14 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC86406-14 for 2-Fluorophenol: Outside control limits due to dilution.
- JC86406-14 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC86406-14 for Phenol-d5: Outside control limits due to dilution.
- JC86406-3 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC86406-12 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC86406-12 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC86406-12 for 2-Fluorophenol: Outside control limits due to dilution.
- JC86406-6 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-11 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC86406-4 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-5 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC86406-2 for 2,4-Dimethylphenol: Associated CCV outside of control limits high.
- JC86406-5 for Indeno(1,2,3-cd)pyrene: Associated CCV outside of control limits high.
- JC86406-5 for Benzo(g,h,i)perylene: Associated CCV outside of control limits high.
- JC86406-3 for Terphenyl-d14: Outside control limits due to dilution.
- JC86406-3 for Phenol-d5: Outside control limits due to dilution.
- JC86406-15 for Dibenzo(a,h)anthracene: Associated CCV outside of control limits high.
- JC86406-13 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-14 for Benzo(g,h,i)perylene: Associated CCV outside of control limits high.
- JC86406-7 for 2,4-Dimethylphenol: Associated CCV outside of control limits high.
- JC86406-9 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-5 for 2-Fluorophenol: Outside control limits due to dilution.
- JC86406-15 for 2,4-Dimethylphenol: Associated CCV outside of control limits high.
- JC86406-15 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86406-14 for 2,4-Dimethylphenol: Associated CCV outside of control limits high.
- JC86406-11 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO **Batch ID:** OP19810

- JC86406-12 for Terphenyl-d14: Outside control limits due to dilution.
- JC86406-3 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-5 for Terphenyl-d14: Outside control limits due to dilution.
- JC86406-8 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-15 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86406-5 for Phenol-d5: Outside control limits due to dilution.
- JC86406-5 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC86406-3 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC86406-1 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-15 for Indeno(1,2,3-cd)pyrene: Associated CCV outside of control limits high.
- JC86406-3 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC86406-3 for 2-Fluorophenol: Outside control limits due to dilution.
- JC86406-15 for 4-Chloro-3-methyl phenol: Associated CCV outside of control limits high, sample was ND.
- JC86406-5 for 2,4,6-Tribromophenol: Outside control limits due to dilution.

Matrix: SO **Batch ID:** OP19854

- All samples were extracted within the recommended method holding time.
- Sample(s) JC86406-10MS, JC86406-10MSD were used as the QC samples indicated.
- Sample(s) JC86406-10 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.
- JC86406-10 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86406-10 for Hexachlorocyclopentadiene: Associated CCV outside of control limits high, sample was ND.
- JC86406-10 for 4,6-Dinitro-o-cresol: Associated CCV outside of control limits high, sample was ND.
- JC86406-10 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP14400

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-10MSD, JC86406-10PS, JC86406-10SDL, JC86406-10MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Calcium, Lead, Manganese are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Calcium, Lead, Manganese are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Aluminum are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for Serial Dilution for Antimony, Cadmium, Selenium, Silver are outside control limits for sample MP14400-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JC86406-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP14400-SD1 for Arsenic: Serial dilution indicates possible matrix interference.
- MP14400-SD1 for Iron: Serial dilution indicates possible matrix interference.
- MP14400-SD1 for Sodium: Serial dilution indicates possible matrix interference.
- JC86406-2 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Cobalt: Elevated detection limit due to dilution required for high interfering element.
- MP14400-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- JC86406-6 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Antimony: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Beryllium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC86406-2 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC86406-11 for Chromium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC86406-6 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JC86406-5 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC86406-11 for Manganese: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 6010D

Matrix:	SO	Batch ID:	MP14400

- JC86406-5 for Selenium: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 7471B

Matrix:	SO	Batch ID:	MP14302

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-14MSD, JC86406-14MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix:	SO	Batch ID:	GN94285

- Sample(s) JC86406-1DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 9012B/LACHAT

Matrix:	SO	Batch ID:	GP20864

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86406-10DUP, JC86406-10MS, JC86406-11MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC86406-1	**S-108(2-4)**					
Acetone		127	16	8.0	ug/kg	SW846 8260C
Benzene		1.7	0.80	0.60	ug/kg	SW846 8260C
Carbon disulfide		6.3	3.2	1.5	ug/kg	SW846 8260C
Methylcyclohexane		1.3 J	3.2	1.1	ug/kg	SW846 8260C
3&4-Methylphenol		102	77	31	ug/kg	SW846 8270D
Phenol		92.2	77	20	ug/kg	SW846 8270D
Acenaphthene		129	38	13	ug/kg	SW846 8270D
Acenaphthylene		1730	38	19	ug/kg	SW846 8270D
Acetophenone		22.8 J	190	8.2	ug/kg	SW846 8270D
Anthracene		1400	38	23	ug/kg	SW846 8270D
Benzo(a)anthracene		6470	190	54	ug/kg	SW846 8270D
Benzo(a)pyrene		6750	190	87	ug/kg	SW846 8270D
Benzo(b)fluoranthene		9740	190	85	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		2490	38	19	ug/kg	SW846 8270D
Benzo(k)fluoranthene		3390	190	89	ug/kg	SW846 8270D
1,1'-Biphenyl		70.1 J	77	5.2	ug/kg	SW846 8270D
Carbazole		358	77	5.6	ug/kg	SW846 8270D
Chrysene		7770	190	60	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		1230	38	17	ug/kg	SW846 8270D
Dibenzofuran		267	77	16	ug/kg	SW846 8270D
Fluoranthene		8090	190	85	ug/kg	SW846 8270D
Fluorene		243	38	18	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		2730	38	18	ug/kg	SW846 8270D
2-Methylnaphthalene		236	38	8.7	ug/kg	SW846 8270D
Naphthalene		968	38	11	ug/kg	SW846 8270D
Phenanthrene		3410	38	13	ug/kg	SW846 8270D
Pyrene		7990	190	61	ug/kg	SW846 8270D
Aluminum		35000	120	19	mg/kg	SW846 6010D
Arsenic [a]		11.9	4.6	0.65	mg/kg	SW846 6010D
Barium		65.7	23	2.2	mg/kg	SW846 6010D
Beryllium		0.72	0.23	0.093	mg/kg	SW846 6010D
Calcium		2080	580	51	mg/kg	SW846 6010D
Chromium		51.6	1.2	0.43	mg/kg	SW846 6010D
Cobalt		5.0 J	5.8	0.33	mg/kg	SW846 6010D
Copper [a]		13.5	5.8	2.0	mg/kg	SW846 6010D
Iron		38100	120	45	mg/kg	SW846 6010D
Lead [a]		13.9	4.6	0.95	mg/kg	SW846 6010D
Magnesium		1420	580	16	mg/kg	SW846 6010D
Manganese [a]		83.7	3.5	0.95	mg/kg	SW846 6010D
Mercury		0.023 J	0.037	0.016	mg/kg	SW846 7471B
Nickel		13.4	4.6	0.41	mg/kg	SW846 6010D
Potassium		1190 J	1200	37	mg/kg	SW846 6010D
Sodium		126 J	1200	90	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vanadium		66.6	5.8	0.22	mg/kg	SW846 6010D
Zinc		44.0	5.8	2.7	mg/kg	SW846 6010D
Cyanide		10.8	0.26	0.13	mg/kg	SW846 9012B/LACHAT
JC86406-2	**S-108(8-10)**					
Acetone		32.4	7.0	3.5	ug/kg	SW846 8260C
Benzene		3.4	0.35	0.26	ug/kg	SW846 8260C
Carbon disulfide		1.4	1.4	0.65	ug/kg	SW846 8260C
Toluene		0.32 J	0.70	0.26	ug/kg	SW846 8260C
2,4-Dimethylphenol [b]		121 J	200	71	ug/kg	SW846 8270D
2-Methylphenol		194	79	25	ug/kg	SW846 8270D
3&4-Methylphenol		945	79	33	ug/kg	SW846 8270D
Phenol		1370	79	21	ug/kg	SW846 8270D
Acenaphthene		1040	40	14	ug/kg	SW846 8270D
Acenaphthylene		185	40	20	ug/kg	SW846 8270D
Anthracene		573	40	24	ug/kg	SW846 8270D
Benzo(a)anthracene		168	40	11	ug/kg	SW846 8270D
Benzo(a)pyrene		151	40	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene		192	40	18	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		105	40	20	ug/kg	SW846 8270D
Benzo(k)fluoranthene		63.2	40	19	ug/kg	SW846 8270D
1,1'-Biphenyl		93.9	79	5.4	ug/kg	SW846 8270D
Carbazole		671	79	5.8	ug/kg	SW846 8270D
Chrysene		199	40	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		25.5 J	40	18	ug/kg	SW846 8270D
Dibenzofuran		357	79	16	ug/kg	SW846 8270D
Fluoranthene		414	40	18	ug/kg	SW846 8270D
Fluorene		589	40	18	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		84.0	40	19	ug/kg	SW846 8270D
2-Methylnaphthalene		295	40	9.0	ug/kg	SW846 8270D
Naphthalene		3820	40	11	ug/kg	SW846 8270D
Phenanthrene		576	40	13	ug/kg	SW846 8270D
Pyrene		447	40	13	ug/kg	SW846 8270D
Aluminum		23000	62	9.9	mg/kg	SW846 6010D
Arsenic [a]		9.0	4.9	0.69	mg/kg	SW846 6010D
Barium		75.9	25	2.3	mg/kg	SW846 6010D
Beryllium		0.75	0.25	0.099	mg/kg	SW846 6010D
Cadmium		0.099 J	0.62	0.086	mg/kg	SW846 6010D
Calcium		1300	620	54	mg/kg	SW846 6010D
Chromium		32.9	1.2	0.46	mg/kg	SW846 6010D
Cobalt		7.6	6.2	0.35	mg/kg	SW846 6010D
Copper [a]		14.1	6.2	2.1	mg/kg	SW846 6010D
Iron		27900	120	47	mg/kg	SW846 6010D
Lead [a]		38.1	4.9	1.0	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		2290	620	17	mg/kg	SW846 6010D
Manganese [a]		201	3.7	1.0	mg/kg	SW846 6010D
Mercury		2.6	0.20	0.086	mg/kg	SW846 7471B
Nickel		15.1	4.9	0.43	mg/kg	SW846 6010D
Potassium		1440	1200	39	mg/kg	SW846 6010D
Vanadium		46.1	6.2	0.23	mg/kg	SW846 6010D
Zinc		63.4	6.2	2.8	mg/kg	SW846 6010D
Cyanide		3.3	0.28	0.14	mg/kg	SW846 9012B/LACHAT
JC86406-3	**S-108(15-17)**					
Benzene [c]		196	130	100	ug/kg	SW846 8260C
Carbon disulfide [c]		51000	540	250	ug/kg	SW846 8260C
Ethylbenzene [c]		3100	270	150	ug/kg	SW846 8260C
Isopropylbenzene [c]		2410	540	190	ug/kg	SW846 8260C
Methyl Acetate [c]		3140	1300	370	ug/kg	SW846 8260C
Methylcyclohexane [c]		466 J	540	190	ug/kg	SW846 8260C
Toluene [c]		1250	270	100	ug/kg	SW846 8260C
m,p-Xylene [c]		2990	270	200	ug/kg	SW846 8260C
o-Xylene [c]		3880	270	160	ug/kg	SW846 8260C
Xylene (total) [c]		6870	270	160	ug/kg	SW846 8260C
2-Methylphenol		37.3 J	110	37	ug/kg	SW846 8270D
3&4-Methylphenol		339	110	47	ug/kg	SW846 8270D
Phenol		132	110	30	ug/kg	SW846 8270D
Acenaphthene		93500	5700	2000	ug/kg	SW846 8270D
Acenaphthylene		1930	57	29	ug/kg	SW846 8270D
Anthracene		49600	5700	3500	ug/kg	SW846 8270D
Benzo(a)anthracene		18400	5700	1600	ug/kg	SW846 8270D
Benzo(a)pyrene		10800	5700	2600	ug/kg	SW846 8270D
Benzo(b)fluoranthene		10800	5700	2500	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		1530	57	29	ug/kg	SW846 8270D
Benzo(k)fluoranthene		1700	57	27	ug/kg	SW846 8270D
1,1'-Biphenyl		19100	11000	780	ug/kg	SW846 8270D
Carbazole		12100	11000	830	ug/kg	SW846 8270D
Chrysene		19400	5700	1800	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		552	57	25	ug/kg	SW846 8270D
Dibenzofuran		53000	11000	2300	ug/kg	SW846 8270D
Fluoranthene		77200	5700	2500	ug/kg	SW846 8270D
Fluorene		81200	5700	2600	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1420	57	27	ug/kg	SW846 8270D
2-Methylnaphthalene		140000	5700	1300	ug/kg	SW846 8270D
Naphthalene		325000	5700	1600	ug/kg	SW846 8270D
Phenanthrene		223000	5700	1900	ug/kg	SW846 8270D
Pyrene		61100	5700	1800	ug/kg	SW846 8270D
Aluminum		11600	85	14	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic		6.1	3.4	0.48	mg/kg	SW846 6010D
Barium		46.6	34	3.2	mg/kg	SW846 6010D
Beryllium		0.53	0.34	0.14	mg/kg	SW846 6010D
Cadmium		0.15 J	0.85	0.12	mg/kg	SW846 6010D
Calcium		714 J	850	75	mg/kg	SW846 6010D
Chromium		19.6	1.7	0.63	mg/kg	SW846 6010D
Cobalt		4.9 J	8.5	0.48	mg/kg	SW846 6010D
Copper		12.6	4.3	1.4	mg/kg	SW846 6010D
Iron		17900	85	33	mg/kg	SW846 6010D
Lead		45.4	3.4	0.70	mg/kg	SW846 6010D
Magnesium		2060	850	23	mg/kg	SW846 6010D
Manganese		156	2.6	0.70	mg/kg	SW846 6010D
Mercury		1.7	0.10	0.045	mg/kg	SW846 7471B
Nickel		11.7	6.8	0.60	mg/kg	SW846 6010D
Potassium		961 J	1700	54	mg/kg	SW846 6010D
Vanadium		24.8	8.5	0.32	mg/kg	SW846 6010D
Zinc		55.1	8.5	3.9	mg/kg	SW846 6010D
Cyanide		9.6	0.41	0.20	mg/kg	SW846 9012B/LACHAT
JC86406-4	**SO-DUP-0415**					
Acetone		12.5 J	15	7.7	ug/kg	SW846 8260C
Benzene		2.0	0.77	0.58	ug/kg	SW846 8260C
Carbon disulfide		5.2	3.1	1.4	ug/kg	SW846 8260C
Methylcyclohexane		1.9 J	3.1	1.1	ug/kg	SW846 8260C
3&4-Methylphenol		117	74	30	ug/kg	SW846 8270D
Phenol		122	74	19	ug/kg	SW846 8270D
Acenaphthene		106	37	13	ug/kg	SW846 8270D
Acenaphthylene		1430	37	19	ug/kg	SW846 8270D
Anthracene		1200	37	23	ug/kg	SW846 8270D
Benzo(a)anthracene		5670	190	52	ug/kg	SW846 8270D
Benzo(a)pyrene		6020	190	84	ug/kg	SW846 8270D
Benzo(b)fluoranthene		8590	190	82	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		2110	37	19	ug/kg	SW846 8270D
Benzo(k)fluoranthene		1910	37	17	ug/kg	SW846 8270D
1,1'-Biphenyl		71.1 J	74	5.1	ug/kg	SW846 8270D
Carbazole		271	74	5.4	ug/kg	SW846 8270D
Chrysene		6710	190	58	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		1060	37	16	ug/kg	SW846 8270D
Dibenzofuran		242	74	15	ug/kg	SW846 8270D
Fluoranthene		6690	190	83	ug/kg	SW846 8270D
Fluorene		192	37	17	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		2300	37	17	ug/kg	SW846 8270D
2-Methylnaphthalene		246	37	8.4	ug/kg	SW846 8270D
Naphthalene		1230	37	10	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
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Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Phenanthrene		2620	37	12	ug/kg	SW846 8270D
Pyrene		6700	190	59	ug/kg	SW846 8270D
Aluminum		9710	57	9.2	mg/kg	SW846 6010D
Arsenic		6.5	2.3	0.32	mg/kg	SW846 6010D
Barium		43.9	23	2.2	mg/kg	SW846 6010D
Beryllium		0.51	0.23	0.091	mg/kg	SW846 6010D
Cadmium		1.2	0.57	0.080	mg/kg	SW846 6010D
Calcium		644	570	50	mg/kg	SW846 6010D
Chromium		14.6	1.1	0.42	mg/kg	SW846 6010D
Cobalt		7.4	5.7	0.32	mg/kg	SW846 6010D
Copper		13.2	2.9	0.96	mg/kg	SW846 6010D
Iron		16600	57	22	mg/kg	SW846 6010D
Lead		32.1	2.3	0.47	mg/kg	SW846 6010D
Magnesium		1950	570	16	mg/kg	SW846 6010D
Manganese		261	1.7	0.47	mg/kg	SW846 6010D
Mercury		0.31	0.035	0.016	mg/kg	SW846 7471B
Nickel		11.9	4.6	0.40	mg/kg	SW846 6010D
Potassium		1070 J	1100	36	mg/kg	SW846 6010D
Sodium		139 J	1100	89	mg/kg	SW846 6010D
Vanadium		20.1	5.7	0.22	mg/kg	SW846 6010D
Zinc		51.0	5.7	2.6	mg/kg	SW846 6010D
Cyanide		12.7	0.26	0.13	mg/kg	SW846 9012B/LACHAT
JC86406-5	**PCTP-17R(5-6)**					
Benzene [c]		1230	390	300	ug/kg	SW846 8260C
Toluene [c]		1650	790	300	ug/kg	SW846 8260C
m,p-Xylene [c]		3880	790	590	ug/kg	SW846 8260C
o-Xylene [c]		1740	790	460	ug/kg	SW846 8260C
Xylene (total) [c]		5620	790	460	ug/kg	SW846 8260C
2,4-Dimethylphenol		2270	910	320	ug/kg	SW846 8270D
2-Methylphenol		1650	73	23	ug/kg	SW846 8270D
3&4-Methylphenol		4700	360	150	ug/kg	SW846 8270D
Phenol		2790	73	19	ug/kg	SW846 8270D
Acenaphthene		4550	180	63	ug/kg	SW846 8270D
Acenaphthylene		29600	3600	1800	ug/kg	SW846 8270D
Anthracene		67800	3600	2200	ug/kg	SW846 8270D
Benzo(a)anthracene		57200	3600	1000	ug/kg	SW846 8270D
Benzo(a)pyrene		41100	3600	1700	ug/kg	SW846 8270D
Benzo(b)fluoranthene		49000	3600	1600	ug/kg	SW846 8270D
Benzo(g,h,i)perylene [b]		20500	3600	1800	ug/kg	SW846 8270D
Benzo(k)fluoranthene		18900	3600	1700	ug/kg	SW846 8270D
1,1'-Biphenyl		8640	360	25	ug/kg	SW846 8270D
Carbazole		28800	7300	530	ug/kg	SW846 8270D
Chrysene		48000	3600	1100	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Dibenzo(a,h)anthracene	6990	180	80	ug/kg	SW846 8270D
Dibenzofuran	49900	7300	1500	ug/kg	SW846 8270D
Fluoranthene	138000	3600	1600	ug/kg	SW846 8270D
Fluorene	77200	3600	1700	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]	22000	3600	1700	ug/kg	SW846 8270D
2-Methylnaphthalene	56200	3600	820	ug/kg	SW846 8270D
Naphthalene	146000	3600	1000	ug/kg	SW846 8270D
Phenanthrene	219000	3600	1200	ug/kg	SW846 8270D
Pyrene	95600	3600	1200	ug/kg	SW846 8270D
Aluminum	7830	57	9.2	mg/kg	SW846 6010D
Arsenic [a]	5.8	4.6	0.64	mg/kg	SW846 6010D
Barium	23.5	23	2.2	mg/kg	SW846 6010D
Beryllium	0.31	0.23	0.091	mg/kg	SW846 6010D
Calcium	176 J	570	50	mg/kg	SW846 6010D
Chromium	17.3	1.1	0.42	mg/kg	SW846 6010D
Cobalt	4.2 J	5.7	0.32	mg/kg	SW846 6010D
Copper [a]	19.3	5.7	1.9	mg/kg	SW846 6010D
Iron	33600	110	44	mg/kg	SW846 6010D
Lead [a]	6.6	4.6	0.94	mg/kg	SW846 6010D
Magnesium	1720	570	16	mg/kg	SW846 6010D
Manganese [a]	102	3.4	0.94	mg/kg	SW846 6010D
Mercury	0.46	0.036	0.016	mg/kg	SW846 7471B
Nickel	20.3	4.6	0.40	mg/kg	SW846 6010D
Potassium	813 J	1100	36	mg/kg	SW846 6010D
Vanadium	19.8	5.7	0.22	mg/kg	SW846 6010D
Zinc	28.0	5.7	2.6	mg/kg	SW846 6010D
Cyanide	8.3	0.25	0.13	mg/kg	SW846 9012B/LACHAT
JC86406-6 PCTP-17R(7-9)					
Acetone	40.7	8.5	4.3	ug/kg	SW846 8260C
2-Butanone (MEK)	3.3 J	8.5	3.2	ug/kg	SW846 8260C
Benzo(a)anthracene	26.4 J	36	10	ug/kg	SW846 8270D
Benzo(a)pyrene	28.0 J	36	16	ug/kg	SW846 8270D
Benzo(b)fluoranthene	34.1 J	36	16	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	20.3 J	36	18	ug/kg	SW846 8270D
1,1'-Biphenyl	5.4 J	72	4.9	ug/kg	SW846 8270D
Carbazole	7.9 J	72	5.2	ug/kg	SW846 8270D
Chrysene	27.6 J	36	11	ug/kg	SW846 8270D
Fluoranthene	36.2	36	16	ug/kg	SW846 8270D
2-Methylnaphthalene	14.5 J	36	8.1	ug/kg	SW846 8270D
Naphthalene	38.0	36	10	ug/kg	SW846 8270D
Phenanthrene	63.0	36	12	ug/kg	SW846 8270D
Pyrene	30.2 J	36	12	ug/kg	SW846 8270D
Aluminum	17400	56	9.0	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic [a]		2.9 J	4.5	0.63	mg/kg	SW846 6010D
Barium		120	22	2.1	mg/kg	SW846 6010D
Beryllium [a]		0.80	0.45	0.18	mg/kg	SW846 6010D
Calcium		1950	560	50	mg/kg	SW846 6010D
Chromium		27.3	1.1	0.42	mg/kg	SW846 6010D
Cobalt [a]		11.7	11	0.63	mg/kg	SW846 6010D
Copper [a]		16.6	5.6	1.9	mg/kg	SW846 6010D
Iron		23600	110	43	mg/kg	SW846 6010D
Lead [a]		9.1	4.5	0.92	mg/kg	SW846 6010D
Magnesium		10600	560	15	mg/kg	SW846 6010D
Manganese [a]		427	3.4	0.92	mg/kg	SW846 6010D
Mercury		0.038	0.033	0.014	mg/kg	SW846 7471B
Nickel		25.4	4.5	0.39	mg/kg	SW846 6010D
Potassium		9760	1100	36	mg/kg	SW846 6010D
Silver [a]		0.61 J	1.1	0.38	mg/kg	SW846 6010D
Sodium		272 J	1100	87	mg/kg	SW846 6010D
Vanadium		33.2	5.6	0.21	mg/kg	SW846 6010D
Zinc		73.8	5.6	2.6	mg/kg	SW846 6010D
Cyanide		0.58	0.24	0.12	mg/kg	SW846 9012B/LACHAT
JC86406-7	**PCTP-17R(9-11)**					
Acetone		119	19	9.5	ug/kg	SW846 8260C
Benzene		1.9	0.95	0.72	ug/kg	SW846 8260C
2-Butanone (MEK)		15.7 J	19	7.1	ug/kg	SW846 8260C
Carbon disulfide		4.8	3.8	1.8	ug/kg	SW846 8260C
Methylcyclohexane		1.3 J	3.8	1.3	ug/kg	SW846 8260C
2,4-Dimethylphenol [b]		145 J	280	100	ug/kg	SW846 8270D
2-Methylphenol		215	110	36	ug/kg	SW846 8270D
3&4-Methylphenol		664	110	47	ug/kg	SW846 8270D
Phenol		540	110	30	ug/kg	SW846 8270D
Acenaphthene		239	57	20	ug/kg	SW846 8270D
Acenaphthylene		102	57	29	ug/kg	SW846 8270D
Anthracene		721	57	35	ug/kg	SW846 8270D
Benzo(a)anthracene		409	57	16	ug/kg	SW846 8270D
Benzo(a)pyrene		449	57	26	ug/kg	SW846 8270D
Benzo(b)fluoranthene		505	57	25	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		289	57	28	ug/kg	SW846 8270D
Benzo(k)fluoranthene		206	57	27	ug/kg	SW846 8270D
1,1'-Biphenyl		61.7 J	110	7.8	ug/kg	SW846 8270D
Benzaldehyde		55.6 J	280	14	ug/kg	SW846 8270D
Carbazole		113	110	8.3	ug/kg	SW846 8270D
Chrysene		527	57	18	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		67.7	57	25	ug/kg	SW846 8270D
Dibenzofuran		158	110	23	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluoranthene		767	57	25	ug/kg	SW846 8270D
Fluorene		190	57	26	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		247	57	27	ug/kg	SW846 8270D
2-Methylnaphthalene		205	57	13	ug/kg	SW846 8270D
Naphthalene		652	57	16	ug/kg	SW846 8270D
Phenanthrene		1010	57	19	ug/kg	SW846 8270D
Pyrene		807	57	18	ug/kg	SW846 8270D
Aluminum		12100	89	14	mg/kg	SW846 6010D
Arsenic		7.5	3.6	0.50	mg/kg	SW846 6010D
Barium		62.4	36	3.4	mg/kg	SW846 6010D
Beryllium		0.71	0.36	0.14	mg/kg	SW846 6010D
Cadmium		0.18 J	0.89	0.12	mg/kg	SW846 6010D
Calcium		1250	890	79	mg/kg	SW846 6010D
Chromium		22.2	1.8	0.66	mg/kg	SW846 6010D
Cobalt		9.2	8.9	0.50	mg/kg	SW846 6010D
Copper		27.9	4.5	1.5	mg/kg	SW846 6010D
Iron		23000	89	34	mg/kg	SW846 6010D
Lead		40.9	3.6	0.73	mg/kg	SW846 6010D
Magnesium		3190	890	24	mg/kg	SW846 6010D
Manganese		374	2.7	0.73	mg/kg	SW846 6010D
Mercury		3.0	0.28	0.12	mg/kg	SW846 7471B
Nickel		17.2	7.1	0.62	mg/kg	SW846 6010D
Potassium		1320 J	1800	57	mg/kg	SW846 6010D
Sodium		409 J	1800	140	mg/kg	SW846 6010D
Vanadium		26.2	8.9	0.34	mg/kg	SW846 6010D
Zinc		111	8.9	4.1	mg/kg	SW846 6010D
Cyanide		9.5	0.43	0.21	mg/kg	SW846 9012B/LACHAT
JC86406-8	**PCTP-17R(18-20)**					
Carbon disulfide [c]		7250	550	250	ug/kg	SW846 8260C
Isopropylbenzene [c]		353 J	550	190	ug/kg	SW846 8260C
Methyl Acetate [c]		2900	1400	380	ug/kg	SW846 8260C
Methylcyclohexane [c]		1210	550	190	ug/kg	SW846 8260C
Toluene [c]		1070	270	100	ug/kg	SW846 8260C
m,p-Xylene [c]		248 J	270	200	ug/kg	SW846 8260C
o-Xylene [c]		173 J	270	160	ug/kg	SW846 8260C
Xylene (total) [c]		421	270	160	ug/kg	SW846 8260C
3&4-Methylphenol		319	120	50	ug/kg	SW846 8270D
Acenaphthene		1760	60	21	ug/kg	SW846 8270D
Acenaphthylene		237	60	31	ug/kg	SW846 8270D
Anthracene		919	60	37	ug/kg	SW846 8270D
Benzo(a)anthracene		884	60	17	ug/kg	SW846 8270D
Benzo(a)pyrene		799	60	27	ug/kg	SW846 8270D
Benzo(b)fluoranthene		809	60	27	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(g,h,i)perylene		354	60	30	ug/kg	SW846 8270D
Benzo(k)fluoranthene		259	60	28	ug/kg	SW846 8270D
1,1'-Biphenyl		79.3 J	120	8.3	ug/kg	SW846 8270D
Carbazole		42.0 J	120	8.8	ug/kg	SW846 8270D
Chrysene		1250	60	19	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		97.6	60	27	ug/kg	SW846 8270D
Dibenzofuran		197	120	25	ug/kg	SW846 8270D
Fluoranthene		2190	60	27	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		269	60	28	ug/kg	SW846 8270D
2-Methylnaphthalene		467	60	14	ug/kg	SW846 8270D
Naphthalene		991	60	17	ug/kg	SW846 8270D
Phenanthrene		4230	60	20	ug/kg	SW846 8270D
Pyrene		2390	60	19	ug/kg	SW846 8270D
Aluminum		14400	92	15	mg/kg	SW846 6010D
Arsenic		14.6	3.7	0.52	mg/kg	SW846 6010D
Barium		312	37	3.5	mg/kg	SW846 6010D
Beryllium		0.61	0.37	0.15	mg/kg	SW846 6010D
Cadmium		0.87 J	0.92	0.13	mg/kg	SW846 6010D
Calcium		2910	920	82	mg/kg	SW846 6010D
Chromium		32.5	1.8	0.68	mg/kg	SW846 6010D
Cobalt		7.2 J	9.2	0.52	mg/kg	SW846 6010D
Copper		288	4.6	1.6	mg/kg	SW846 6010D
Iron		27800	92	35	mg/kg	SW846 6010D
Lead		697	3.7	0.76	mg/kg	SW846 6010D
Magnesium		2530	920	25	mg/kg	SW846 6010D
Manganese		204	2.8	0.76	mg/kg	SW846 6010D
Mercury		1.3	0.056	0.024	mg/kg	SW846 7471B
Nickel		22.7	7.4	0.65	mg/kg	SW846 6010D
Potassium		1170 J	1800	59	mg/kg	SW846 6010D
Silver		0.66 J	0.92	0.31	mg/kg	SW846 6010D
Sodium		589 J	1800	140	mg/kg	SW846 6010D
Vanadium		70.6	9.2	0.35	mg/kg	SW846 6010D
Zinc		448	9.2	4.2	mg/kg	SW846 6010D
Cyanide		3.0	0.41	0.21	mg/kg	SW846 9012B/LACHAT
JC86406-9	**PCTP-17R(24-25)**					
Acetone		495	30	15	ug/kg	SW846 8260C
2-Butanone (MEK)		117	30	11	ug/kg	SW846 8260C
Carbon disulfide		5.0 J	5.9	2.8	ug/kg	SW846 8260C
Methylcyclohexane		5.3 J	5.9	2.1	ug/kg	SW846 8260C
Acenaphthene		105	63	22	ug/kg	SW846 8270D
Anthracene		55.9 J	63	39	ug/kg	SW846 8270D
Benzo(a)anthracene		31.4 J	63	18	ug/kg	SW846 8270D
1,1'-Biphenyl		17.0 J	130	8.7	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Carbazole		21.8 J	130	9.2	ug/kg	SW846 8270D
Chrysene		31.4 J	63	20	ug/kg	SW846 8270D
Dibenzofuran		41.7 J	130	26	ug/kg	SW846 8270D
Fluoranthene		67.1	63	28	ug/kg	SW846 8270D
Fluorene		76.2	63	29	ug/kg	SW846 8270D
2-Methylnaphthalene		74.2	63	14	ug/kg	SW846 8270D
Naphthalene		149	63	18	ug/kg	SW846 8270D
Phenanthrene		232	63	21	ug/kg	SW846 8270D
Pyrene		68.0	63	20	ug/kg	SW846 8270D
Aluminum		11800	92	15	mg/kg	SW846 6010D
Arsenic		7.6	3.7	0.52	mg/kg	SW846 6010D
Barium		41.7	37	3.5	mg/kg	SW846 6010D
Beryllium		0.68	0.37	0.15	mg/kg	SW846 6010D
Calcium		1060	920	81	mg/kg	SW846 6010D
Chromium		18.9	1.8	0.68	mg/kg	SW846 6010D
Cobalt		12.3	9.2	0.52	mg/kg	SW846 6010D
Copper		16.6	4.6	1.5	mg/kg	SW846 6010D
Iron		22600	92	35	mg/kg	SW846 6010D
Lead		18.3	3.7	0.76	mg/kg	SW846 6010D
Magnesium		3180	920	25	mg/kg	SW846 6010D
Manganese		493	2.8	0.76	mg/kg	SW846 6010D
Mercury		0.057	0.056	0.024	mg/kg	SW846 7471B
Nickel		18.5	7.4	0.64	mg/kg	SW846 6010D
Potassium		1410 J	1800	59	mg/kg	SW846 6010D
Vanadium		24.4	9.2	0.35	mg/kg	SW846 6010D
Zinc		57.6	9.2	4.2	mg/kg	SW846 6010D
Cyanide		1.5	0.41	0.20	mg/kg	SW846 9012B/LACHAT
JC86406-10	**S-114(2-4)**					
Acetone		28.1	12	5.9	ug/kg	SW846 8260C
Acenaphthene		52.7	38	13	ug/kg	SW846 8270D
Acenaphthylene		46.6	38	19	ug/kg	SW846 8270D
Anthracene		205	38	23	ug/kg	SW846 8270D
Benzo(a)anthracene		549	38	11	ug/kg	SW846 8270D
Benzo(a)pyrene		565	38	17	ug/kg	SW846 8270D
Benzo(b)fluoranthene		664	38	17	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		351	38	19	ug/kg	SW846 8270D
Benzo(k)fluoranthene		228	38	18	ug/kg	SW846 8270D
1,1'-Biphenyl		6.0 JB	76	5.2	ug/kg	SW846 8270D
Carbazole		45.4 JB	76	5.5	ug/kg	SW846 8270D
Chrysene		544	38	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		78.6	38	17	ug/kg	SW846 8270D
Dibenzofuran		25.8 J	76	15	ug/kg	SW846 8270D
Fluoranthene		1190	38	17	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluorene		58.0	38	17	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		341	38	18	ug/kg	SW846 8270D
2-Methylnaphthalene		10.9 J	38	8.6	ug/kg	SW846 8270D
Naphthalene		19.7 J	38	11	ug/kg	SW846 8270D
Phenanthrene		827	38	13	ug/kg	SW846 8270D
Pyrene		1080	38	12	ug/kg	SW846 8270D
Aluminum		12200	57	9.2	mg/kg	SW846 6010D
Arsenic		7.0	2.3	0.32	mg/kg	SW846 6010D
Barium		76.0	23	2.2	mg/kg	SW846 6010D
Beryllium		0.75	0.23	0.092	mg/kg	SW846 6010D
Cadmium		0.18 J	0.57	0.080	mg/kg	SW846 6010D
Calcium		6050	570	51	mg/kg	SW846 6010D
Chromium		21.4	1.1	0.42	mg/kg	SW846 6010D
Cobalt		5.0 J	5.7	0.32	mg/kg	SW846 6010D
Copper		18.1	2.9	0.96	mg/kg	SW846 6010D
Iron		15700	57	22	mg/kg	SW846 6010D
Lead		193	2.3	0.47	mg/kg	SW846 6010D
Magnesium		2330	570	16	mg/kg	SW846 6010D
Manganese		160	1.7	0.47	mg/kg	SW846 6010D
Mercury		0.57	0.038	0.017	mg/kg	SW846 7471B
Nickel		10.6	4.6	0.40	mg/kg	SW846 6010D
Potassium		1210	1100	36	mg/kg	SW846 6010D
Selenium		1.2 J	2.3	0.75	mg/kg	SW846 6010D
Sodium		98.2 J	1100	89	mg/kg	SW846 6010D
Vanadium		25.0	5.7	0.22	mg/kg	SW846 6010D
Zinc		80.7	5.7	2.6	mg/kg	SW846 6010D
JC86406-11	**S-114(8-10)**					
Acetone		70.3	14	7.1	ug/kg	SW846 8260C
2-Butanone (MEK)		13.7 J	14	5.3	ug/kg	SW846 8260C
3&4-Methylphenol		152	97	40	ug/kg	SW846 8270D
Acenaphthene		17200	970	330	ug/kg	SW846 8270D
Acenaphthylene		10500	970	490	ug/kg	SW846 8270D
Anthracene		23200	970	590	ug/kg	SW846 8270D
Benzo(a)anthracene		25900	970	270	ug/kg	SW846 8270D
Benzo(a)pyrene		23700	970	440	ug/kg	SW846 8270D
Benzo(b)fluoranthene		24900	970	430	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		13600	970	480	ug/kg	SW846 8270D
Benzo(k)fluoranthene		9920	970	450	ug/kg	SW846 8270D
1,1'-Biphenyl		525	97	6.6	ug/kg	SW846 8270D
Carbazole		6910	1900	140	ug/kg	SW846 8270D
Chrysene		22500	970	300	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		2280	48	21	ug/kg	SW846 8270D
Dibenzofuran		13600	1900	390	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluoranthene		72700	970	430	ug/kg	SW846 8270D
Fluorene		24700	970	440	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		14800	970	450	ug/kg	SW846 8270D
2-Methylnaphthalene		327	48	11	ug/kg	SW846 8270D
Naphthalene		1180	48	14	ug/kg	SW846 8270D
Phenanthrene		39700	970	330	ug/kg	SW846 8270D
Pyrene		56400	970	310	ug/kg	SW846 8270D
Aluminum		11700	76	12	mg/kg	SW846 6010D
Arsenic		6.9	3.0	0.42	mg/kg	SW846 6010D
Barium		42.0	30	2.9	mg/kg	SW846 6010D
Beryllium		0.59	0.30	0.12	mg/kg	SW846 6010D
Calcium		645 J	760	67	mg/kg	SW846 6010D
Chromium [a]		19.5	1.5	0.56	mg/kg	SW846 6010D
Cobalt		8.2	7.6	0.42	mg/kg	SW846 6010D
Copper		13.8	3.8	1.3	mg/kg	SW846 6010D
Iron		20000	76	29	mg/kg	SW846 6010D
Lead		14.8	3.0	0.62	mg/kg	SW846 6010D
Magnesium		2430	760	21	mg/kg	SW846 6010D
Manganese [a]		335	2.3	0.62	mg/kg	SW846 6010D
Mercury		0.81	0.047	0.021	mg/kg	SW846 7471B
Nickel		14.7	6.1	0.53	mg/kg	SW846 6010D
Potassium		1090 J	1500	48	mg/kg	SW846 6010D
Vanadium		24.6	7.6	0.29	mg/kg	SW846 6010D
Zinc		45.1	7.6	3.5	mg/kg	SW846 6010D
Cyanide		0.59	0.37	0.19	mg/kg	SW846 9012B/LACHAT
JC86406-12	**S-114(14-15)**					
Benzene [c]		20800	1200	890	ug/kg	SW846 8260C
Carbon disulfide [c]		5260	4700	2200	ug/kg	SW846 8260C
Ethylbenzene [c]		1950 J	2400	1300	ug/kg	SW846 8260C
Styrene [c]		5570	4700	1400	ug/kg	SW846 8260C
Toluene [c]		26600	2400	890	ug/kg	SW846 8260C
m,p-Xylene [c]		37000	2400	1800	ug/kg	SW846 8260C
o-Xylene [c]		12400	2400	1400	ug/kg	SW846 8260C
Xylene (total) [c]		49400	2400	1400	ug/kg	SW846 8260C
2,4-Dimethylphenol [d]		10700	2200	770	ug/kg	SW846 8270D
2-Methylphenol [e]		818 J	870	280	ug/kg	SW846 8270D
3&4-Methylphenol [e]		1750	870	360	ug/kg	SW846 8270D
Phenol [e]		771 J	870	230	ug/kg	SW846 8270D
Acenaphthene		253000	4300	1500	ug/kg	SW846 8270D
Acenaphthylene		425000	4300	2200	ug/kg	SW846 8270D
Anthracene		580000	43000	27000	ug/kg	SW846 8270D
Benzo(a)anthracene		428000	43000	12000	ug/kg	SW846 8270D
Benzo(a)pyrene		396000	4300	2000	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(b)fluoranthene		430000	43000	19000	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		188000	4300	2200	ug/kg	SW846 8270D
Benzo(k)fluoranthene		172000	43000	20000	ug/kg	SW846 8270D
1,1'-Biphenyl		132000	8700	590	ug/kg	SW846 8270D
Carbazole		277000	8700	630	ug/kg	SW846 8270D
Chrysene		435000	43000	14000	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		61300	4300	1900	ug/kg	SW846 8270D
Dibenzofuran		546000	87000	18000	ug/kg	SW846 8270D
Fluoranthene		1210000	43000	19000	ug/kg	SW846 8270D
Fluorene		821000	43000	20000	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		180000	4300	2000	ug/kg	SW846 8270D
2-Methylnaphthalene		499000	43000	9800	ug/kg	SW846 8270D
Naphthalene		3010000	43000	12000	ug/kg	SW846 8270D
Phenanthrene		2340000	43000	15000	ug/kg	SW846 8270D
Pyrene		859000	43000	14000	ug/kg	SW846 8270D
Aluminum		10800	69	11	mg/kg	SW846 6010D
Arsenic		7.0	2.7	0.38	mg/kg	SW846 6010D
Barium		24.7 J	27	2.6	mg/kg	SW846 6010D
Beryllium		0.55	0.27	0.11	mg/kg	SW846 6010D
Calcium		178 J	690	61	mg/kg	SW846 6010D
Chromium		16.8	1.4	0.51	mg/kg	SW846 6010D
Cobalt		9.1	6.9	0.38	mg/kg	SW846 6010D
Copper		13.2	3.4	1.2	mg/kg	SW846 6010D
Iron		21100	69	26	mg/kg	SW846 6010D
Lead		9.2	2.7	0.56	mg/kg	SW846 6010D
Magnesium		2150	690	19	mg/kg	SW846 6010D
Manganese		150	2.1	0.56	mg/kg	SW846 6010D
Mercury		1.7	0.20	0.088	mg/kg	SW846 7471B
Nickel		14.7	5.5	0.48	mg/kg	SW846 6010D
Potassium		954 J	1400	44	mg/kg	SW846 6010D
Sodium		162 J	1400	110	mg/kg	SW846 6010D
Vanadium		21.9	6.9	0.26	mg/kg	SW846 6010D
Zinc		38.4	6.9	3.2	mg/kg	SW846 6010D
Cyanide		12.1	0.30	0.15	mg/kg	SW846 9012B/LACHAT
JC86406-13	**S-114(23-25)**					
Acetone		213	17	8.6	ug/kg	SW846 8260C
Benzene		0.84 J	0.86	0.65	ug/kg	SW846 8260C
2-Butanone (MEK)		62.6	17	6.4	ug/kg	SW846 8260C
Carbon disulfide		5.6	3.4	1.6	ug/kg	SW846 8260C
Isopropylbenzene		2.5 J	3.4	1.2	ug/kg	SW846 8260C
Methylcyclohexane		2.3 J	3.4	1.2	ug/kg	SW846 8260C
Toluene		1.5 J	1.7	0.65	ug/kg	SW846 8260C
o-Xylene		1.3 J	1.7	1.0	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Xylene (total)	1.3 J	1.7	1.0	ug/kg	SW846 8260C
3&4-Methylphenol	909	110	44	ug/kg	SW846 8270D
Phenol	223	110	28	ug/kg	SW846 8270D
Benzo(a)anthracene	15.9 J	54	15	ug/kg	SW846 8270D
Benzaldehyde	103 J	270	13	ug/kg	SW846 8270D
Fluoranthene	27.2 J	54	24	ug/kg	SW846 8270D
Fluorene	32.5 J	54	25	ug/kg	SW846 8270D
2-Methylnaphthalene	23.4 J	54	12	ug/kg	SW846 8270D
Naphthalene	136	54	15	ug/kg	SW846 8270D
Phenanthrene	65.8	54	18	ug/kg	SW846 8270D
Pyrene	22.8 J	54	17	ug/kg	SW846 8270D
Aluminum	14700	89	14	mg/kg	SW846 6010D
Arsenic	8.3	3.6	0.50	mg/kg	SW846 6010D
Barium	45.6	36	3.4	mg/kg	SW846 6010D
Beryllium	0.69	0.36	0.14	mg/kg	SW846 6010D
Calcium	3380	890	79	mg/kg	SW846 6010D
Chromium	27.5	1.8	0.66	mg/kg	SW846 6010D
Cobalt	9.7	8.9	0.50	mg/kg	SW846 6010D
Copper	16.9	4.4	1.5	mg/kg	SW846 6010D
Iron	26700	89	34	mg/kg	SW846 6010D
Lead	14.3	3.6	0.73	mg/kg	SW846 6010D
Magnesium	3360	890	24	mg/kg	SW846 6010D
Manganese	259	2.7	0.73	mg/kg	SW846 6010D
Mercury	0.029 J	0.055	0.024	mg/kg	SW846 7471B
Nickel	19.7	7.1	0.62	mg/kg	SW846 6010D
Potassium	1460 J	1800	57	mg/kg	SW846 6010D
Sodium	201 J	1800	140	mg/kg	SW846 6010D
Vanadium	30.8	8.9	0.34	mg/kg	SW846 6010D
Zinc	55.6	8.9	4.1	mg/kg	SW846 6010D
Cyanide	4.6	0.41	0.20	mg/kg	SW846 9012B/LACHAT
JC86406-14 S-109(2-4)					
Acetone	37.9	19	9.5	ug/kg	SW846 8260C
Benzene	0.86 J	0.95	0.71	ug/kg	SW846 8260C
Carbon disulfide	4.9	3.8	1.8	ug/kg	SW846 8260C
Methylcyclohexane	1.6 J	3.8	1.3	ug/kg	SW846 8260C
2,4-Dimethylphenol [b]	77.2 J	190	67	ug/kg	SW846 8270D
2-Methylphenol	133	75	24	ug/kg	SW846 8270D
3&4-Methylphenol	538	75	31	ug/kg	SW846 8270D
Phenol	635	75	20	ug/kg	SW846 8270D
Acenaphthene	427	37	13	ug/kg	SW846 8270D
Acenaphthylene	10900	750	380	ug/kg	SW846 8270D
Anthracene	13400	750	460	ug/kg	SW846 8270D
Benzo(a)anthracene	40500	750	210	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(a)pyrene		36300	750	340	ug/kg	SW846 8270D
Benzo(b)fluoranthene		49000	750	330	ug/kg	SW846 8270D
Benzo(g,h,i)perylene [b]		22000	750	370	ug/kg	SW846 8270D
Benzo(k)fluoranthene		21100	750	350	ug/kg	SW846 8270D
1,1'-Biphenyl		438	75	5.1	ug/kg	SW846 8270D
Carbazole		3160	75	5.4	ug/kg	SW846 8270D
Chrysene		39700	750	240	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene [b]		5350	750	330	ug/kg	SW846 8270D
Dibenzofuran		4190	1500	300	ug/kg	SW846 8270D
Fluoranthene		73200	1900	840	ug/kg	SW846 8270D
Fluorene		6440	750	340	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]		23400	750	350	ug/kg	SW846 8270D
2-Methylnaphthalene		1200	37	8.5	ug/kg	SW846 8270D
Naphthalene		1910	37	11	ug/kg	SW846 8270D
Phenanthrene		46500	750	250	ug/kg	SW846 8270D
Pyrene		69000	750	240	ug/kg	SW846 8270D
Aluminum		8650	57	9.1	mg/kg	SW846 6010D
Arsenic		5.3	2.3	0.32	mg/kg	SW846 6010D
Barium		33.8	23	2.2	mg/kg	SW846 6010D
Beryllium		0.50	0.23	0.091	mg/kg	SW846 6010D
Calcium		792	570	50	mg/kg	SW846 6010D
Chromium		13.9	1.1	0.42	mg/kg	SW846 6010D
Cobalt		3.6 J	5.7	0.32	mg/kg	SW846 6010D
Copper		8.9	2.8	0.95	mg/kg	SW846 6010D
Iron		12700	57	22	mg/kg	SW846 6010D
Lead		23.3	2.3	0.47	mg/kg	SW846 6010D
Magnesium		1330	570	16	mg/kg	SW846 6010D
Manganese		91.5	1.7	0.47	mg/kg	SW846 6010D
Mercury		0.13	0.037	0.016	mg/kg	SW846 7471B
Nickel		8.1	4.5	0.40	mg/kg	SW846 6010D
Potassium		540 J	1100	36	mg/kg	SW846 6010D
Sodium		157 J	1100	88	mg/kg	SW846 6010D
Vanadium		16.6	5.7	0.22	mg/kg	SW846 6010D
Zinc		31.2	5.7	2.6	mg/kg	SW846 6010D
Cyanide		5.5	0.28	0.14	mg/kg	SW846 9012B/LACHAT
JC86406-15	**S-109(8-10)**					
Acetone		138	16	8.1	ug/kg	SW846 8260C
Benzene		3.5	0.81	0.61	ug/kg	SW846 8260C
Carbon disulfide		4.1	3.2	1.5	ug/kg	SW846 8260C
2,4-Dimethylphenol [b]		71.3 J	190	69	ug/kg	SW846 8270D
2-Methylphenol		122	77	25	ug/kg	SW846 8270D
3&4-Methylphenol		378	77	32	ug/kg	SW846 8270D
Phenol		299	77	20	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Acenaphthene		324	39	13	ug/kg	SW846 8270D
Acenaphthylene		488	39	20	ug/kg	SW846 8270D
Acetophenone		11.1 J	190	8.3	ug/kg	SW846 8270D
Anthracene		636	39	24	ug/kg	SW846 8270D
Benzo(a)anthracene		1600	39	11	ug/kg	SW846 8270D
Benzo(a)pyrene		1720	39	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene		2270	39	17	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		1260	39	19	ug/kg	SW846 8270D
Benzo(k)fluoranthene		772	39	18	ug/kg	SW846 8270D
1,1'-Biphenyl		75.9 J	77	5.3	ug/kg	SW846 8270D
Carbazole		163	77	5.6	ug/kg	SW846 8270D
Chrysene		1830	39	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene [b]		415	39	17	ug/kg	SW846 8270D
Dibenzofuran		371	77	16	ug/kg	SW846 8270D
Fluoranthene		3040	39	17	ug/kg	SW846 8270D
Fluorene		314	39	18	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]		1110	39	18	ug/kg	SW846 8270D
2-Methylnaphthalene		194	39	8.7	ug/kg	SW846 8270D
Naphthalene		1060	39	11	ug/kg	SW846 8270D
Phenanthrene		1820	39	13	ug/kg	SW846 8270D
Pyrene		2320	39	12	ug/kg	SW846 8270D
Aluminum		11400	62	10	mg/kg	SW846 6010D
Arsenic		11.0	2.5	0.35	mg/kg	SW846 6010D
Barium		126	25	2.4	mg/kg	SW846 6010D
Beryllium		1.8	0.25	0.10	mg/kg	SW846 6010D
Cadmium		1.1	0.62	0.087	mg/kg	SW846 6010D
Calcium		24300	620	55	mg/kg	SW846 6010D
Chromium		44.5	1.2	0.46	mg/kg	SW846 6010D
Cobalt		8.9	6.2	0.35	mg/kg	SW846 6010D
Copper		75.6	3.1	1.0	mg/kg	SW846 6010D
Iron		19900	62	24	mg/kg	SW846 6010D
Lead		147	2.5	0.51	mg/kg	SW846 6010D
Magnesium		5920	620	17	mg/kg	SW846 6010D
Manganese		359	1.9	0.51	mg/kg	SW846 6010D
Mercury		0.19	0.037	0.016	mg/kg	SW846 7471B
Nickel		19.4	5.0	0.44	mg/kg	SW846 6010D
Potassium		1150 J	1200	40	mg/kg	SW846 6010D
Selenium		2.0 J	2.5	0.81	mg/kg	SW846 6010D
Sodium		722 J	1200	97	mg/kg	SW846 6010D
Vanadium		25.8	6.2	0.24	mg/kg	SW846 6010D
Zinc		335	6.2	2.9	mg/kg	SW846 6010D
Cyanide		17.5	0.32	0.16	mg/kg	SW846 9012B/LACHAT

(a) Elevated detection limit due to dilution required for high interfering element.
(b) Associated CCV outside of control limits high.

Summary of Hits

Job Number: JC86406
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/15/19

Lab Sample ID	Client Sample ID	Result/				
Analyte		Qual	RL	MDL	Units	Method

(c) Diluted due to high concentration of non-target compound.
(d) Dilution required due to viscosity of the extract matrix. Associated CCV outside of control limits high. Estimated value, due to corresponding internal standard failing low.
(e) Dilution required due to viscosity of the extract matrix.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(2-4)		
Lab Sample ID:	JC86406-1	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I225721.D	1	04/25/19 18:39	TDN	n/a	n/a	VI9093
Run #2 [a]	3V44289.D	1	04/24/19 14:38	RS	n/a	n/a	V3V1778
Run #3 [a]	D264071.D	1	04/26/19 11:20	JTP	n/a	n/a	VD10644

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.6 g		
Run #2	3.8 g		
Run #3	3.6 g	10.0 ml	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	127	16	8.0	ug/kg	
71-43-2	Benzene	1.7	0.80	0.60	ug/kg	
74-97-5	Bromochloromethane	ND	8.0	0.69	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.71	ug/kg	
75-25-2	Bromoform	ND	8.0	0.64	ug/kg	
74-83-9	Bromomethane	ND	8.0	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	ND	16	6.0	ug/kg	
75-15-0	Carbon disulfide	6.3	3.2	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.88	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.57	ug/kg	
75-00-3	Chloroethane	ND	8.0	1.1	ug/kg	
67-66-3	Chloroform	ND	3.2	0.59	ug/kg	
74-87-3	Chloromethane	ND	8.0	3.1	ug/kg	
110-82-7	Cyclohexane	ND	3.2	0.65	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.2	1.3	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.54	ug/kg	
106-93-4	1,2-Dibromoethane [b]	ND	1.6	0.52	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.6	0.49	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.57	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.6	0.55	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.61	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.75	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.6	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.6	1.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.65	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.56	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.52	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.88	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(2-4)		
Lab Sample ID:	JC86406-1	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	8.0	1.2	ug/kg	
591-78-6	2-Hexanone	ND	8.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	3.2	1.1	ug/kg	
79-20-9	Methyl Acetate	ND	8.0	2.2	ug/kg	
108-87-2	Methylcyclohexane	1.3	3.2	1.1	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.6	0.56	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	8.0	4.0	ug/kg	
100-42-5	Styrene	ND	3.2	0.92	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.62	ug/kg	
127-18-4	Tetrachloroethene	ND	3.2	0.74	ug/kg	
108-88-3	Toluene	ND	1.6	0.60	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.0	1.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.68	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.6	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.0	1.1	ug/kg	
75-01-4	Vinyl chloride	ND	3.2	0.75	ug/kg	
	m,p-Xylene	ND	1.6	1.2	ug/kg	
95-47-6	o-Xylene	ND	1.6	0.93	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	108%	107%	99%	75-127%
17060-07-0	1,2-Dichloroethane-D4	119%	114%	91%	75-130%
2037-26-5	Toluene-D8	112%	135% [c]	99%	80-120%
460-00-4	4-Bromofluorobenzene	133% [c]	145% [c]	94%	79-127%

(a) Confirmation run.
(b) This compound in BS is outside in house QC limits bias high.
(c) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(2-4)		
Lab Sample ID:	JC86406-1	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86743.D	1	04/19/19 04:05	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	2P86767.D	5	04/22/19 18:07	YC	04/17/19 18:45	OP19810	E2P3832

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2	30.0 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	77	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	33	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	68	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	190	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	190	41	ug/kg	
95-48-7	2-Methylphenol	ND	77	24	ug/kg	
	3&4-Methylphenol	102	77	31	ug/kg	
88-75-5	2-Nitrophenol	ND	190	25	ug/kg	
100-02-7	4-Nitrophenol	ND	380	100	ug/kg	
87-86-5	Pentachlorophenol	ND	150	36	ug/kg	
108-95-2	Phenol	92.2	77	20	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	25	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	29	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	23	ug/kg	
83-32-9	Acenaphthene	129	38	13	ug/kg	
208-96-8	Acenaphthylene	1730	38	19	ug/kg	
98-86-2	Acetophenone	22.8	190	8.2	ug/kg	J
120-12-7	Anthracene	1400	38	23	ug/kg	
1912-24-9	Atrazine	ND	77	16	ug/kg	
56-55-3	Benzo(a)anthracene	6470 [b]	190	54	ug/kg	
50-32-8	Benzo(a)pyrene	6750 [b]	190	87	ug/kg	
205-99-2	Benzo(b)fluoranthene	9740 [b]	190	85	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2490	38	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	3390 [b]	190	89	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	77	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	77	9.3	ug/kg	
92-52-4	1,1'-Biphenyl	70.1	77	5.2	ug/kg	J
100-52-7	Benzaldehyde	ND	190	9.5	ug/kg	
91-58-7	2-Chloronaphthalene	ND	77	9.1	ug/kg	
106-47-8	4-Chloroaniline	ND	190	14	ug/kg	
86-74-8	Carbazole	358	77	5.6	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-108(2-4)
Lab Sample ID: JC86406-1
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.0

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	77	15	ug/kg	
218-01-9	Chrysene	7770 b	190	60	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	77	8.2	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	77	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	77	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	77	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	38	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	38	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	77	32	ug/kg	
123-91-1	1,4-Dioxane	ND	38	25	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1230	38	17	ug/kg	
132-64-9	Dibenzofuran	267	77	16	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	77	6.2	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	77	9.5	ug/kg	
84-66-2	Diethyl phthalate	ND	77	8.2	ug/kg	
131-11-3	Dimethyl phthalate	ND	77	6.8	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	77	9.0	ug/kg	
206-44-0	Fluoranthene	8090 b	190	85	ug/kg	
86-73-7	Fluorene	243	38	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	77	9.7	ug/kg	
87-68-3	Hexachlorobutadiene	ND	38	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	380	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2730	38	18	ug/kg	
78-59-1	Isophorone	ND	77	8.2	ug/kg	
91-57-6	2-Methylnaphthalene	236	38	8.7	ug/kg	
88-74-4	2-Nitroaniline	ND	190	9.0	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.6	ug/kg	
100-01-6	4-Nitroaniline	ND	190	9.9	ug/kg	
91-20-3	Naphthalene	968	38	11	ug/kg	
98-95-3	Nitrobenzene	ND	77	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	77	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	3410	38	13	ug/kg	
129-00-0	Pyrene	7990 b	190	61	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%	58%	23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(2-4)		
Lab Sample ID:	JC86406-1	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	56%	75%	27-114%
118-79-6	2,4,6-Tribromophenol	65%	48%	19-152%
4165-60-0	Nitrobenzene-d5	59%	77%	26-134%
321-60-8	2-Fluorobiphenyl	79%	86%	39-124%
1718-51-0	Terphenyl-d14	60%	70%	36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Result is from Run# 2

Report of Analysis

Client Sample ID: S-108(2-4)
Lab Sample ID: JC86406-1
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	35000	120	19	mg/kg	2	04/19/19	04/24/19	GT	SW846 6010D [4]	SW846 3050B [6]
Antimony	0.48 U	2.3	0.48	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Arsenic [a]	11.9	4.6	0.65	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Barium	65.7	23	2.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Beryllium	0.72	0.23	0.093	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Cadmium [a]	0.16 U	1.2	0.16	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Calcium	2080	580	51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Chromium	51.6	1.2	0.43	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Cobalt	5.0 J	5.8	0.33	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Copper [a]	13.5	5.8	2.0	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Iron	38100	120	45	mg/kg	2	04/19/19	04/24/19	GT	SW846 6010D [4]	SW846 3050B [6]
Lead [a]	13.9	4.6	0.95	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Magnesium	1420	580	16	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Manganese [a]	83.7	3.5	0.95	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Mercury	0.023 J	0.037	0.016	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [5]
Nickel	13.4	4.6	0.41	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Potassium	1190 J	1200	37	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Selenium [a]	1.5 U	4.6	1.5	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Silver [a]	0.39 U	1.2	0.39	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Sodium	126 J	1200	90	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Thallium [a]	1.3 U	2.3	1.3	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [6]
Vanadium	66.6	5.8	0.22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]
Zinc	44.0	5.8	2.7	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [6]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Instrument QC Batch: MA46568
(4) Instrument QC Batch: MA46578
(5) Prep QC Batch: MP14302
(6) Prep QC Batch: MP14400

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-108(2-4)		
Lab Sample ID:	JC86406-1	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	10.8	0.26	0.13	mg/kg	1	04/25/19 15:23	KI	SW846 9012B/LACHAT
Solids, Percent	87			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(8-10)		
Lab Sample ID:	JC86406-2	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	80.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V44290.D	1	04/24/19 15:04	RS	n/a	n/a	V3V1778
Run #2							

	Initial Weight
Run #1	8.9 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	32.4	7.0	3.5	ug/kg	
71-43-2	Benzene	3.4	0.35	0.26	ug/kg	
74-97-5	Bromochloromethane	ND	3.5	0.30	ug/kg	
75-27-4	Bromodichloromethane	ND	1.4	0.31	ug/kg	
75-25-2	Bromoform	ND	3.5	0.28	ug/kg	
74-83-9	Bromomethane	ND	3.5	0.70	ug/kg	
78-93-3	2-Butanone (MEK)	ND	7.0	2.6	ug/kg	
75-15-0	Carbon disulfide	1.4	1.4	0.65	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.4	0.38	ug/kg	
108-90-7	Chlorobenzene	ND	1.4	0.25	ug/kg	
75-00-3	Chloroethane	ND	3.5	0.48	ug/kg	
67-66-3	Chloroform	ND	1.4	0.26	ug/kg	
74-87-3	Chloromethane	ND	3.5	1.4	ug/kg	
110-82-7	Cyclohexane [a]	ND	1.4	0.28	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.4	0.58	ug/kg	
124-48-1	Dibromochloromethane	ND	1.4	0.24	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.70	0.23	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.70	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.70	0.25	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.70	0.24	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	3.5	0.44	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.70	0.27	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.70	0.33	ug/kg	
75-35-4	1,1-Dichloroethene	ND	0.70	0.46	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.70	0.67	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.70	0.47	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.4	0.28	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.4	0.25	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.4	0.23	ug/kg	
100-41-4	Ethylbenzene	ND	0.70	0.39	ug/kg	
76-13-1	Freon 113	ND	3.5	0.53	ug/kg	
591-78-6	2-Hexanone	ND	3.5	0.89	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(8-10)		
Lab Sample ID:	JC86406-2	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	80.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.4	0.49	ug/kg	
79-20-9	Methyl Acetate	ND	3.5	0.97	ug/kg	
108-87-2	Methylcyclohexane [a]	ND	1.4	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.70	0.25	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	3.5	1.1	ug/kg	
75-09-2	Methylene chloride	ND	3.5	1.7	ug/kg	
100-42-5	Styrene	ND	1.4	0.40	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.4	0.27	ug/kg	
127-18-4	Tetrachloroethene	ND	1.4	0.32	ug/kg	
108-88-3	Toluene	0.32	0.70	0.26	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	3.5	0.70	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	3.5	0.70	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1.4	0.30	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.4	0.24	ug/kg	
79-01-6	Trichloroethene	ND	0.70	0.53	ug/kg	
75-69-4	Trichlorofluoromethane	ND	3.5	0.48	ug/kg	
75-01-4	Vinyl chloride	ND	1.4	0.33	ug/kg	
	m,p-Xylene	ND	0.70	0.52	ug/kg	
95-47-6	o-Xylene	ND	0.70	0.41	ug/kg	
1330-20-7	Xylene (total)	ND	0.70	0.41	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-127%
17060-07-0	1,2-Dichloroethane-D4	105%		75-130%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	99%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(8-10)		
Lab Sample ID:	JC86406-2	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86739.D	1	04/19/19 02:38	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	31.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	79	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	24	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	34	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	121	200	71	ug/kg	J
51-28-5	2,4-Dinitrophenol	ND	200	150	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	200	42	ug/kg	
95-48-7	2-Methylphenol	194	79	25	ug/kg	
	3&4-Methylphenol	945	79	33	ug/kg	
88-75-5	2-Nitrophenol	ND	200	26	ug/kg	
100-02-7	4-Nitrophenol	ND	400	110	ug/kg	
87-86-5	Pentachlorophenol	ND	160	37	ug/kg	
108-95-2	Phenol	1370	79	21	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	200	26	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	30	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	24	ug/kg	
83-32-9	Acenaphthene	1040	40	14	ug/kg	
208-96-8	Acenaphthylene	185	40	20	ug/kg	
98-86-2	Acetophenone	ND	200	8.5	ug/kg	
120-12-7	Anthracene	573	40	24	ug/kg	
1912-24-9	Atrazine	ND	79	17	ug/kg	
56-55-3	Benzo(a)anthracene	168	40	11	ug/kg	
50-32-8	Benzo(a)pyrene	151	40	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	192	40	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	105	40	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	63.2	40	19	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	79	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	79	9.7	ug/kg	
92-52-4	1,1'-Biphenyl	93.9	79	5.4	ug/kg	
100-52-7	Benzaldehyde	ND	200	9.8	ug/kg	
91-58-7	2-Chloronaphthalene	ND	79	9.4	ug/kg	
106-47-8	4-Chloroaniline	ND	200	14	ug/kg	
86-74-8	Carbazole	671	79	5.8	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-108(8-10)
Lab Sample ID: JC86406-2
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 80.3

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	79	16	ug/kg	
218-01-9	Chrysene	199	40	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	79	8.5	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	79	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	79	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	79	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	40	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	40	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	79	33	ug/kg	
123-91-1	1,4-Dioxane	ND	40	26	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	25.5	40	18	ug/kg	J
132-64-9	Dibenzofuran	357	79	16	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	79	6.5	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	79	9.9	ug/kg	
84-66-2	Diethyl phthalate	ND	79	8.4	ug/kg	
131-11-3	Dimethyl phthalate	ND	79	7.1	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	79	9.3	ug/kg	
206-44-0	Fluoranthene	414	40	18	ug/kg	
86-73-7	Fluorene	589	40	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	79	10	ug/kg	
87-68-3	Hexachlorobutadiene	ND	40	16	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	400	16	ug/kg	
67-72-1	Hexachloroethane	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	84.0	40	19	ug/kg	
78-59-1	Isophorone	ND	79	8.5	ug/kg	
91-57-6	2-Methylnaphthalene	295	40	9.0	ug/kg	
88-74-4	2-Nitroaniline	ND	200	9.4	ug/kg	
99-09-2	3-Nitroaniline	ND	200	9.9	ug/kg	
100-01-6	4-Nitroaniline	ND	200	10	ug/kg	
91-20-3	Naphthalene	3820	40	11	ug/kg	
98-95-3	Nitrobenzene	ND	79	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	79	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	15	ug/kg	
85-01-8	Phenanthrene	576	40	13	ug/kg	
129-00-0	Pyrene	447	40	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	200	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(8-10)		
Lab Sample ID:	JC86406-2	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	64%		27-114%
118-79-6	2,4,6-Tribromophenol	60%		19-152%
4165-60-0	Nitrobenzene-d5	65%		26-134%
321-60-8	2-Fluorobiphenyl	74%		39-124%
1718-51-0	Terphenyl-d14	65%		36-134%

(a) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-108(8-10)
Lab Sample ID: JC86406-2
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 80.3

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	23000	62	9.9	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.51 U	2.5	0.51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	9.0	4.9	0.69	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Barium	75.9	25	2.3	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.75	0.25	0.099	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.099 J	0.62	0.086	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	1300	620	54	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	32.9	1.2	0.46	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt	7.6	6.2	0.35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	14.1	6.2	2.1	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Iron	27900	120	47	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	38.1	4.9	1.0	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Magnesium	2290	620	17	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	201	3.7	1.0	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Mercury	2.6	0.20	0.086	mg/kg	5	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	15.1	4.9	0.43	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	1440	1200	39	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	1.6 U	4.9	1.6	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.42 U	1.2	0.42	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Sodium	96 U	1200	96	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.4 U	2.5	1.4	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Vanadium	46.1	6.2	0.23	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	63.4	6.2	2.8	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Instrument QC Batch: MA46568
(4) Prep QC Batch: MP14302
(5) Prep QC Batch: MP14400

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-108(8-10)		
Lab Sample ID:	JC86406-2	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	80.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	3.3	0.28	0.14	mg/kg	1	04/25/19 15:24	KI	SW846 9012B/LACHAT
Solids, Percent	80.3			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(15-17)		
Lab Sample ID:	JC86406-3	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	56.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264076.D	1	04/26/19 14:03	JTP	n/a	n/a	VD10644
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.8 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	2700	1300	ug/kg	
71-43-2	Benzene	196	130	100	ug/kg	
74-97-5	Bromochloromethane	ND	1300	120	ug/kg	
75-27-4	Bromodichloromethane	ND	540	120	ug/kg	
75-25-2	Bromoform	ND	1300	110	ug/kg	
74-83-9	Bromomethane	ND	1300	270	ug/kg	
78-93-3	2-Butanone (MEK)	ND	2700	1000	ug/kg	
75-15-0	Carbon disulfide	51000	540	250	ug/kg	
56-23-5	Carbon tetrachloride	ND	540	150	ug/kg	
108-90-7	Chlorobenzene	ND	540	95	ug/kg	
75-00-3	Chloroethane	ND	1300	190	ug/kg	
67-66-3	Chloroform	ND	540	100	ug/kg	
74-87-3	Chloromethane	ND	1300	530	ug/kg	
110-82-7	Cyclohexane	ND	540	110	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	540	230	ug/kg	
124-48-1	Dibromochloromethane	ND	540	91	ug/kg	
106-93-4	1,2-Dibromoethane	ND	270	88	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	270	82	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	97	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	93	ug/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	1300	170	ug/kg	
75-34-3	1,1-Dichloroethane	ND	270	100	ug/kg	
107-06-2	1,2-Dichloroethane [b]	ND	270	130	ug/kg	
75-35-4	1,1-Dichloroethene	ND	270	180	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	270	260	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	270	180	ug/kg	
78-87-5	1,2-Dichloropropane	ND	540	110	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	540	95	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	540	88	ug/kg	
100-41-4	Ethylbenzene	3100	270	150	ug/kg	
76-13-1	Freon 113	ND	1300	210	ug/kg	
591-78-6	2-Hexanone	ND	1300	340	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-108(15-17)
Lab Sample ID: JC86406-3
Matrix: SO - Soil
Method: SW846 8260C
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 56.8

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	2410	540	190	ug/kg	
79-20-9	Methyl Acetate	3140	1300	370	ug/kg	
108-87-2	Methylcyclohexane	466	540	190	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	270	95	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1300	420	ug/kg	
75-09-2	Methylene chloride	ND	1300	670	ug/kg	
100-42-5	Styrene	ND	540	160	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	540	110	ug/kg	
127-18-4	Tetrachloroethene	ND	540	120	ug/kg	
108-88-3	Toluene	1250	270	100	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1300	270	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1300	270	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	540	110	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	540	92	ug/kg	
79-01-6	Trichloroethene	ND	270	210	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1300	180	ug/kg	
75-01-4	Vinyl chloride	ND	540	130	ug/kg	
	m,p-Xylene	2990	270	200	ug/kg	
95-47-6	o-Xylene	3880	270	160	ug/kg	
1330-20-7	Xylene (total)	6870	270	160	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-127%
17060-07-0	1,2-Dichloroethane-D4	90%		75-130%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	94%		79-127%

(a) Diluted due to high concentration of non-target compound.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-108(15-17)		
Lab Sample ID:	JC86406-3	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	56.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86746.D	1	04/19/19 05:11	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	Z137269.D	100	04/25/19 22:03	AR	04/17/19 18:45	OP19810	EZ6762

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2	30.8 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	110	28	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	290	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	290	49	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	290	100	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	290	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	290	61	ug/kg	
95-48-7	2-Methylphenol	37.3	110	37	ug/kg	J
	3&4-Methylphenol	339	110	47	ug/kg	
88-75-5	2-Nitrophenol	ND	290	38	ug/kg	
100-02-7	4-Nitrophenol	ND	570	150	ug/kg	
87-86-5	Pentachlorophenol	ND	230	54	ug/kg	
108-95-2	Phenol	132	110	30	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	290	38	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	290	43	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	290	34	ug/kg	
83-32-9	Acenaphthene	93500 [b]	5700	2000	ug/kg	
208-96-8	Acenaphthylene	1930	57	29	ug/kg	
98-86-2	Acetophenone	ND	290	12	ug/kg	
120-12-7	Anthracene	49600 [b]	5700	3500	ug/kg	
1912-24-9	Atrazine	ND	110	24	ug/kg	
56-55-3	Benzo(a)anthracene	18400 [b]	5700	1600	ug/kg	
50-32-8	Benzo(a)pyrene	10800 [b]	5700	2600	ug/kg	
205-99-2	Benzo(b)fluoranthene	10800 [b]	5700	2500	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1530	57	29	ug/kg	
207-08-9	Benzo(k)fluoranthene	1700	57	27	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	110	22	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	110	14	ug/kg	
92-52-4	1,1'-Biphenyl	19100 [b]	11000	780	ug/kg	
100-52-7	Benzaldehyde	ND	290	14	ug/kg	
91-58-7	2-Chloronaphthalene	ND	110	14	ug/kg	
106-47-8	4-Chloroaniline	ND	290	21	ug/kg	
86-74-8	Carbazole	12100 [b]	11000	830	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(15-17)		
Lab Sample ID:	JC86406-3	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	56.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	110	23	ug/kg	
218-01-9	Chrysene	19400 [b]	5700	1800	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	110	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	25	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	110	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	110	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	57	18	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	57	29	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	48	ug/kg	
123-91-1	1,4-Dioxane	ND	57	38	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	552	57	25	ug/kg	
132-64-9	Dibenzofuran	53000 [b]	11000	2300	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	9.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	110	14	ug/kg	
84-66-2	Diethyl phthalate	ND	110	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	110	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	110	13	ug/kg	
206-44-0	Fluoranthene	77200 [b]	5700	2500	ug/kg	
86-73-7	Fluorene	81200 [b]	5700	2600	ug/kg	
118-74-1	Hexachlorobenzene	ND	110	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	57	23	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	570	23	ug/kg	
67-72-1	Hexachloroethane	ND	290	28	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1420	57	27	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	140000 [b]	5700	1300	ug/kg	
88-74-4	2-Nitroaniline	ND	290	13	ug/kg	
99-09-2	3-Nitroaniline	ND	290	14	ug/kg	
100-01-6	4-Nitroaniline	ND	290	15	ug/kg	
91-20-3	Naphthalene	325000 [b]	5700	1600	ug/kg	
98-95-3	Nitrobenzene	ND	110	22	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	110	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	290	21	ug/kg	
85-01-8	Phenanthrene	223000 [b]	5700	1900	ug/kg	
129-00-0	Pyrene	61100 [b]	5700	1800	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	290	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%	0% [c]	23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-108(15-17)		
Lab Sample ID:	JC86406-3	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	56.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	48%	0% [c]	27-114%
118-79-6	2,4,6-Tribromophenol	85%	0% [c]	19-152%
4165-60-0	Nitrobenzene-d5	104%	0% [c]	26-134%
321-60-8	2-Fluorobiphenyl	69%	0% [c]	39-124%
1718-51-0	Terphenyl-d14	59%	0% [c]	36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

Report of Analysis

Client Sample ID: S-108(15-17)
Lab Sample ID: JC86406-3
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 56.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11600	85	14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.70 U	3.4	0.70	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	6.1	3.4	0.48	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	46.6	34	3.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.53	0.34	0.14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.15 J	0.85	0.12	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	714 J	850	75	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	19.6	1.7	0.63	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	4.9 J	8.5	0.48	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	12.6	4.3	1.4	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	17900	85	33	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	45.4	3.4	0.70	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2060	850	23	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	156	2.6	0.70	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	1.7	0.10	0.045	mg/kg	2	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	11.7	6.8	0.60	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	961 J	1700	54	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.1 U	3.4	1.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.29 U	0.85	0.29	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	130 U	1700	130	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.99 U	1.7	0.99	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	24.8	8.5	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	55.1	8.5	3.9	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-108(15-17)		
Lab Sample ID:	JC86406-3	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	56.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	9.6	0.41	0.20	mg/kg	1	04/25/19 15:26	KI	SW846 9012B/LACHAT
Solids, Percent	56.8			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP-0415		
Lab Sample ID:	JC86406-4	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I225722.D	1	04/25/19 19:08	TDN	n/a	n/a	VI9093
Run #2							

	Initial Weight
Run #1	3.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	12.5	15	7.7	ug/kg	J
71-43-2	Benzene	2.0	0.77	0.58	ug/kg	
74-97-5	Bromochloromethane	ND	7.7	0.66	ug/kg	
75-27-4	Bromodichloromethane	ND	3.1	0.68	ug/kg	
75-25-2	Bromoform	ND	7.7	0.62	ug/kg	
74-83-9	Bromomethane	ND	7.7	1.5	ug/kg	
78-93-3	2-Butanone (MEK)	ND	15	5.8	ug/kg	
75-15-0	Carbon disulfide	5.2	3.1	1.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.1	0.85	ug/kg	
108-90-7	Chlorobenzene	ND	3.1	0.55	ug/kg	
75-00-3	Chloroethane	ND	7.7	1.1	ug/kg	
67-66-3	Chloroform	ND	3.1	0.57	ug/kg	
74-87-3	Chloromethane	ND	7.7	3.0	ug/kg	
110-82-7	Cyclohexane	ND	3.1	0.63	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.1	1.3	ug/kg	
124-48-1	Dibromochloromethane	ND	3.1	0.52	ug/kg	
106-93-4	1,2-Dibromoethane [a]	ND	1.5	0.50	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.5	0.47	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.5	0.55	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.5	0.53	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.7	0.98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.5	0.59	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.5	0.73	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.5	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.1	0.63	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	0.54	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	1.5	0.85	ug/kg	
76-13-1	Freon 113	ND	7.7	1.2	ug/kg	
591-78-6	2-Hexanone	ND	7.7	2.0	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SO-DUP-0415		
Lab Sample ID:	JC86406-4	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	3.1	1.1	ug/kg	
79-20-9	Methyl Acetate	ND	7.7	2.1	ug/kg	
108-87-2	Methylcyclohexane	1.9	3.1	1.1	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.5	0.54	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.7	2.4	ug/kg	
75-09-2	Methylene chloride	ND	7.7	3.9	ug/kg	
100-42-5	Styrene	ND	3.1	0.89	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	0.60	ug/kg	
127-18-4	Tetrachloroethene	ND	3.1	0.71	ug/kg	
108-88-3	Toluene	ND	1.5	0.58	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.7	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.7	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.1	0.66	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.1	0.53	ug/kg	
79-01-6	Trichloroethene	ND	1.5	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.7	1.1	ug/kg	
75-01-4	Vinyl chloride	ND	3.1	0.72	ug/kg	
	m,p-Xylene	ND	1.5	1.2	ug/kg	
95-47-6	o-Xylene	ND	1.5	0.90	ug/kg	
1330-20-7	Xylene (total)	ND	1.5	0.90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		75-127%
17060-07-0	1,2-Dichloroethane-D4	116%		75-130%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	123%		79-127%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP-0415		
Lab Sample ID:	JC86406-4	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86747.D	1	04/19/19 05:33	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	2P86768.D	5	04/22/19 18:29	YC	04/17/19 18:45	OP19810	E2P3832

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2	30.8 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	74	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	32	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	66	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	190	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	190	40	ug/kg	
95-48-7	2-Methylphenol	ND	74	24	ug/kg	
	3&4-Methylphenol	117	74	30	ug/kg	
88-75-5	2-Nitrophenol	ND	190	24	ug/kg	
100-02-7	4-Nitrophenol	ND	370	99	ug/kg	
87-86-5	Pentachlorophenol	ND	150	35	ug/kg	
108-95-2	Phenol	122	74	19	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	25	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	22	ug/kg	
83-32-9	Acenaphthene	106	37	13	ug/kg	
208-96-8	Acenaphthylene	1430	37	19	ug/kg	
98-86-2	Acetophenone	ND	190	8.0	ug/kg	
120-12-7	Anthracene	1200	37	23	ug/kg	
1912-24-9	Atrazine	ND	74	16	ug/kg	
56-55-3	Benzo(a)anthracene	5670 [b]	190	52	ug/kg	
50-32-8	Benzo(a)pyrene	6020 [b]	190	84	ug/kg	
205-99-2	Benzo(b)fluoranthene	8590 [b]	190	82	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2110	37	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	1910	37	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	74	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	74	9.0	ug/kg	
92-52-4	1,1'-Biphenyl	71.1	74	5.1	ug/kg	J
100-52-7	Benzaldehyde	ND	190	9.2	ug/kg	
91-58-7	2-Chloronaphthalene	ND	74	8.8	ug/kg	
106-47-8	4-Chloroaniline	ND	190	13	ug/kg	
86-74-8	Carbazole	271	74	5.4	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SO-DUP-0415
Lab Sample ID: JC86406-4
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.6

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	74	15	ug/kg	
218-01-9	Chrysene	6710 b	190	58	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	74	7.9	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	74	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	74	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	74	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	37	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	37	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	74	31	ug/kg	
123-91-1	1,4-Dioxane	ND	37	24	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1060	37	16	ug/kg	
132-64-9	Dibenzofuran	242	74	15	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	74	6.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	74	9.2	ug/kg	
84-66-2	Diethyl phthalate	ND	74	7.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	74	6.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	74	8.7	ug/kg	
206-44-0	Fluoranthene	6690 b	190	83	ug/kg	
86-73-7	Fluorene	192	37	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	74	9.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	37	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	370	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2300	37	17	ug/kg	
78-59-1	Isophorone	ND	74	7.9	ug/kg	
91-57-6	2-Methylnaphthalene	246	37	8.4	ug/kg	
88-74-4	2-Nitroaniline	ND	190	8.7	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.3	ug/kg	
100-01-6	4-Nitroaniline	ND	190	9.6	ug/kg	
91-20-3	Naphthalene	1230	37	10	ug/kg	
98-95-3	Nitrobenzene	ND	74	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	74	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	2620	37	12	ug/kg	
129-00-0	Pyrene	6700 b	190	59	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%	54%	23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SO-DUP-0415		
Lab Sample ID:	JC86406-4	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	50%	66%	27-114%
118-79-6	2,4,6-Tribromophenol	55%	45%	19-152%
4165-60-0	Nitrobenzene-d5	56%	72%	26-134%
321-60-8	2-Fluorobiphenyl	72%	76%	39-124%
1718-51-0	Terphenyl-d14	51%	63%	36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SO-DUP-0415
Lab Sample ID: JC86406-4
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9710	57	9.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.47 U	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	6.5	2.3	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	43.9	23	2.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.51	0.23	0.091	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	1.2	0.57	0.080	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	644	570	50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	14.6	1.1	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	7.4	5.7	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	13.2	2.9	0.96	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	16600	57	22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	32.1	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1950	570	16	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	261	1.7	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.31	0.035	0.016	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	11.9	4.6	0.40	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1070 J	1100	36	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.74 U	2.3	0.74	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.19 U	0.57	0.19	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	139 J	1100	89	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.66 U	1.1	0.66	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	20.1	5.7	0.22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	51.0	5.7	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SO-DUP-0415		
Lab Sample ID:	JC86406-4	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	87.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	12.7	0.26	0.13	mg/kg	1	04/25/19 15:27	KI	SW846 9012B/LACHAT
Solids, Percent	87.6			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(5-6)		
Lab Sample ID:	JC86406-5	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264077.D	1	04/26/19 14:32	JTP	n/a	n/a	VD10644
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.8 g	10.0 ml	20.0 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	7900	3900	ug/kg	
71-43-2	Benzene	1230	390	300	ug/kg	
74-97-5	Bromochloromethane	ND	3900	340	ug/kg	
75-27-4	Bromodichloromethane	ND	1600	350	ug/kg	
75-25-2	Bromoform	ND	3900	320	ug/kg	
74-83-9	Bromomethane	ND	3900	780	ug/kg	
78-93-3	2-Butanone (MEK)	ND	7900	2900	ug/kg	
75-15-0	Carbon disulfide	ND	1600	730	ug/kg	
56-23-5	Carbon tetrachloride	ND	1600	430	ug/kg	
108-90-7	Chlorobenzene	ND	1600	280	ug/kg	
75-00-3	Chloroethane	ND	3900	540	ug/kg	
67-66-3	Chloroform	ND	1600	290	ug/kg	
74-87-3	Chloromethane	ND	3900	1500	ug/kg	
110-82-7	Cyclohexane	ND	1600	320	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1600	660	ug/kg	
124-48-1	Dibromochloromethane	ND	1600	270	ug/kg	
106-93-4	1,2-Dibromoethane [b]	ND	790	260	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	790	240	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	790	280	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	790	270	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	3900	500	ug/kg	
75-34-3	1,1-Dichloroethane	ND	790	300	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	790	370	ug/kg	
75-35-4	1,1-Dichloroethene	ND	790	520	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	790	750	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	790	520	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1600	320	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1600	280	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1600	260	ug/kg	
100-41-4	Ethylbenzene	ND	790	430	ug/kg	
76-13-1	Freon 113	ND	3900	600	ug/kg	
591-78-6	2-Hexanone	ND	3900	1000	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(5-6)		
Lab Sample ID:	JC86406-5	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1600	550	ug/kg	
79-20-9	Methyl Acetate	ND	3900	1100	ug/kg	
108-87-2	Methylcyclohexane	ND	1600	560	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	790	280	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	3900	1200	ug/kg	
75-09-2	Methylene chloride	ND	3900	2000	ug/kg	
100-42-5	Styrene	ND	1600	450	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1600	310	ug/kg	
127-18-4	Tetrachloroethene	ND	1600	360	ug/kg	
108-88-3	Toluene	1650	790	300	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	3900	790	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	3900	790	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1600	330	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1600	270	ug/kg	
79-01-6	Trichloroethene	ND	790	600	ug/kg	
75-69-4	Trichlorofluoromethane	ND	3900	530	ug/kg	
75-01-4	Vinyl chloride	ND	1600	370	ug/kg	
	m,p-Xylene	3880	790	590	ug/kg	
95-47-6	o-Xylene	1740	790	460	ug/kg	
1330-20-7	Xylene (total)	5620	790	460	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		75-127%
17060-07-0	1,2-Dichloroethane-D4	87%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	93%		79-127%

(a) Diluted due to high concentration of non-target compound.
(b) This compound in BS is outside in house QC limits bias high.
(c) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(5-6)		
Lab Sample ID:	JC86406-5	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86748.D	1	04/19/19 05:54	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	Z137310.D	5	04/26/19 21:07	AR	04/17/19 18:45	OP19810	EZ6764
Run #3	Z137270.D	100	04/25/19 22:31	AR	04/17/19 18:45	OP19810	EZ6762

	Initial Weight	Final Volume
Run #1	31.4 g	1.0 ml
Run #2	31.4 g	1.0 ml
Run #3	31.4 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	73	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	22	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	31	ug/kg	
105-67-9	2,4-Dimethylphenol	2270 [a]	910	320	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	180	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	180	39	ug/kg	
95-48-7	2-Methylphenol	1650	73	23	ug/kg	
	3&4-Methylphenol	4700 [a]	360	150	ug/kg	
88-75-5	2-Nitrophenol	ND	180	24	ug/kg	
100-02-7	4-Nitrophenol	ND	360	97	ug/kg	
87-86-5	Pentachlorophenol	ND	150	34	ug/kg	
108-95-2	Phenol	2790	73	19	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	24	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	22	ug/kg	
83-32-9	Acenaphthene	4550 [a]	180	63	ug/kg	
208-96-8	Acenaphthylene	29600 [b]	3600	1800	ug/kg	
98-86-2	Acetophenone	ND	180	7.8	ug/kg	
120-12-7	Anthracene	67800 [b]	3600	2200	ug/kg	
1912-24-9	Atrazine	ND	73	16	ug/kg	
56-55-3	Benzo(a)anthracene	57200 [b]	3600	1000	ug/kg	
50-32-8	Benzo(a)pyrene	41100 [b]	3600	1700	ug/kg	
205-99-2	Benzo(b)fluoranthene	49000 [b]	3600	1600	ug/kg	
191-24-2	Benzo(g,h,i)perylene [c]	20500 [b]	3600	1800	ug/kg	
207-08-9	Benzo(k)fluoranthene	18900 [b]	3600	1700	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	73	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	73	8.9	ug/kg	
92-52-4	1,1'-Biphenyl	8640 [a]	360	25	ug/kg	
100-52-7	Benzaldehyde	ND	180	9.0	ug/kg	
91-58-7	2-Chloronaphthalene	ND	73	8.6	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(5-6)
Lab Sample ID: JC86406-5
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.7

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
106-47-8	4-Chloroaniline	ND	180	13	ug/kg	
86-74-8	Carbazole	28800 b	7300	530	ug/kg	
105-60-2	Caprolactam	ND	73	14	ug/kg	
218-01-9	Chrysene	48000 b	3600	1100	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	73	7.8	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	73	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	73	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	73	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	73	30	ug/kg	
123-91-1	1,4-Dioxane	ND	36	24	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6990 a	180	80	ug/kg	
132-64-9	Dibenzofuran	49900 b	7300	1500	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	73	5.9	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	73	9.0	ug/kg	
84-66-2	Diethyl phthalate	ND	73	7.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	73	6.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	73	8.5	ug/kg	
206-44-0	Fluoranthene	138000 b	3600	1600	ug/kg	
86-73-7	Fluorene	77200 b	3600	1700	ug/kg	
118-74-1	Hexachlorobenzene	ND	73	9.2	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	14	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene c	22000 b	3600	1700	ug/kg	
78-59-1	Isophorone	ND	73	7.8	ug/kg	
91-57-6	2-Methylnaphthalene	56200 b	3600	820	ug/kg	
88-74-4	2-Nitroaniline	ND	180	8.6	ug/kg	
99-09-2	3-Nitroaniline	ND	180	9.1	ug/kg	
100-01-6	4-Nitroaniline	ND	180	9.4	ug/kg	
91-20-3	Naphthalene	146000 b	3600	1000	ug/kg	
98-95-3	Nitrobenzene	ND	73	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	73	10	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	13	ug/kg	
85-01-8	Phenanthrene	219000 b	3600	1200	ug/kg	
129-00-0	Pyrene	95600 b	3600	1200	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	9.2	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(5-6)		
Lab Sample ID:	JC86406-5	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	47%	53%	0% [d]	23-115%
4165-62-2	Phenol-d5	53%	49%	0% [d]	27-114%
118-79-6	2,4,6-Tribromophenol	68%	45%	0% [d]	19-152%
4165-60-0	Nitrobenzene-d5	89%	53%	0% [d]	26-134%
321-60-8	2-Fluorobiphenyl	51%	53%	0% [d]	39-124%
1718-51-0	Terphenyl-d14	61%	56%	0% [d]	36-134%

(a) Result is from Run# 2
(b) Result is from Run# 3
(c) Associated CCV outside of control limits high.
(d) Outside control limits due to dilution.

Report of Analysis

Client Sample ID: PCTP-17R(5-6)
Lab Sample ID: JC86406-5
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 87.7

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7830	57	9.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.47 U	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	5.8	4.6	0.64	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Barium	23.5	23	2.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.31	0.23	0.091	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium [a]	0.16 U	1.1	0.16	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Calcium	176 J	570	50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	17.3	1.1	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt	4.2 J	5.7	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	19.3	5.7	1.9	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Iron	33600	110	44	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	6.6	4.6	0.94	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Magnesium	1720	570	16	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	102	3.4	0.94	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.46	0.036	0.016	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	20.3	4.6	0.40	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	813 J	1100	36	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	1.5 U	4.6	1.5	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.39 U	1.1	0.39	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Sodium	89 U	1100	89	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.3 U	2.3	1.3	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Vanadium	19.8	5.7	0.22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	28.0	5.7	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Instrument QC Batch: MA46568
(4) Prep QC Batch: MP14302
(5) Prep QC Batch: MP14400

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	PCTP-17R(5-6)		
Lab Sample ID:	JC86406-5	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	8.3	0.25	0.13	mg/kg	1	04/25/19 15:28	KI	SW846 9012B/LACHAT
Solids, Percent	87.7			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(7-9)		
Lab Sample ID:	JC86406-6	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	89.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V44292.D	1	04/24/19 15:56	RS	n/a	n/a	V3V1778
Run #2							

	Initial Weight
Run #1	6.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	40.7	8.5	4.3	ug/kg	
71-43-2	Benzene	ND	0.43	0.32	ug/kg	
74-97-5	Bromochloromethane	ND	4.3	0.37	ug/kg	
75-27-4	Bromodichloromethane	ND	1.7	0.38	ug/kg	
75-25-2	Bromoform	ND	4.3	0.34	ug/kg	
74-83-9	Bromomethane	ND	4.3	0.85	ug/kg	
78-93-3	2-Butanone (MEK)	3.3	8.5	3.2	ug/kg	J
75-15-0	Carbon disulfide	ND	1.7	0.79	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.7	0.47	ug/kg	
108-90-7	Chlorobenzene	ND	1.7	0.30	ug/kg	
75-00-3	Chloroethane	ND	4.3	0.58	ug/kg	
67-66-3	Chloroform	ND	1.7	0.32	ug/kg	
74-87-3	Chloromethane	ND	4.3	1.7	ug/kg	
110-82-7	Cyclohexane [a]	ND	1.7	0.35	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	0.71	ug/kg	
124-48-1	Dibromochloromethane	ND	1.7	0.29	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.85	0.28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.85	0.26	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.85	0.31	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.85	0.29	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.3	0.54	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.85	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.85	0.40	ug/kg	
75-35-4	1,1-Dichloroethene	ND	0.85	0.56	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.85	0.81	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.85	0.57	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.7	0.35	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	0.30	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.28	ug/kg	
100-41-4	Ethylbenzene	ND	0.85	0.47	ug/kg	
76-13-1	Freon 113	ND	4.3	0.65	ug/kg	
591-78-6	2-Hexanone	ND	4.3	1.1	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(7-9)		
Lab Sample ID:	JC86406-6	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	89.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.7	0.59	ug/kg	
79-20-9	Methyl Acetate	ND	4.3	1.2	ug/kg	
108-87-2	Methylcyclohexane [a]	ND	1.7	0.60	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.85	0.30	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.3	1.3	ug/kg	
75-09-2	Methylene chloride	ND	4.3	2.1	ug/kg	
100-42-5	Styrene	ND	1.7	0.49	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.33	ug/kg	
127-18-4	Tetrachloroethene	ND	1.7	0.39	ug/kg	
108-88-3	Toluene	ND	0.85	0.32	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.3	0.85	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.3	0.85	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1.7	0.36	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.7	0.29	ug/kg	
79-01-6	Trichloroethene	ND	0.85	0.65	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.3	0.58	ug/kg	
75-01-4	Vinyl chloride	ND	1.7	0.40	ug/kg	
	m,p-Xylene	ND	0.85	0.63	ug/kg	
95-47-6	o-Xylene	ND	0.85	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	0.85	0.50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		75-127%
17060-07-0	1,2-Dichloroethane-D4	104%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	102%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(7-9)		
Lab Sample ID:	JC86406-6	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86733.D	1	04/19/19 00:27	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	31.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	72	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	22	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	31	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	180	64	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	180	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	180	38	ug/kg	
95-48-7	2-Methylphenol	ND	72	23	ug/kg	
	3&4-Methylphenol	ND	72	30	ug/kg	
88-75-5	2-Nitrophenol	ND	180	24	ug/kg	
100-02-7	4-Nitrophenol	ND	360	96	ug/kg	
87-86-5	Pentachlorophenol	ND	140	34	ug/kg	
108-95-2	Phenol	ND	72	19	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	24	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	21	ug/kg	
83-32-9	Acenaphthene	ND	36	12	ug/kg	
208-96-8	Acenaphthylene	ND	36	18	ug/kg	
98-86-2	Acetophenone	ND	180	7.7	ug/kg	
120-12-7	Anthracene	ND	36	22	ug/kg	
1912-24-9	Atrazine	ND	72	15	ug/kg	
56-55-3	Benzo(a)anthracene	26.4	36	10	ug/kg	J
50-32-8	Benzo(a)pyrene	28.0	36	16	ug/kg	J
205-99-2	Benzo(b)fluoranthene	34.1	36	16	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	20.3	36	18	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	36	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	72	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	72	8.8	ug/kg	
92-52-4	1,1'-Biphenyl	5.4	72	4.9	ug/kg	J
100-52-7	Benzaldehyde	ND	180	8.9	ug/kg	
91-58-7	2-Chloronaphthalene	ND	72	8.6	ug/kg	
106-47-8	4-Chloroaniline	ND	180	13	ug/kg	
86-74-8	Carbazole	7.9	72	5.2	ug/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(7-9)
Lab Sample ID: JC86406-6
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 89.1

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	72	14	ug/kg	
218-01-9	Chrysene	27.6	36	11	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	72	7.7	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	72	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	72	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	72	30	ug/kg	
123-91-1	1,4-Dioxane	ND	36	24	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	36	16	ug/kg	
132-64-9	Dibenzofuran	ND	72	15	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	72	5.9	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	72	9.0	ug/kg	
84-66-2	Diethyl phthalate	ND	72	7.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	72	6.4	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	72	8.4	ug/kg	
206-44-0	Fluoranthene	36.2	36	16	ug/kg	
86-73-7	Fluorene	ND	36	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	72	9.1	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	14	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	14	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	36	17	ug/kg	
78-59-1	Isophorone	ND	72	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	14.5	36	8.1	ug/kg	J
88-74-4	2-Nitroaniline	ND	180	8.5	ug/kg	
99-09-2	3-Nitroaniline	ND	180	9.0	ug/kg	
100-01-6	4-Nitroaniline	ND	180	9.3	ug/kg	
91-20-3	Naphthalene	38.0	36	10	ug/kg	
98-95-3	Nitrobenzene	ND	72	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	10	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	13	ug/kg	
85-01-8	Phenanthrene	63.0	36	12	ug/kg	
129-00-0	Pyrene	30.2	36	12	ug/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(7-9)		
Lab Sample ID:	JC86406-6	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	67%		27-114%
118-79-6	2,4,6-Tribromophenol	62%		19-152%
4165-60-0	Nitrobenzene-d5	75%		26-134%
321-60-8	2-Fluorobiphenyl	76%		39-124%
1718-51-0	Terphenyl-d14	63%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(7-9)
Lab Sample ID: JC86406-6
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 89.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17400	56	9.0	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony [a]	0.92 U	4.5	0.92	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Arsenic [a]	2.9 J	4.5	0.63	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Barium	120	22	2.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium [a]	0.80	0.45	0.18	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Cadmium	0.079 U	0.56	0.079	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	1950	560	50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	27.3	1.1	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt [a]	11.7	11	0.63	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Copper [a]	16.6	5.6	1.9	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Iron	23600	110	43	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	9.1	4.5	0.92	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Magnesium	10600	560	15	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	427	3.4	0.92	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.038	0.033	0.014	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	25.4	4.5	0.39	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	9760	1100	36	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	1.5 U	4.5	1.5	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.61 J	1.1	0.38	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Sodium	272 J	1100	87	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.3 U	2.2	1.3	mg/kg	2	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Vanadium	33.2	5.6	0.21	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	73.8	5.6	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Instrument QC Batch: MA46568
(4) Prep QC Batch: MP14302
(5) Prep QC Batch: MP14400

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	PCTP-17R(7-9)		
Lab Sample ID:	JC86406-6	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	89.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.58	0.24	0.12	mg/kg	1	04/25/19 15:30	KI	SW846 9012B/LACHAT
Solids, Percent	89.1			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(9-11)		
Lab Sample ID:	JC86406-7	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	58.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y184763.D	1	04/26/19 12:22	EH	n/a	n/a	VY8016
Run #2							

	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	119	19	9.5	ug/kg	
71-43-2	Benzene	1.9	0.95	0.72	ug/kg	
74-97-5	Bromochloromethane	ND	9.5	0.82	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.84	ug/kg	
75-25-2	Bromoform	ND	9.5	0.77	ug/kg	
74-83-9	Bromomethane	ND	9.5	1.9	ug/kg	
78-93-3	2-Butanone (MEK)	15.7	19	7.1	ug/kg	J
75-15-0	Carbon disulfide	4.8	3.8	1.8	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.67	ug/kg	
75-00-3	Chloroethane	ND	9.5	1.3	ug/kg	
67-66-3	Chloroform	ND	3.8	0.71	ug/kg	
74-87-3	Chloromethane	ND	9.5	3.7	ug/kg	
110-82-7	Cyclohexane	ND	3.8	0.77	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.8	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	3.8	0.64	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.9	0.62	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.58	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.68	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.65	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	9.5	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.9	0.73	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.9	0.89	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.9	1.2	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.9	1.8	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	1.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.8	0.77	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.67	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.62	ug/kg	
100-41-4	Ethylbenzene	ND	1.9	1.0	ug/kg	
76-13-1	Freon 113 [a]	ND	9.5	1.4	ug/kg	
591-78-6	2-Hexanone	ND	9.5	2.4	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(9-11)		
Lab Sample ID:	JC86406-7	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	58.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	3.8	1.3	ug/kg	
79-20-9	Methyl Acetate	ND	9.5	2.6	ug/kg	
108-87-2	Methylcyclohexane	1.3	3.8	1.3	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.9	0.67	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	9.5	3.0	ug/kg	
75-09-2	Methylene chloride	ND	9.5	4.7	ug/kg	
100-42-5	Styrene	ND	3.8	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane [b]	ND	3.8	0.74	ug/kg	
127-18-4	Tetrachloroethene	ND	3.8	0.88	ug/kg	
108-88-3	Toluene	ND	1.9	0.71	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	9.5	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	9.5	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.8	0.81	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	0.65	ug/kg	
79-01-6	Trichloroethene	ND	1.9	1.4	ug/kg	
75-69-4	Trichlorofluoromethane	ND	9.5	1.3	ug/kg	
75-01-4	Vinyl chloride	ND	3.8	0.89	ug/kg	
	m,p-Xylene	ND	1.9	1.4	ug/kg	
95-47-6	o-Xylene	ND	1.9	1.1	ug/kg	
1330-20-7	Xylene (total)	ND	1.9	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		75-127%
17060-07-0	1,2-Dichloroethane-D4	101%		75-130%
2037-26-5	Toluene-D8	87%		80-120%
460-00-4	4-Bromofluorobenzene	98%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(9-11)		
Lab Sample ID:	JC86406-7	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	58.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86740.D	1	04/19/19 03:00	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	110	28	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	280	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	280	49	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	145	280	100	ug/kg	J
51-28-5	2,4-Dinitrophenol	ND	280	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	280	61	ug/kg	
95-48-7	2-Methylphenol	215	110	36	ug/kg	
	3&4-Methylphenol	664	110	47	ug/kg	
88-75-5	2-Nitrophenol	ND	280	38	ug/kg	
100-02-7	4-Nitrophenol	ND	570	150	ug/kg	
87-86-5	Pentachlorophenol	ND	230	54	ug/kg	
108-95-2	Phenol	540	110	30	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	280	38	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	280	43	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	280	34	ug/kg	
83-32-9	Acenaphthene	239	57	20	ug/kg	
208-96-8	Acenaphthylene	102	57	29	ug/kg	
98-86-2	Acetophenone	ND	280	12	ug/kg	
120-12-7	Anthracene	721	57	35	ug/kg	
1912-24-9	Atrazine	ND	110	24	ug/kg	
56-55-3	Benzo(a)anthracene	409	57	16	ug/kg	
50-32-8	Benzo(a)pyrene	449	57	26	ug/kg	
205-99-2	Benzo(b)fluoranthene	505	57	25	ug/kg	
191-24-2	Benzo(g,h,i)perylene	289	57	28	ug/kg	
207-08-9	Benzo(k)fluoranthene	206	57	27	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	110	22	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	110	14	ug/kg	
92-52-4	1,1'-Biphenyl	61.7	110	7.8	ug/kg	J
100-52-7	Benzaldehyde	55.6	280	14	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	110	14	ug/kg	
106-47-8	4-Chloroaniline	ND	280	21	ug/kg	
86-74-8	Carbazole	113	110	8.3	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(9-11)
Lab Sample ID: JC86406-7
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 58.5

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	110	23	ug/kg	
218-01-9	Chrysene	527	57	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	110	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	25	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	110	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	110	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	57	18	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	57	29	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	48	ug/kg	
123-91-1	1,4-Dioxane	ND	57	38	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	67.7	57	25	ug/kg	
132-64-9	Dibenzofuran	158	110	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	9.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	110	14	ug/kg	
84-66-2	Diethyl phthalate	ND	110	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	110	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	110	13	ug/kg	
206-44-0	Fluoranthene	767	57	25	ug/kg	
86-73-7	Fluorene	190	57	26	ug/kg	
118-74-1	Hexachlorobenzene	ND	110	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	57	23	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	570	23	ug/kg	
67-72-1	Hexachloroethane	ND	280	28	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	247	57	27	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	205	57	13	ug/kg	
88-74-4	2-Nitroaniline	ND	280	13	ug/kg	
99-09-2	3-Nitroaniline	ND	280	14	ug/kg	
100-01-6	4-Nitroaniline	ND	280	15	ug/kg	
91-20-3	Naphthalene	652	57	16	ug/kg	
98-95-3	Nitrobenzene	ND	110	22	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	110	16	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	280	21	ug/kg	
85-01-8	Phenanthrene	1010	57	19	ug/kg	
129-00-0	Pyrene	807	57	18	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	280	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(9-11)		
Lab Sample ID:	JC86406-7	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	58.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	56%		27-114%
118-79-6	2,4,6-Tribromophenol	57%		19-152%
4165-60-0	Nitrobenzene-d5	64%		26-134%
321-60-8	2-Fluorobiphenyl	72%		39-124%
1718-51-0	Terphenyl-d14	62%		36-134%

(a) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(9-11)
Lab Sample ID: JC86406-7
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 58.5

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12100	89	14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.73 U	3.6	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	7.5	3.6	0.50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	62.4	36	3.4	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.71	0.36	0.14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.18 J	0.89	0.12	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	1250	890	79	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	22.2	1.8	0.66	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	9.2	8.9	0.50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	27.9	4.5	1.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	23000	89	34	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	40.9	3.6	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3190	890	24	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	374	2.7	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	3.0	0.28	0.12	mg/kg	5	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	17.2	7.1	0.62	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1320 J	1800	57	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 U	3.6	1.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.30 U	0.89	0.30	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	409 J	1800	140	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	1.0 U	1.8	1.0	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	26.2	8.9	0.34	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	111	8.9	4.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	PCTP-17R(9-11)		
Lab Sample ID:	JC86406-7	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	58.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	9.5	0.43	0.21	mg/kg	1	04/25/19 15:31	KI	SW846 9012B/LACHAT
Solids, Percent	58.5			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264060.D	1	04/25/19 18:55	TDN	n/a	n/a	VD10643
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.2 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	2700	1400	ug/kg	
71-43-2	Benzene	ND	140	100	ug/kg	
74-97-5	Bromochloromethane	ND	1400	120	ug/kg	
75-27-4	Bromodichloromethane	ND	550	120	ug/kg	
75-25-2	Bromoform	ND	1400	110	ug/kg	
74-83-9	Bromomethane	ND	1400	270	ug/kg	
78-93-3	2-Butanone (MEK)	ND	2700	1000	ug/kg	
75-15-0	Carbon disulfide	7250	550	250	ug/kg	
56-23-5	Carbon tetrachloride	ND	550	150	ug/kg	
108-90-7	Chlorobenzene	ND	550	97	ug/kg	
75-00-3	Chloroethane	ND	1400	190	ug/kg	
67-66-3	Chloroform	ND	550	100	ug/kg	
74-87-3	Chloromethane	ND	1400	540	ug/kg	
110-82-7	Cyclohexane	ND	550	110	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	550	230	ug/kg	
124-48-1	Dibromochloromethane	ND	550	93	ug/kg	
106-93-4	1,2-Dibromoethane	ND	270	89	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	270	84	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	99	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	94	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	1400	170	ug/kg	
75-34-3	1,1-Dichloroethane	ND	270	110	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	270	130	ug/kg	
75-35-4	1,1-Dichloroethene	ND	270	180	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	270	260	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	270	180	ug/kg	
78-87-5	1,2-Dichloropropane	ND	550	110	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	550	97	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	550	90	ug/kg	
100-41-4	Ethylbenzene	ND	270	150	ug/kg	
76-13-1	Freon 113	ND	1400	210	ug/kg	
591-78-6	2-Hexanone	ND	1400	350	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	353	550	190	ug/kg	J
79-20-9	Methyl Acetate	2900	1400	380	ug/kg	
108-87-2	Methylcyclohexane	1210	550	190	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	270	97	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1400	430	ug/kg	
75-09-2	Methylene chloride	ND	1400	690	ug/kg	
100-42-5	Styrene	ND	550	160	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	550	110	ug/kg	
127-18-4	Tetrachloroethene	ND	550	130	ug/kg	
108-88-3	Toluene	1070	270	100	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1400	270	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1400	270	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	550	120	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	550	94	ug/kg	
79-01-6	Trichloroethene	ND	270	210	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1400	190	ug/kg	
75-01-4	Vinyl chloride	ND	550	130	ug/kg	
	m,p-Xylene	248	270	200	ug/kg	J
95-47-6	o-Xylene	173	270	160	ug/kg	J
1330-20-7	Xylene (total)	421	270	160	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		75-127%
17060-07-0	1,2-Dichloroethane-D4	90%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	101%		79-127%

(a) Diluted due to high concentration of non-target compound.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86741.D	1	04/19/19 03:22	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	31.8 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	120	30	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	300	37	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	300	51	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	300	110	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	300	230	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	300	65	ug/kg	
95-48-7	2-Methylphenol	ND	120	39	ug/kg	
	3&4-Methylphenol	319	120	50	ug/kg	
88-75-5	2-Nitrophenol	ND	300	40	ug/kg	
100-02-7	4-Nitrophenol	ND	600	160	ug/kg	
87-86-5	Pentachlorophenol	ND	240	57	ug/kg	
108-95-2	Phenol	ND	120	32	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	300	40	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	300	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	300	36	ug/kg	
83-32-9	Acenaphthene	1760	60	21	ug/kg	
208-96-8	Acenaphthylene	237	60	31	ug/kg	
98-86-2	Acetophenone	ND	300	13	ug/kg	
120-12-7	Anthracene	919	60	37	ug/kg	
1912-24-9	Atrazine	ND	120	26	ug/kg	
56-55-3	Benzo(a)anthracene	884	60	17	ug/kg	
50-32-8	Benzo(a)pyrene	799	60	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	809	60	27	ug/kg	
191-24-2	Benzo(g,h,i)perylene	354	60	30	ug/kg	
207-08-9	Benzo(k)fluoranthene	259	60	28	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	120	23	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	120	15	ug/kg	
92-52-4	1,1'-Biphenyl	79.3	120	8.3	ug/kg	J
100-52-7	Benzaldehyde	ND	300	15	ug/kg	
91-58-7	2-Chloronaphthalene	ND	120	14	ug/kg	
106-47-8	4-Chloroaniline	ND	300	22	ug/kg	
86-74-8	Carbazole	42.0	120	8.8	ug/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	120	24	ug/kg	
218-01-9	Chrysene	1250	60	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	120	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	120	26	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	120	22	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	120	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	60	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	60	30	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	120	50	ug/kg	
123-91-1	1,4-Dioxane	ND	60	40	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	97.6	60	27	ug/kg	
132-64-9	Dibenzofuran	197	120	25	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	120	9.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	120	15	ug/kg	
84-66-2	Diethyl phthalate	ND	120	13	ug/kg	
131-11-3	Dimethyl phthalate	ND	120	11	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	120	14	ug/kg	
206-44-0	Fluoranthene	2190	60	27	ug/kg	
86-73-7	Fluorene	ND	60	28	ug/kg	
118-74-1	Hexachlorobenzene	ND	120	15	ug/kg	
87-68-3	Hexachlorobutadiene	ND	60	24	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	600	24	ug/kg	
67-72-1	Hexachloroethane	ND	300	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	269	60	28	ug/kg	
78-59-1	Isophorone	ND	120	13	ug/kg	
91-57-6	2-Methylnaphthalene	467	60	14	ug/kg	
88-74-4	2-Nitroaniline	ND	300	14	ug/kg	
99-09-2	3-Nitroaniline	ND	300	15	ug/kg	
100-01-6	4-Nitroaniline	ND	300	16	ug/kg	
91-20-3	Naphthalene	991	60	17	ug/kg	
98-95-3	Nitrobenzene	ND	120	23	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	120	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	300	22	ug/kg	
85-01-8	Phenanthrene	4230	60	20	ug/kg	
129-00-0	Pyrene	2390	60	19	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	300	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	64%		27-114%
118-79-6	2,4,6-Tribromophenol	68%		19-152%
4165-60-0	Nitrobenzene-d5	79%		26-134%
321-60-8	2-Fluorobiphenyl	81%		39-124%
1718-51-0	Terphenyl-d14	72%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(18-20)
Lab Sample ID: JC86406-8
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 52.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14400	92	15	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.76 U	3.7	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	14.6	3.7	0.52	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	312	37	3.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.61	0.37	0.15	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.87 J	0.92	0.13	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	2910	920	82	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	32.5	1.8	0.68	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	7.2 J	9.2	0.52	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	288	4.6	1.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	27800	92	35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	697	3.7	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2530	920	25	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	204	2.8	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	1.3	0.056	0.024	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	22.7	7.4	0.65	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1170 J	1800	59	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 U	3.7	1.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.66 J	0.92	0.31	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	589 J	1800	140	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	1.1 U	1.8	1.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	70.6	9.2	0.35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	448	9.2	4.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	PCTP-17R(18-20)		
Lab Sample ID:	JC86406-8	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	52.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	3.0	0.41	0.21	mg/kg	1	04/25/19 15:32	KI	SW846 9012B/LACHAT
Solids, Percent	52.1			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y184762.D	1	04/26/19 11:53	EH	n/a	n/a	VY8016
Run #2							

	Initial Weight
Run #1	3.2 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	495	30	15	ug/kg	
71-43-2	Benzene	ND	1.5	1.1	ug/kg	
74-97-5	Bromochloromethane	ND	15	1.3	ug/kg	
75-27-4	Bromodichloromethane	ND	5.9	1.3	ug/kg	
75-25-2	Bromoform	ND	15	1.2	ug/kg	
74-83-9	Bromomethane	ND	15	3.0	ug/kg	
78-93-3	2-Butanone (MEK)	117	30	11	ug/kg	
75-15-0	Carbon disulfide	5.0	5.9	2.8	ug/kg	J
56-23-5	Carbon tetrachloride	ND	5.9	1.6	ug/kg	
108-90-7	Chlorobenzene	ND	5.9	1.0	ug/kg	
75-00-3	Chloroethane	ND	15	2.0	ug/kg	
67-66-3	Chloroform	ND	5.9	1.1	ug/kg	
74-87-3	Chloromethane	ND	15	5.8	ug/kg	
110-82-7	Cyclohexane	ND	5.9	1.2	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.9	2.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.9	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	3.0	0.96	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	3.0	0.90	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	3.0	1.1	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	3.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	15	1.9	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.0	1.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.0	1.4	ug/kg	
75-35-4	1,1-Dichloroethene	ND	3.0	1.9	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	3.0	2.8	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	3.0	2.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.9	1.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.9	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.9	0.97	ug/kg	
100-41-4	Ethylbenzene	ND	3.0	1.6	ug/kg	
76-13-1	Freon 113 [a]	ND	15	2.3	ug/kg	
591-78-6	2-Hexanone	ND	15	3.8	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	5.9	2.1	ug/kg	
79-20-9	Methyl Acetate	ND	15	4.1	ug/kg	
108-87-2	Methylcyclohexane	5.3	5.9	2.1	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	3.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	15	4.6	ug/kg	
75-09-2	Methylene chloride	ND	15	7.4	ug/kg	
100-42-5	Styrene	ND	5.9	1.7	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane [b]	ND	5.9	1.2	ug/kg	
127-18-4	Tetrachloroethene	ND	5.9	1.4	ug/kg	
108-88-3	Toluene	ND	3.0	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	15	3.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	15	3.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.9	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.9	1.0	ug/kg	
79-01-6	Trichloroethene	ND	3.0	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	15	2.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.9	1.4	ug/kg	
	m,p-Xylene	ND	3.0	2.2	ug/kg	
95-47-6	o-Xylene	ND	3.0	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	3.0	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		75-127%
17060-07-0	1,2-Dichloroethane-D4	102%		75-130%
2037-26-5	Toluene-D8	87%		80-120%
460-00-4	4-Bromofluorobenzene	98%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86734.D	1	04/19/19 00:48	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	130	31	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	320	39	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	320	54	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	320	110	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	320	240	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	320	68	ug/kg	
95-48-7	2-Methylphenol	ND	130	40	ug/kg	
	3&4-Methylphenol	ND	130	52	ug/kg	
88-75-5	2-Nitrophenol	ND	320	42	ug/kg	
100-02-7	4-Nitrophenol	ND	630	170	ug/kg	
87-86-5	Pentachlorophenol	ND	250	59	ug/kg	
108-95-2	Phenol	ND	130	33	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	320	42	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	320	47	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	320	38	ug/kg	
83-32-9	Acenaphthene	105	63	22	ug/kg	
208-96-8	Acenaphthylene	ND	63	32	ug/kg	
98-86-2	Acetophenone	ND	320	14	ug/kg	
120-12-7	Anthracene	55.9	63	39	ug/kg	J
1912-24-9	Atrazine	ND	130	27	ug/kg	
56-55-3	Benzo(a)anthracene	31.4	63	18	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	63	29	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	63	28	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	63	32	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	63	30	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	130	24	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	130	15	ug/kg	
92-52-4	1,1'-Biphenyl	17.0	130	8.7	ug/kg	J
100-52-7	Benzaldehyde	ND	320	16	ug/kg	
91-58-7	2-Chloronaphthalene	ND	130	15	ug/kg	
106-47-8	4-Chloroaniline	ND	320	23	ug/kg	
86-74-8	Carbazole	21.8	130	9.2	ug/kg	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	130	25	ug/kg	
218-01-9	Chrysene	31.4	63	20	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	130	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	130	27	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	130	23	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	130	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	63	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	63	32	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	130	53	ug/kg	
123-91-1	1,4-Dioxane	ND	63	42	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	63	28	ug/kg	
132-64-9	Dibenzofuran	41.7	130	26	ug/kg	J
84-74-2	Di-n-butyl phthalate	ND	130	10	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	130	16	ug/kg	
84-66-2	Diethyl phthalate	ND	130	13	ug/kg	
131-11-3	Dimethyl phthalate	ND	130	11	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	130	15	ug/kg	
206-44-0	Fluoranthene	67.1	63	28	ug/kg	
86-73-7	Fluorene	76.2	63	29	ug/kg	
118-74-1	Hexachlorobenzene	ND	130	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	63	25	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	630	25	ug/kg	
67-72-1	Hexachloroethane	ND	320	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	63	30	ug/kg	
78-59-1	Isophorone	ND	130	14	ug/kg	
91-57-6	2-Methylnaphthalene	74.2	63	14	ug/kg	
88-74-4	2-Nitroaniline	ND	320	15	ug/kg	
99-09-2	3-Nitroaniline	ND	320	16	ug/kg	
100-01-6	4-Nitroaniline	ND	320	16	ug/kg	
91-20-3	Naphthalene	149	63	18	ug/kg	
98-95-3	Nitrobenzene	ND	130	24	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	130	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	320	23	ug/kg	
85-01-8	Phenanthrene	232	63	21	ug/kg	
129-00-0	Pyrene	68.0	63	20	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	320	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		23-115%

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	69%		27-114%
118-79-6	2,4,6-Tribromophenol	55%		19-152%
4165-60-0	Nitrobenzene-d5	80%		26-134%
321-60-8	2-Fluorobiphenyl	80%		39-124%
1718-51-0	Terphenyl-d14	71%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PCTP-17R(24-25)
Lab Sample ID: JC86406-9
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 52.7

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11800	92	15	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.76 U	3.7	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	7.6	3.7	0.52	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	41.7	37	3.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.68	0.37	0.15	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.13 U	0.92	0.13	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	1060	920	81	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	18.9	1.8	0.68	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	12.3	9.2	0.52	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	16.6	4.6	1.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	22600	92	35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	18.3	3.7	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3180	920	25	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	493	2.8	0.76	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.057	0.056	0.024	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	18.5	7.4	0.64	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1410 J	1800	59	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 U	3.7	1.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.31 U	0.92	0.31	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	140 U	1800	140	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	1.1 U	1.8	1.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	24.4	9.2	0.35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	57.6	9.2	4.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	PCTP-17R(24-25)		
Lab Sample ID:	JC86406-9	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	52.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	1.5	0.41	0.20	mg/kg	1	04/25/19 15:37	KI	SW846 9012B/LACHAT
Solids, Percent	52.7			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V44288.D	1	04/24/19 14:12	RS	n/a	n/a	V3V1778
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	28.1	12	5.9	ug/kg	
71-43-2	Benzene	ND	0.59	0.45	ug/kg	
74-97-5	Bromochloromethane	ND	5.9	0.51	ug/kg	
75-27-4	Bromodichloromethane	ND	2.4	0.52	ug/kg	
75-25-2	Bromoform	ND	5.9	0.48	ug/kg	
74-83-9	Bromomethane	ND	5.9	1.2	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	4.4	ug/kg	
75-15-0	Carbon disulfide	ND	2.4	1.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.4	0.65	ug/kg	
108-90-7	Chlorobenzene	ND	2.4	0.42	ug/kg	
75-00-3	Chloroethane	ND	5.9	0.81	ug/kg	
67-66-3	Chloroform	ND	2.4	0.44	ug/kg	
74-87-3	Chloromethane	ND	5.9	2.3	ug/kg	
110-82-7	Cyclohexane [a]	ND	2.4	0.48	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.4	0.99	ug/kg	
124-48-1	Dibromochloromethane	ND	2.4	0.40	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.38	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.36	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.42	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.41	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.9	0.75	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.2	0.45	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.56	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.2	0.77	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.2	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	0.79	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.4	0.48	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.4	0.42	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.4	0.39	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.65	ug/kg	
76-13-1	Freon 113	ND	5.9	0.90	ug/kg	
591-78-6	2-Hexanone	ND	5.9	1.5	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.4	0.82	ug/kg	
79-20-9	Methyl Acetate	ND	5.9	1.6	ug/kg	
108-87-2	Methylcyclohexane [a]	ND	2.4	0.84	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.42	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.9	1.8	ug/kg	
75-09-2	Methylene chloride	ND	5.9	3.0	ug/kg	
100-42-5	Styrene	ND	2.4	0.68	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.4	0.46	ug/kg	
127-18-4	Tetrachloroethene	ND	2.4	0.55	ug/kg	
108-88-3	Toluene	ND	1.2	0.44	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.9	1.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.9	1.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.4	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.4	0.40	ug/kg	
79-01-6	Trichloroethene	ND	1.2	0.90	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.9	0.80	ug/kg	
75-01-4	Vinyl chloride	ND	2.4	0.55	ug/kg	
	m,p-Xylene	ND	1.2	0.88	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.69	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		75-127%
17060-07-0	1,2-Dichloroethane-D4	104%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	105%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153649.D	1	04/21/19 08:16	CB	04/19/19 07:45	OP19854	EM6566
Run #2							

	Initial Weight	Final Volume
Run #1	31.8 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	76	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	32	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	67	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	190	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol [a]	ND	190	41	ug/kg	
95-48-7	2-Methylphenol	ND	76	24	ug/kg	
	3&4-Methylphenol	ND	76	31	ug/kg	
88-75-5	2-Nitrophenol	ND	190	25	ug/kg	
100-02-7	4-Nitrophenol	ND	380	100	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	150	36	ug/kg	
108-95-2	Phenol	ND	76	20	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	25	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	23	ug/kg	
83-32-9	Acenaphthene	52.7	38	13	ug/kg	
208-96-8	Acenaphthylene	46.6	38	19	ug/kg	
98-86-2	Acetophenone	ND	190	8.1	ug/kg	
120-12-7	Anthracene	205	38	23	ug/kg	
1912-24-9	Atrazine	ND	76	16	ug/kg	
56-55-3	Benzo(a)anthracene	549	38	11	ug/kg	
50-32-8	Benzo(a)pyrene	565	38	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	664	38	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	351	38	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	228	38	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	76	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	76	9.2	ug/kg	
92-52-4	1,1'-Biphenyl	6.0	76	5.2	ug/kg	JB
100-52-7	Benzaldehyde	ND	190	9.4	ug/kg	
91-58-7	2-Chloronaphthalene	ND	76	9.0	ug/kg	
106-47-8	4-Chloroaniline	ND	190	14	ug/kg	
86-74-8	Carbazole	45.4	76	5.5	ug/kg	JB

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	76	15	ug/kg	
218-01-9	Chrysene	544	38	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	76	8.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	76	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	76	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	76	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	38	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	38	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	76	32	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	38	25	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	78.6	38	17	ug/kg	
132-64-9	Dibenzofuran	25.8	76	15	ug/kg	J
84-74-2	Di-n-butyl phthalate	ND	76	6.2	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	76	9.4	ug/kg	
84-66-2	Diethyl phthalate	ND	76	8.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	76	6.7	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	76	8.9	ug/kg	
206-44-0	Fluoranthene	1190	38	17	ug/kg	
86-73-7	Fluorene	58.0	38	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	76	9.6	ug/kg	
87-68-3	Hexachlorobutadiene	ND	38	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene [a]	ND	380	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	341	38	18	ug/kg	
78-59-1	Isophorone	ND	76	8.1	ug/kg	
91-57-6	2-Methylnaphthalene	10.9	38	8.6	ug/kg	J
88-74-4	2-Nitroaniline	ND	190	8.9	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.5	ug/kg	
100-01-6	4-Nitroaniline	ND	190	9.8	ug/kg	
91-20-3	Naphthalene	19.7	38	11	ug/kg	J
98-95-3	Nitrobenzene	ND	76	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	76	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	827	38	13	ug/kg	
129-00-0	Pyrene	1080	38	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	37%		27-114%
118-79-6	2,4,6-Tribromophenol	65%		19-152%
4165-60-0	Nitrobenzene-d5	45%		26-134%
321-60-8	2-Fluorobiphenyl	51%		39-124%
1718-51-0	Terphenyl-d14	50%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-114(2-4)
Lab Sample ID: JC86406-10
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 83.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12200	57	9.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.47 U	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	7.0	2.3	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	76.0	23	2.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.75	0.23	0.092	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.18 J	0.57	0.080	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	6050	570	51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	21.4	1.1	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	5.0 J	5.7	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	18.1	2.9	0.96	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	15700	57	22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	193	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2330	570	16	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	160	1.7	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.57	0.038	0.017	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	10.6	4.6	0.40	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1210	1100	36	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 J	2.3	0.75	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.20 U	0.57	0.20	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	98.2 J	1100	89	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.67 U	1.1	0.67	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	25.0	5.7	0.22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	80.7	5.7	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-114(2-4)		
Lab Sample ID:	JC86406-10	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	83.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.14 U	0.29	0.14	mg/kg	1	04/25/19 15:12	KI	SW846 9012B/LACHAT
Solids, Percent	83			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V44295.D	1	04/24/19 17:13	RS	n/a	n/a	V3V1778
Run #2							

	Initial Weight
Run #1	5.2 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	70.3	14	7.1	ug/kg	
71-43-2	Benzene	ND	0.71	0.54	ug/kg	
74-97-5	Bromochloromethane	ND	7.1	0.61	ug/kg	
75-27-4	Bromodichloromethane	ND	2.9	0.63	ug/kg	
75-25-2	Bromoform	ND	7.1	0.58	ug/kg	
74-83-9	Bromomethane	ND	7.1	1.4	ug/kg	
78-93-3	2-Butanone (MEK)	13.7	14	5.3	ug/kg	J
75-15-0	Carbon disulfide	ND	2.9	1.3	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.9	0.79	ug/kg	
108-90-7	Chlorobenzene	ND	2.9	0.51	ug/kg	
75-00-3	Chloroethane	ND	7.1	0.98	ug/kg	
67-66-3	Chloroform	ND	2.9	0.53	ug/kg	
74-87-3	Chloromethane	ND	7.1	2.8	ug/kg	
110-82-7	Cyclohexane [a]	ND	2.9	0.58	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.9	1.2	ug/kg	
124-48-1	Dibromochloromethane	ND	2.9	0.48	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.4	0.46	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.4	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.4	0.51	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.4	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.1	0.91	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.4	0.55	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.67	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.4	0.94	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.4	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.4	0.95	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.9	0.58	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.9	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.9	0.47	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	0.79	ug/kg	
76-13-1	Freon 113	ND	7.1	1.1	ug/kg	
591-78-6	2-Hexanone	ND	7.1	1.8	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.9	1.0	ug/kg	
79-20-9	Methyl Acetate	ND	7.1	2.0	ug/kg	
108-87-2	Methylcyclohexane [a]	ND	2.9	1.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.1	2.2	ug/kg	
75-09-2	Methylene chloride	ND	7.1	3.6	ug/kg	
100-42-5	Styrene	ND	2.9	0.82	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.9	0.56	ug/kg	
127-18-4	Tetrachloroethene	ND	2.9	0.66	ug/kg	
108-88-3	Toluene	ND	1.4	0.54	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.1	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.1	1.4	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.9	0.61	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.9	0.49	ug/kg	
79-01-6	Trichloroethene	ND	1.4	1.1	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.1	0.97	ug/kg	
75-01-4	Vinyl chloride	ND	2.9	0.67	ug/kg	
	m,p-Xylene	ND	1.4	1.1	ug/kg	
95-47-6	o-Xylene	ND	1.4	0.83	ug/kg	
1330-20-7	Xylene (total)	ND	1.4	0.83	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		75-127%
17060-07-0	1,2-Dichloroethane-D4	105%		75-130%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	99%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86749.D	1	04/19/19 06:16	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	Z137309.D	20	04/26/19 20:39	AR	04/17/19 18:45	OP19810	EZ6764

	Initial Weight	Final Volume
Run #1	30.7 g	1.0 ml
Run #2	30.7 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	97	24	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	240	30	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	240	41	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	240	86	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	240	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	240	52	ug/kg	
95-48-7	2-Methylphenol	ND	97	31	ug/kg	
	3&4-Methylphenol	152	97	40	ug/kg	
88-75-5	2-Nitrophenol	ND	240	32	ug/kg	
100-02-7	4-Nitrophenol	ND	480	130	ug/kg	
87-86-5	Pentachlorophenol	ND	190	45	ug/kg	
108-95-2	Phenol	ND	97	25	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	240	32	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	240	36	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	240	29	ug/kg	
83-32-9	Acenaphthene	17200 [b]	970	330	ug/kg	
208-96-8	Acenaphthylene	10500 [b]	970	490	ug/kg	
98-86-2	Acetophenone	ND	240	10	ug/kg	
120-12-7	Anthracene	23200 [b]	970	590	ug/kg	
1912-24-9	Atrazine	ND	97	21	ug/kg	
56-55-3	Benzo(a)anthracene	25900 [b]	970	270	ug/kg	
50-32-8	Benzo(a)pyrene	23700 [b]	970	440	ug/kg	
205-99-2	Benzo(b)fluoranthene	24900 [b]	970	430	ug/kg	
191-24-2	Benzo(g,h,i)perylene	13600 [b]	970	480	ug/kg	
207-08-9	Benzo(k)fluoranthene	9920 [b]	970	450	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	97	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	97	12	ug/kg	
92-52-4	1,1'-Biphenyl	525	97	6.6	ug/kg	
100-52-7	Benzaldehyde	ND	240	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	97	12	ug/kg	
106-47-8	4-Chloroaniline	ND	240	17	ug/kg	
86-74-8	Carbazole	6910 [b]	1900	140	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	97	19	ug/kg	
218-01-9	Chrysene	22500 b	970	300	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	97	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	97	21	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	97	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	97	16	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	48	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	48	24	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	97	40	ug/kg	
123-91-1	1,4-Dioxane	ND	48	32	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	2280	48	21	ug/kg	
132-64-9	Dibenzofuran	13600 b	1900	390	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	97	7.9	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	97	12	ug/kg	
84-66-2	Diethyl phthalate	ND	97	10	ug/kg	
131-11-3	Dimethyl phthalate	ND	97	8.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	97	11	ug/kg	
206-44-0	Fluoranthene	72700 b	970	430	ug/kg	
86-73-7	Fluorene	24700 b	970	440	ug/kg	
118-74-1	Hexachlorobenzene	ND	97	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	48	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	480	19	ug/kg	
67-72-1	Hexachloroethane	ND	240	24	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	14800 b	970	450	ug/kg	
78-59-1	Isophorone	ND	97	10	ug/kg	
91-57-6	2-Methylnaphthalene	327	48	11	ug/kg	
88-74-4	2-Nitroaniline	ND	240	11	ug/kg	
99-09-2	3-Nitroaniline	ND	240	12	ug/kg	
100-01-6	4-Nitroaniline	ND	240	13	ug/kg	
91-20-3	Naphthalene	1180	48	14	ug/kg	
98-95-3	Nitrobenzene	ND	97	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	97	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	18	ug/kg	
85-01-8	Phenanthrene	39700 b	970	330	ug/kg	
129-00-0	Pyrene	56400 b	970	310	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	240	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%	44%	23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	51%	53%	27-114%
118-79-6	2,4,6-Tribromophenol	72%	0% [c]	19-152%
4165-60-0	Nitrobenzene-d5	62%	58%	26-134%
321-60-8	2-Fluorobiphenyl	71%	71%	39-124%
1718-51-0	Terphenyl-d14	56%	79%	36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-114(8-10)
Lab Sample ID: JC86406-11
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 67.3

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11700	76	12	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.62 U	3.0	0.62	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic	6.9	3.0	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Barium	42.0	30	2.9	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.59	0.30	0.12	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.11 U	0.76	0.11	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	645 J	760	67	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium [a]	19.5	1.5	0.56	mg/kg	1	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Cobalt	8.2	7.6	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper	13.8	3.8	1.3	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Iron	20000	76	29	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Lead	14.8	3.0	0.62	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Magnesium	2430	760	21	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	335	2.3	0.62	mg/kg	1	04/19/19	04/23/19	ND	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.81	0.047	0.021	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	14.7	6.1	0.53	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	1090 J	1500	48	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium	0.99 U	3.0	0.99	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Silver	0.26 U	0.76	0.26	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Sodium	120 U	1500	120	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.88 U	1.5	0.88	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Vanadium	24.6	7.6	0.29	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	45.1	7.6	3.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Instrument QC Batch: MA46568
(4) Prep QC Batch: MP14302
(5) Prep QC Batch: MP14400

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-114(8-10)		
Lab Sample ID:	JC86406-11	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	67.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.59	0.37	0.19	mg/kg	1	04/25/19 15:13	KI	SW846 9012B/LACHAT
Solids, Percent	67.3			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(14-15)		
Lab Sample ID:	JC86406-12	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	72.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264078.D	1	04/26/19 15:01	JTP	n/a	n/a	VD10644
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.2 g	10.0 ml	10.0 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	24000	12000	ug/kg	
71-43-2	Benzene	20800	1200	890	ug/kg	
74-97-5	Bromochloromethane	ND	12000	1000	ug/kg	
75-27-4	Bromodichloromethane	ND	4700	1000	ug/kg	
75-25-2	Bromoform	ND	12000	950	ug/kg	
74-83-9	Bromomethane	ND	12000	2400	ug/kg	
78-93-3	2-Butanone (MEK)	ND	24000	8800	ug/kg	
75-15-0	Carbon disulfide	5260	4700	2200	ug/kg	
56-23-5	Carbon tetrachloride	ND	4700	1300	ug/kg	
108-90-7	Chlorobenzene	ND	4700	840	ug/kg	
75-00-3	Chloroethane	ND	12000	1600	ug/kg	
67-66-3	Chloroform	ND	4700	880	ug/kg	
74-87-3	Chloromethane	ND	12000	4600	ug/kg	
110-82-7	Cyclohexane	ND	4700	960	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4700	2000	ug/kg	
124-48-1	Dibromochloromethane	ND	4700	800	ug/kg	
106-93-4	1,2-Dibromoethane [b]	ND	2400	770	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2400	720	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2400	850	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2400	810	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	12000	1500	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2400	910	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	2400	1100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2400	1500	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2400	2300	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2400	1600	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4700	960	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4700	830	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4700	770	ug/kg	
100-41-4	Ethylbenzene	1950	2400	1300	ug/kg	J
76-13-1	Freon 113	ND	12000	1800	ug/kg	
591-78-6	2-Hexanone	ND	12000	3000	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(14-15)		
Lab Sample ID:	JC86406-12	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	72.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4700	1600	ug/kg	
79-20-9	Methyl Acetate	ND	12000	3300	ug/kg	
108-87-2	Methylcyclohexane	ND	4700	1700	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2400	830	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	12000	3700	ug/kg	
75-09-2	Methylene chloride	ND	12000	5900	ug/kg	
100-42-5	Styrene	5570	4700	1400	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4700	920	ug/kg	
127-18-4	Tetrachloroethene	ND	4700	1100	ug/kg	
108-88-3	Toluene	26600	2400	890	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	12000	2400	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	12000	2400	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4700	1000	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4700	810	ug/kg	
79-01-6	Trichloroethene	ND	2400	1800	ug/kg	
75-69-4	Trichlorofluoromethane	ND	12000	1600	ug/kg	
75-01-4	Vinyl chloride	ND	4700	1100	ug/kg	
	m,p-Xylene	37000	2400	1800	ug/kg	
95-47-6	o-Xylene	12400	2400	1400	ug/kg	
1330-20-7	Xylene (total)	49400	2400	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		75-127%
17060-07-0	1,2-Dichloroethane-D4	90%		75-130%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	92%		79-127%

(a) Diluted due to high concentration of non-target compound.
(b) This compound in BS is outside in house QC limits bias high.
(c) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(14-15)		
Lab Sample ID:	JC86406-12	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	72.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P86776.D	10	04/22/19 21:22	YC	04/17/19 18:45	OP19810	E2P3832
Run #2	2P86919.D	100	04/27/19 08:16	CS	04/17/19 18:45	OP19810	E2P3839
Run #3	2P86913.D	1000	04/27/19 06:09	CS	04/17/19 18:45	OP19810	E2P3839

	Initial Weight	Final Volume
Run #1	32.0 g	1.0 ml
Run #2	32.0 g	1.0 ml
Run #3	32.0 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	870	210	ug/kg	
59-50-7	4-Chloro-3-methyl phenol [b]	ND	2200	270	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	2200	370	ug/kg	
105-67-9	2,4-Dimethylphenol [c]	10700	2200	770	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	2200	1600	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2200	460	ug/kg	
95-48-7	2-Methylphenol	818	870	280	ug/kg	J
	3&4-Methylphenol	1750	870	360	ug/kg	
88-75-5	2-Nitrophenol	ND	2200	290	ug/kg	
100-02-7	4-Nitrophenol	ND	4300	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	1700	410	ug/kg	
108-95-2	Phenol	771	870	230	ug/kg	J
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2200	290	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	2200	320	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	2200	260	ug/kg	
83-32-9	Acenaphthene	253000 [d]	4300	1500	ug/kg	
208-96-8	Acenaphthylene	425000 [d]	4300	2200	ug/kg	
98-86-2	Acetophenone	ND	2200	93	ug/kg	
120-12-7	Anthracene	580000 [e]	43000	27000	ug/kg	
1912-24-9	Atrazine	ND	870	190	ug/kg	
56-55-3	Benzo(a)anthracene	428000 [e]	43000	12000	ug/kg	
50-32-8	Benzo(a)pyrene	396000 [d]	4300	2000	ug/kg	
205-99-2	Benzo(b)fluoranthene	430000 [e]	43000	19000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	188000 [d]	4300	2200	ug/kg	
207-08-9	Benzo(k)fluoranthene	172000 [e]	43000	20000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	870	170	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	870	110	ug/kg	
92-52-4	1,1'-Biphenyl	132000 [d]	8700	590	ug/kg	
100-52-7	Benzaldehyde	ND	2200	110	ug/kg	
91-58-7	2-Chloronaphthalene	ND	870	100	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-114(14-15)
Lab Sample ID: JC86406-12
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 72.1

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
106-47-8	4-Chloroaniline	ND	2200	160	ug/kg	
86-74-8	Carbazole	277000 [d]	8700	630	ug/kg	
105-60-2	Caprolactam	ND	870	170	ug/kg	
218-01-9	Chrysene	435000 [e]	43000	14000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	870	93	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	870	190	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	870	160	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	870	140	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	430	130	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	430	220	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	870	360	ug/kg	
123-91-1	1,4-Dioxane	ND	430	290	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	61300 [d]	4300	1900	ug/kg	
132-64-9	Dibenzofuran	546000 [e]	87000	18000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	870	71	ug/kg	
117-84-0	Di-n-octyl phthalate [b]	ND	870	110	ug/kg	
84-66-2	Diethyl phthalate	ND	870	92	ug/kg	
131-11-3	Dimethyl phthalate	ND	870	77	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [b]	ND	870	100	ug/kg	
206-44-0	Fluoranthene	1210000 [e]	43000	19000	ug/kg	
86-73-7	Fluorene	821000 [e]	43000	20000	ug/kg	
118-74-1	Hexachlorobenzene	ND	870	110	ug/kg	
87-68-3	Hexachlorobutadiene	ND	430	170	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	4300	170	ug/kg	
67-72-1	Hexachloroethane	ND	2200	210	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	180000 [d]	4300	2000	ug/kg	
78-59-1	Isophorone	ND	870	93	ug/kg	
91-57-6	2-Methylnaphthalene	499000 [e]	43000	9800	ug/kg	
88-74-4	2-Nitroaniline	ND	2200	100	ug/kg	
99-09-2	3-Nitroaniline	ND	2200	110	ug/kg	
100-01-6	4-Nitroaniline	ND	2200	110	ug/kg	
91-20-3	Naphthalene	3010000 [e]	43000	12000	ug/kg	
98-95-3	Nitrobenzene	ND	870	170	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	870	130	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	2200	160	ug/kg	
85-01-8	Phenanthrene	2340000 [e]	43000	15000	ug/kg	
129-00-0	Pyrene	859000 [e]	43000	14000	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2200	110	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(14-15)		
Lab Sample ID:	JC86406-12	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	72.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	51%	27%	0% f	23-115%
4165-62-2	Phenol-d5	66%	35%	0% f	27-114%
118-79-6	2,4,6-Tribromophenol	112%	42%	0% f	19-152%
4165-60-0	Nitrobenzene-d5	198% g	61%	0% f	26-134%
321-60-8	2-Fluorobiphenyl	62%	70%	0% f	39-124%
1718-51-0	Terphenyl-d14	70%	61%	0% f	36-134%

(a) Dilution required due to viscosity of the extract matrix.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits high. Estimated value, due to corresponding internal standard failing low.
(d) Result is from Run# 2
(e) Result is from Run# 3
(f) Outside control limits due to dilution.
(g) Outside control limits due to matrix interference.

Report of Analysis

Client Sample ID: S-114(14-15)
Lab Sample ID: JC86406-12
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 72.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10800	69	11	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.56 U	2.7	0.56	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	7.0	2.7	0.38	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	24.7 J	27	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.55	0.27	0.11	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.096 U	0.69	0.096	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	178 J	690	61	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	16.8	1.4	0.51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	9.1	6.9	0.38	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	13.2	3.4	1.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	21100	69	26	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	9.2	2.7	0.56	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2150	690	19	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	150	2.1	0.56	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	1.7	0.20	0.088	mg/kg	5	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	14.7	5.5	0.48	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	954 J	1400	44	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.89 U	2.7	0.89	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.23 U	0.69	0.23	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	162 J	1400	110	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.80 U	1.4	0.80	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	21.9	6.9	0.26	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	38.4	6.9	3.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-114(14-15)		
Lab Sample ID:	JC86406-12	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	72.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	12.1	0.30	0.15	mg/kg	1	04/25/19 15:15	KI	SW846 9012B/LACHAT
Solids, Percent	72.1			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(23-25)		
Lab Sample ID:	JC86406-13	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	59.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y184769.D	1	04/26/19 15:13	EH	n/a	n/a	VY8016
Run #2							

	Initial Weight
Run #1	4.9 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	213	17	8.6	ug/kg	
71-43-2	Benzene	0.84	0.86	0.65	ug/kg	J
74-97-5	Bromochloromethane	ND	8.6	0.74	ug/kg	
75-27-4	Bromodichloromethane	ND	3.4	0.76	ug/kg	
75-25-2	Bromoform	ND	8.6	0.69	ug/kg	
74-83-9	Bromomethane	ND	8.6	1.7	ug/kg	
78-93-3	2-Butanone (MEK)	62.6	17	6.4	ug/kg	
75-15-0	Carbon disulfide	5.6	3.4	1.6	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.4	0.95	ug/kg	
108-90-7	Chlorobenzene	ND	3.4	0.61	ug/kg	
75-00-3	Chloroethane	ND	8.6	1.2	ug/kg	
67-66-3	Chloroform	ND	3.4	0.64	ug/kg	
74-87-3	Chloromethane	ND	8.6	3.4	ug/kg	
110-82-7	Cyclohexane	ND	3.4	0.70	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.4	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	3.4	0.58	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.7	0.56	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.7	0.53	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.7	0.62	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.7	0.59	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.6	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.7	0.66	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.7	0.81	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.7	1.1	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.7	1.6	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	1.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.4	0.70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.4	0.61	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.4	0.56	ug/kg	
100-41-4	Ethylbenzene	ND	1.7	0.95	ug/kg	
76-13-1	Freon 113 [a]	ND	8.6	1.3	ug/kg	
591-78-6	2-Hexanone	ND	8.6	2.2	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(23-25)		
Lab Sample ID:	JC86406-13	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	59.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	2.5	3.4	1.2	ug/kg	J
79-20-9	Methyl Acetate	ND	8.6	2.4	ug/kg	
108-87-2	Methylcyclohexane	2.3	3.4	1.2	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.7	0.61	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.6	2.7	ug/kg	
75-09-2	Methylene chloride	ND	8.6	4.3	ug/kg	
100-42-5	Styrene	ND	3.4	0.99	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane [b]	ND	3.4	0.67	ug/kg	
127-18-4	Tetrachloroethene	ND	3.4	0.80	ug/kg	
108-88-3	Toluene	1.5	1.7	0.65	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	8.6	1.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.6	1.7	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.4	0.73	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.4	0.59	ug/kg	
79-01-6	Trichloroethene	ND	1.7	1.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.6	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	3.4	0.81	ug/kg	
	m,p-Xylene	ND	1.7	1.3	ug/kg	
95-47-6	o-Xylene	1.3	1.7	1.0	ug/kg	J
1330-20-7	Xylene (total)	1.3	1.7	1.0	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120%		75-127%
17060-07-0	1,2-Dichloroethane-D4	100%		75-130%
2037-26-5	Toluene-D8	87%		80-120%
460-00-4	4-Bromofluorobenzene	97%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-114(23-25)		
Lab Sample ID:	JC86406-13	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	59.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86735.D	1	04/19/19 01:10	CB	04/17/19 18:45	OP19810	E2P3831
Run #2							

	Initial Weight	Final Volume
Run #1	31.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	110	27	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	270	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	270	46	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	270	96	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	270	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	270	58	ug/kg	
95-48-7	2-Methylphenol	ND	110	34	ug/kg	
	3&4-Methylphenol	909	110	44	ug/kg	
88-75-5	2-Nitrophenol	ND	270	36	ug/kg	
100-02-7	4-Nitrophenol	ND	540	140	ug/kg	
87-86-5	Pentachlorophenol	ND	220	51	ug/kg	
108-95-2	Phenol	223	110	28	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	270	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	270	40	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	270	32	ug/kg	
83-32-9	Acenaphthene	ND	54	19	ug/kg	
208-96-8	Acenaphthylene	ND	54	27	ug/kg	
98-86-2	Acetophenone	ND	270	12	ug/kg	
120-12-7	Anthracene	ND	54	33	ug/kg	
1912-24-9	Atrazine	ND	110	23	ug/kg	
56-55-3	Benzo(a)anthracene	15.9	54	15	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	54	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	54	24	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	54	27	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	54	25	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	110	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	110	13	ug/kg	
92-52-4	1,1'-Biphenyl	ND	110	7.4	ug/kg	
100-52-7	Benzaldehyde	103	270	13	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	110	13	ug/kg	
106-47-8	4-Chloroaniline	ND	270	19	ug/kg	
86-74-8	Carbazole	ND	110	7.8	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-114(23-25)
Lab Sample ID: JC86406-13
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 59.2

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	110	21	ug/kg	
218-01-9	Chrysene	ND	54	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	110	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	23	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	110	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	110	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	54	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	54	27	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	45	ug/kg	
123-91-1	1,4-Dioxane	ND	54	36	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	54	24	ug/kg	
132-64-9	Dibenzofuran	ND	110	22	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	8.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	110	13	ug/kg	
84-66-2	Diethyl phthalate	ND	110	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	110	9.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	110	13	ug/kg	
206-44-0	Fluoranthene	27.2	54	24	ug/kg	J
86-73-7	Fluorene	32.5	54	25	ug/kg	J
118-74-1	Hexachlorobenzene	ND	110	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	54	22	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	540	21	ug/kg	
67-72-1	Hexachloroethane	ND	270	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	54	25	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	23.4	54	12	ug/kg	J
88-74-4	2-Nitroaniline	ND	270	13	ug/kg	
99-09-2	3-Nitroaniline	ND	270	13	ug/kg	
100-01-6	4-Nitroaniline	ND	270	14	ug/kg	
91-20-3	Naphthalene	136	54	15	ug/kg	
98-95-3	Nitrobenzene	ND	110	21	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	110	16	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	20	ug/kg	
85-01-8	Phenanthrene	65.8	54	18	ug/kg	
129-00-0	Pyrene	22.8	54	17	ug/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	270	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-114(23-25)		
Lab Sample ID:	JC86406-13	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	59.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	76%		27-114%
118-79-6	2,4,6-Tribromophenol	62%		19-152%
4165-60-0	Nitrobenzene-d5	90%		26-134%
321-60-8	2-Fluorobiphenyl	93%		39-124%
1718-51-0	Terphenyl-d14	89%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-114(23-25)
Lab Sample ID: JC86406-13
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 59.2

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14700	89	14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.73 U	3.6	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	8.3	3.6	0.50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	45.6	36	3.4	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.69	0.36	0.14	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.12 U	0.89	0.12	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	3380	890	79	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	27.5	1.8	0.66	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	9.7	8.9	0.50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	16.9	4.4	1.5	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	26700	89	34	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	14.3	3.6	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3360	890	24	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	259	2.7	0.73	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.029 J	0.055	0.024	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	19.7	7.1	0.62	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1460 J	1800	57	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 U	3.6	1.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.30 U	0.89	0.30	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	201 J	1800	140	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	1.0 U	1.8	1.0	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	30.8	8.9	0.34	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	55.6	8.9	4.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-114(23-25)		
Lab Sample ID:	JC86406-13	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	59.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	4.6	0.41	0.20	mg/kg	1	04/25/19 15:16	KI	SW846 9012B/LACHAT
Solids, Percent	59.2			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I225723.D	1	04/25/19 19:37	TDN	n/a	n/a	VI9093
Run #2 [a]	3V44294.D	1	04/24/19 16:47	RS	n/a	n/a	V3V1778
Run #3 [a]	D264075.D	1	04/26/19 13:34	JTP	n/a	n/a	VD10644

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.0 g		
Run #2	2.9 g		
Run #3	3.6 g	10.0 ml	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	37.9	19	9.5	ug/kg	
71-43-2	Benzene	0.86	0.95	0.71	ug/kg	J
74-97-5	Bromochloromethane	ND	9.5	0.81	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.84	ug/kg	
75-25-2	Bromoform	ND	9.5	0.76	ug/kg	
74-83-9	Bromomethane	ND	9.5	1.9	ug/kg	
78-93-3	2-Butanone (MEK)	ND	19	7.1	ug/kg	
75-15-0	Carbon disulfide	4.9	3.8	1.8	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.67	ug/kg	
75-00-3	Chloroethane	ND	9.5	1.3	ug/kg	
67-66-3	Chloroform	ND	3.8	0.70	ug/kg	
74-87-3	Chloromethane	ND	9.5	3.7	ug/kg	
110-82-7	Cyclohexane	ND	3.8	0.77	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.8	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	3.8	0.64	ug/kg	
106-93-4	1,2-Dibromoethane [b]	ND	1.9	0.61	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.58	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.68	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.65	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	9.5	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.9	0.73	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.9	0.89	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.9	1.2	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.9	1.8	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	1.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.8	0.77	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.67	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.62	ug/kg	
100-41-4	Ethylbenzene	ND	1.9	1.0	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	9.5	1.4	ug/kg	
591-78-6	2-Hexanone	ND	9.5	2.4	ug/kg	
98-82-8	Isopropylbenzene	ND	3.8	1.3	ug/kg	
79-20-9	Methyl Acetate	ND	9.5	2.6	ug/kg	
108-87-2	Methylcyclohexane	1.6	3.8	1.3	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.9	0.67	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	9.5	3.0	ug/kg	
75-09-2	Methylene chloride	ND	9.5	4.7	ug/kg	
100-42-5	Styrene	ND	3.8	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	0.74	ug/kg	
127-18-4	Tetrachloroethene	ND	3.8	0.87	ug/kg	
108-88-3	Toluene	ND	1.9	0.71	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	9.5	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	9.5	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.8	0.81	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	0.65	ug/kg	
79-01-6	Trichloroethene	ND	1.9	1.4	ug/kg	
75-69-4	Trichlorofluoromethane	ND	9.5	1.3	ug/kg	
75-01-4	Vinyl chloride	ND	3.8	0.89	ug/kg	
	m,p-Xylene	ND	1.9	1.4	ug/kg	
95-47-6	o-Xylene	ND	1.9	1.1	ug/kg	
1330-20-7	Xylene (total)	ND	1.9	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	109%	104%	98%	75-127%
17060-07-0	1,2-Dichloroethane-D4	119%	108%	89%	75-130%
2037-26-5	Toluene-D8	109%	126% [c]	98%	80-120%
460-00-4	4-Bromofluorobenzene	126%	132% [c]	89%	79-127%

(a) Confirmation run.
(b) This compound in BS is outside in house QC limits bias high.
(c) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86750.D	1	04/19/19 06:37	CB	04/17/19 18:45	OP19810	E2P3831
Run #2	Z137272.D	20	04/25/19 23:27	AR	04/17/19 18:45	OP19810	EZ6762
Run #3	Z137308.D	50	04/26/19 20:10	AR	04/17/19 18:45	OP19810	EZ6764

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2	30.3 g	1.0 ml
Run #3	30.3 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	75	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	32	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	77.2	190	67	ug/kg	J
51-28-5	2,4-Dinitrophenol	ND	190	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	190	40	ug/kg	
95-48-7	2-Methylphenol	133	75	24	ug/kg	
	3&4-Methylphenol	538	75	31	ug/kg	
88-75-5	2-Nitrophenol	ND	190	25	ug/kg	
100-02-7	4-Nitrophenol	ND	370	100	ug/kg	
87-86-5	Pentachlorophenol	ND	150	35	ug/kg	
108-95-2	Phenol	635	75	20	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	25	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	22	ug/kg	
83-32-9	Acenaphthene	427	37	13	ug/kg	
208-96-8	Acenaphthylene	10900 [b]	750	380	ug/kg	
98-86-2	Acetophenone	ND	190	8.1	ug/kg	
120-12-7	Anthracene	13400 [b]	750	460	ug/kg	
1912-24-9	Atrazine	ND	75	16	ug/kg	
56-55-3	Benzo(a)anthracene	40500 [b]	750	210	ug/kg	
50-32-8	Benzo(a)pyrene	36300 [b]	750	340	ug/kg	
205-99-2	Benzo(b)fluoranthene	49000 [b]	750	330	ug/kg	
191-24-2	Benzo(g,h,i)perylene [a]	22000 [b]	750	370	ug/kg	
207-08-9	Benzo(k)fluoranthene	21100 [b]	750	350	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	75	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	75	9.1	ug/kg	
92-52-4	1,1'-Biphenyl	438	75	5.1	ug/kg	
100-52-7	Benzaldehyde	ND	190	9.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	75	8.9	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
106-47-8	4-Chloroaniline	ND	190	13	ug/kg	
86-74-8	Carbazole	3160	75	5.4	ug/kg	
105-60-2	Caprolactam	ND	75	15	ug/kg	
218-01-9	Chrysene	39700 [b]	750	240	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	75	8.0	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	75	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	75	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	75	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	37	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	37	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	75	31	ug/kg	
123-91-1	1,4-Dioxane	ND	37	25	ug/kg	
53-70-3	Dibenzo(a,h)anthracene [a]	5350 [b]	750	330	ug/kg	
132-64-9	Dibenzofuran	4190 [b]	1500	300	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	75	6.1	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	75	9.3	ug/kg	
84-66-2	Diethyl phthalate	ND	75	8.0	ug/kg	
131-11-3	Dimethyl phthalate	ND	75	6.7	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	75	8.8	ug/kg	
206-44-0	Fluoranthene	73200 [c]	1900	840	ug/kg	
86-73-7	Fluorene	6440 [b]	750	340	ug/kg	
118-74-1	Hexachlorobenzene	ND	75	9.5	ug/kg	
87-68-3	Hexachlorobutadiene	ND	37	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	370	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	23400 [b]	750	350	ug/kg	
78-59-1	Isophorone	ND	75	8.0	ug/kg	
91-57-6	2-Methylnaphthalene	1200	37	8.5	ug/kg	
88-74-4	2-Nitroaniline	ND	190	8.8	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.4	ug/kg	
100-01-6	4-Nitroaniline	ND	190	9.7	ug/kg	
91-20-3	Naphthalene	1910	37	11	ug/kg	
98-95-3	Nitrobenzene	ND	75	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	75	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	46500 [b]	750	250	ug/kg	
129-00-0	Pyrene	69000 [b]	750	240	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.5	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	48%	52%	0% [d]	23-115%
4165-62-2	Phenol-d5	57%	59%	0% [d]	27-114%
118-79-6	2,4,6-Tribromophenol	73%	53%	0% [d]	19-152%
4165-60-0	Nitrobenzene-d5	61%	62%	0% [d]	26-134%
321-60-8	2-Fluorobiphenyl	80%	78%	60%	39-124%
1718-51-0	Terphenyl-d14	72%	86%	72%	36-134%

(a) Associated CCV outside of control limits high.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Outside control limits due to dilution.

Report of Analysis

Client Sample ID: S-109(2-4)
Lab Sample ID: JC86406-14
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 88.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8650	57	9.1	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.47 U	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	5.3	2.3	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	33.8	23	2.2	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.50	0.23	0.091	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.079 U	0.57	0.079	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	792	570	50	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	13.9	1.1	0.42	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	3.6 J	5.7	0.32	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	8.9	2.8	0.95	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	12700	57	22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	23.3	2.3	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1330	570	16	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	91.5	1.7	0.47	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.13	0.037	0.016	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	8.1	4.5	0.40	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	540 J	1100	36	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.74 U	2.3	0.74	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.19 U	0.57	0.19	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	157 J	1100	88	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.66 U	1.1	0.66	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	16.6	5.7	0.22	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	31.2	5.7	2.6	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-109(2-4)		
Lab Sample ID:	JC86406-14	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	88.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	5.5	0.28	0.14	mg/kg	1	04/25/19 15:20	KI	SW846 9012B/LACHAT
Solids, Percent	88.1			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y184768.D	1	04/26/19 14:45	EH	n/a	n/a	VY8016
Run #2							

	Initial Weight
Run #1	3.8 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	138	16	8.1	ug/kg	
71-43-2	Benzene	3.5	0.81	0.61	ug/kg	
74-97-5	Bromochloromethane	ND	8.1	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.72	ug/kg	
75-25-2	Bromoform	ND	8.1	0.65	ug/kg	
74-83-9	Bromomethane	ND	8.1	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	ND	16	6.1	ug/kg	
75-15-0	Carbon disulfide	4.1	3.2	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.89	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.57	ug/kg	
75-00-3	Chloroethane	ND	8.1	1.1	ug/kg	
67-66-3	Chloroform	ND	3.2	0.60	ug/kg	
74-87-3	Chloromethane	ND	8.1	3.2	ug/kg	
110-82-7	Cyclohexane	ND	3.2	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.2	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.55	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.6	0.53	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.6	0.49	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.58	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.6	0.56	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.1	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.76	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.6	1.1	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	1.6	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.6	1.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.57	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.53	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.89	ug/kg	
76-13-1	Freon 113 [a]	ND	8.1	1.2	ug/kg	
591-78-6	2-Hexanone	ND	8.1	2.1	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8260C	**Percent Solids:**	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	3.2	1.1	ug/kg	
79-20-9	Methyl Acetate	ND	8.1	2.3	ug/kg	
108-87-2	Methylcyclohexane	ND	3.2	1.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.6	0.57	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.1	2.5	ug/kg	
75-09-2	Methylene chloride	ND	8.1	4.1	ug/kg	
100-42-5	Styrene	ND	3.2	0.93	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane [b]	ND	3.2	0.63	ug/kg	
127-18-4	Tetrachloroethene	ND	3.2	0.75	ug/kg	
108-88-3	Toluene	ND	1.6	0.61	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.1	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.1	1.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.69	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.6	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.1	1.1	ug/kg	
75-01-4	Vinyl chloride	ND	3.2	0.76	ug/kg	
	m,p-Xylene	ND	1.6	1.2	ug/kg	
95-47-6	o-Xylene	ND	1.6	0.94	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.94	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-127%
17060-07-0	1,2-Dichloroethane-D4	92%		75-130%
2037-26-5	Toluene-D8	90%		80-120%
460-00-4	4-Bromofluorobenzene	94%		79-127%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P86773.D	1	04/22/19 20:17	YC	04/17/19 18:45	OP19810	E2P3832
Run #2							

	Initial Weight	Final Volume
Run #1	31.9 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	77	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol [a]	ND	190	24	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	33	ug/kg	
105-67-9	2,4-Dimethylphenol [b]	71.3	190	69	ug/kg	J
51-28-5	2,4-Dinitrophenol	ND	190	150	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	190	41	ug/kg	
95-48-7	2-Methylphenol	122	77	25	ug/kg	
	3&4-Methylphenol	378	77	32	ug/kg	
88-75-5	2-Nitrophenol	ND	190	26	ug/kg	
100-02-7	4-Nitrophenol	ND	390	100	ug/kg	
87-86-5	Pentachlorophenol	ND	150	36	ug/kg	
108-95-2	Phenol	299	77	20	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	26	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	29	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	23	ug/kg	
83-32-9	Acenaphthene	324	39	13	ug/kg	
208-96-8	Acenaphthylene	488	39	20	ug/kg	
98-86-2	Acetophenone	11.1	190	8.3	ug/kg	J
120-12-7	Anthracene	636	39	24	ug/kg	
1912-24-9	Atrazine	ND	77	17	ug/kg	
56-55-3	Benzo(a)anthracene	1600	39	11	ug/kg	
50-32-8	Benzo(a)pyrene	1720	39	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	2270	39	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1260	39	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	772	39	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	77	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	77	9.4	ug/kg	
92-52-4	1,1'-Biphenyl	75.9	77	5.3	ug/kg	J
100-52-7	Benzaldehyde	ND	190	9.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	77	9.2	ug/kg	
106-47-8	4-Chloroaniline	ND	190	14	ug/kg	
86-74-8	Carbazole	163	77	5.6	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	77	15	ug/kg	
218-01-9	Chrysene	1830	39	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	77	8.3	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	77	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	77	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	77	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	39	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	39	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	77	32	ug/kg	
123-91-1	1,4-Dioxane	ND	39	26	ug/kg	
53-70-3	Dibenzo(a,h)anthracene [b]	415	39	17	ug/kg	
132-64-9	Dibenzofuran	371	77	16	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	77	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate [a]	ND	77	9.6	ug/kg	
84-66-2	Diethyl phthalate	ND	77	8.2	ug/kg	
131-11-3	Dimethyl phthalate	ND	77	6.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	77	9.0	ug/kg	
206-44-0	Fluoranthene	3040	39	17	ug/kg	
86-73-7	Fluorene	314	39	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	77	9.8	ug/kg	
87-68-3	Hexachlorobutadiene	ND	39	16	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	390	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene [b]	1110	39	18	ug/kg	
78-59-1	Isophorone	ND	77	8.3	ug/kg	
91-57-6	2-Methylnaphthalene	194	39	8.7	ug/kg	
88-74-4	2-Nitroaniline	ND	190	9.1	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.7	ug/kg	
100-01-6	4-Nitroaniline	ND	190	10	ug/kg	
91-20-3	Naphthalene	1060	39	11	ug/kg	
98-95-3	Nitrobenzene	ND	77	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	77	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	1820	39	13	ug/kg	
129-00-0	Pyrene	2320	39	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	70%		27-114%
118-79-6	2,4,6-Tribromophenol	67%		19-152%
4165-60-0	Nitrobenzene-d5	76%		26-134%
321-60-8	2-Fluorobiphenyl	85%		39-124%
1718-51-0	Terphenyl-d14	75%		36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-109(8-10)
Lab Sample ID: JC86406-15
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/15/19
Date Received: 04/16/19
Percent Solids: 81.2

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11400	62	10	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.51 U	2.5	0.51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	11.0	2.5	0.35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	126	25	2.4	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.8	0.25	0.10	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	1.1	0.62	0.087	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	24300	620	55	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	44.5	1.2	0.46	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	8.9	6.2	0.35	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	75.6	3.1	1.0	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	19900	62	24	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	147	2.5	0.51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	5920	620	17	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	359	1.9	0.51	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.19	0.037	0.016	mg/kg	1	04/17/19	04/17/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	19.4	5.0	0.44	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1150 J	1200	40	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	2.0 J	2.5	0.81	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.21 U	0.62	0.21	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	722 J	1200	97	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.72 U	1.2	0.72	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	25.8	6.2	0.24	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	335	6.2	2.9	mg/kg	1	04/19/19	04/22/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46522
(2) Instrument QC Batch: MA46556
(3) Prep QC Batch: MP14302
(4) Prep QC Batch: MP14400

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	S-109(8-10)		
Lab Sample ID:	JC86406-15	**Date Sampled:**	04/15/19
Matrix:	SO - Soil	**Date Received:**	04/16/19
		Percent Solids:	81.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	17.5	0.32	0.16	mg/kg	1	04/25/19 15:22	KI	SW846 9012B/LACHAT
Solids, Percent	81.2			%	1	04/18/19 15:55	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SO
SLL

SGS CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 1 of 2

FED-EX Tracking #:
Bottle Order Control #: AK-241119-130
SGS Quote #:
SGS Job #: JC 26406

Client / Reporting Information

Company Name: Arcadis - US
Street Address: 110 W Fayette St #300
City: Syracuse State: NY Zip: 13202
Project Contact: Craig Healy E-mail: Lawrence.Healy@arcadis.com
Phone #: (315) 335-1953
Sampler(s) Name(s): Evan Green Phone #: (603) 305-2692

Project Information

Project Name: Philadelphia Corp
Street: 4501 Richmond St
City: Philadelphia State: PA
Project #: B00336M0.0001
Client Purchase Order #: B00336M0.0001
Project Manager: John Bousel

Billing Information (if different from Report to)
Company Name: Same
Street Address:
City: State: Zip:
Attention:

Requested Analysis

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Method	VB&20 TCL 20	CN	ABS2 TOTCL 20	MTAL	LAB USE ONLY
1	S-108 (2-4)		4/15/19	1055	EG	G	SO	5					2	2			1	X	X	X	X	
2	S-108 (8-10)		4/15/19	1105	EG	G	SO	5					2	2			1	X	X	X	X	
3	S-108 (15-17)		4/15/19	1120	EG	G	SO	5					2	2			1	X	X	X	X	
4	SO-DUP-0-15		4/15/19	--:--	EG	G	SO	5					2	2			1	X	X	X	X	
5	PCTP-17R (5-6)		4/15/19	1215	EG	G	SO	5					2	2			1	X	X	X	X	
6	PCTP-17R (7-9)		4/15/19	1220	EG	G	SO	5					2	2			1	X	X	X	X	
7	PCTP-17R (9-11)		4/15/19	1230	EG	G	SO	5					2	2			1	X	X	X	X	
8	PCTP-17R (18-20)		4/15/19	1245	EG	G	SO	5					2	2			1	X	X	X	X	
9	PCTP-17R (24-25)		4/15/19	1305	EG	G	SO	5					2	2			1	X	X	X	X	
10	S-114 (2-4)		4/15/19	1345	EG	G	SO	5					2	2			1	X	X	X	X	
	S-114 (2-4) MS		4/15/19	1345	EG	G	SO	5					2	2			1	X	X	X	X	
	S-114 (2-4) MSD		4/15/19	1345	EG	G	SO	5					2	2			1	X	X	X	X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [X] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [X] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

INITIAL ASESSMENT 38.5

LABEL VERIFICATION

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	4/16/19/1630	1	2	4/15/19 17:33	2
Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
3		3	4		4
Relinquished by:	Date / Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable / Absent / Therm. ID:	On Ice	Cooler Temp. °C
5		5					2.4C Ep

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

D37
P32
14163
4036

5.1.5

JC86406: Chain of Custody
Page 1 of 3

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 2 of 2

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JC86406

Client / Reporting Information

Company Name: Arcadis - US
Street Address: 110 W Fayette St. #300
City / State / Zip: Syracuse, NY 13202
Project Contact / E-mail: Carey Healy Lawrence Healy@Arcadis.com
Phone #: (315) 335-9453
Sampler(s) Name(s) / Phone #: Evan Green (607) 305-2692

Project Information

Project Name: Philadelphia Coke
Street: 4501 Richmond St
City / State: Philadelphia PA
Project #: B0036790.0001
Client Purchase Order #: B0036790.0001
Project Manager: John Brussel

Billing Information (if different from Report to)
Company Name: Same
Street Address:
City / State / Zip:
Attention:

Requested Analysis

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	Methanol	US260TCL20	CN	AB8270TCL20	MTAL	LAB USE ONLY
11	S-114 (8-10)		4/15/19	1355	EG	G	SO	S					2	2			1	X	X	X	X	
12	S-114 (14-15)		4/15/19	1400	EG	G	SO	S					2	2			1	X	X	X	X	
13	S-114 (23-25)		4/15/19	1410	EG	G	SO	S					2	2			1	X	X	X	X	
14	S-109 (2-4)		4/15/19	1520	EG	G	SO	S					2	2			1	X	X	X	X	
15	S-109 (8-10)		4/15/19	1530	EG	G	SO	S					2	2			1	X	X	X	X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; ~~WW - Water~~; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [x] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [x] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria____
- [ ] CT RCP Criteria____
- [ ] State Forms
- [ ] EDD Format ____
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	4/15/19 1630	1 [signature]	2 [signature]	4/15/19 17:33	2 [signature]
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact | Preserved where applicable Absent ☐ Therm. ID: | On Ice ☐ | Cooler Temp. °C 2.4 CIp

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

JC86406: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: JC86406 **Client:** ARCADIS U.S. **Project:** NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 4/16/2019 5:33:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (1.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86406-1 S-108(2-4)	Collected: 15-APR-19 10:55 By: EG		Received: 16-APR-19 By: DG			
JC86406-1	SW846 7471B	17-APR-19 14:18	LL	17-APR-19	LL	HG
JC86406-1	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-1	SW846 8270D	19-APR-19 04:05	CB	17-APR-19	SH	AB8270TCL20
JC86406-1	SW846 8270D	22-APR-19 18:07	YC	17-APR-19	SH	AB8270TCL20
JC86406-1	SW846 6010D	22-APR-19 21:41	ND	19-APR-19	MR	BA,BE,CA,CO,CR,K,MG,NA,NI, SB,V,ZN
JC86406-1	SW846 6010D	23-APR-19 17:38	ND	19-APR-19	MR	AG,AS,CD,CU,MN,PB,SE,TL
JC86406-1	SW846 8260C	24-APR-19 14:38	RS			V8260TCL20
JC86406-1	SW846 6010D	24-APR-19 14:45	GT	19-APR-19	MR	AL,FE
JC86406-1	SW846 9012B/LACHAT	25-APR-19 15:23	KI	25-APR-19	RC	CN
JC86406-1	SW846 8260C	25-APR-19 18:39	TDN			V8260TCL20
JC86406-1	SW846 8260C	26-APR-19 11:20	JTP			V8260TCL20
JC86406-2 S-108(8-10)	Collected: 15-APR-19 11:05 By: EG		Received: 16-APR-19 By: DG			
JC86406-2	SW846 7471B	17-APR-19 15:36	LL	17-APR-19	LL	HG
JC86406-2	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-2	SW846 8270D	19-APR-19 02:38	CB	17-APR-19	SH	AB8270TCL20
JC86406-2	SW846 6010D	22-APR-19 21:46	ND	19-APR-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC86406-2	SW846 6010D	23-APR-19 13:56	ND	19-APR-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC86406-2	SW846 8260C	24-APR-19 15:04	RS			V8260TCL20
JC86406-2	SW846 9012B/LACHAT	25-APR-19 15:24	KI	25-APR-19	RC	CN
JC86406-3 S-108(15-17)	Collected: 15-APR-19 11:20 By: EG		Received: 16-APR-19 By: DG			
JC86406-3	SW846 7471B	17-APR-19 15:38	LL	17-APR-19	LL	HG
JC86406-3	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-3	SW846 8270D	19-APR-19 05:11	CB	17-APR-19	SH	AB8270TCL20
JC86406-3	SW846 6010D	22-APR-19 21:51	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-3	SW846 9012B/LACHAT	25-APR-19 15:26	KI	25-APR-19	RC	CN
JC86406-3	SW846 8270D	25-APR-19 22:03	AR	17-APR-19	SH	AB8270TCL20
JC86406-3	SW846 8260C	26-APR-19 14:03	JTP			V8260TCL20

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86406-4	Collected: 15-APR-19 00:00 By: EG			Received: 16-APR-19 By: DG		
SO-DUP-0415						
JC86406-4	SW846 7471B	17-APR-19 14:23	LL	17-APR-19	LL	HG
JC86406-4	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-4	SW846 8270D	19-APR-19 05:33	CB	17-APR-19	SH	AB8270TCL20
JC86406-4	SW846 8270D	22-APR-19 18:29	YC	17-APR-19	SH	AB8270TCL20
JC86406-4	SW846 6010D	22-APR-19 21:57	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86406-4	SW846 9012B/LACHAT	25-APR-19 15:27	KI	25-APR-19	RC	CN
JC86406-4	SW846 8260C	25-APR-19 19:08	TDN			V8260TCL20
JC86406-5	Collected: 15-APR-19 12:15 By: EG			Received: 16-APR-19 By: DG		
PCTP-17R(5-6)						
JC86406-5	SW846 7471B	17-APR-19 14:26	LL	17-APR-19	LL	HG
JC86406-5	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-5	SW846 8270D	19-APR-19 05:54	CB	17-APR-19	SH	AB8270TCL20
JC86406-5	SW846 6010D	22-APR-19 22:02	ND	19-APR-19	MR	AL,BA,BE,CA,CO,CR,K,MG,NA,NI,SB,V,ZN
JC86406-5	SW846 6010D	23-APR-19 17:43	ND	19-APR-19	MR	AG,AS,CD,CU,FE,MN,PB,SE,TL
JC86406-5	SW846 9012B/LACHAT	25-APR-19 15:28	KI	25-APR-19	RC	CN
JC86406-5	SW846 8270D	25-APR-19 22:31	AR	17-APR-19	SH	AB8270TCL20
JC86406-5	SW846 8260C	26-APR-19 14:32	JTP			V8260TCL20
JC86406-5	SW846 8270D	26-APR-19 21:07	AR	17-APR-19	SH	AB8270TCL20
JC86406-6	Collected: 15-APR-19 12:20 By: EG			Received: 16-APR-19 By: DG		
PCTP-17R(7-9)						
JC86406-6	SW846 7471B	17-APR-19 14:32	LL	17-APR-19	LL	HG
JC86406-6	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-6	SW846 8270D	19-APR-19 00:27	CB	17-APR-19	SH	AB8270TCL20
JC86406-6	SW846 6010D	22-APR-19 22:07	ND	19-APR-19	MR	AL,BA,CA,CD,CR,K,MG,NA,NI,V,ZN
JC86406-6	SW846 6010D	23-APR-19 14:07	ND	19-APR-19	MR	AG,AS,BE,CO,CU,FE,MN,PB,SB,SE,TL
JC86406-6	SW846 8260C	24-APR-19 15:56	RS			V8260TCL20
JC86406-6	SW846 9012B/LACHAT	25-APR-19 15:30	KI	25-APR-19	RC	CN

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86406-7	Collected: 15-APR-19 12:30 By: EG			Received: 16-APR-19 By: DG		
PCTP-17R(9-11)						
JC86406-7	SW846 7471B	17-APR-19 15:40	LL	17-APR-19	LL	HG
JC86406-7	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-7	SW846 8270D	19-APR-19 03:00	CB	17-APR-19	SH	AB8270TCL20
JC86406-7	SW846 6010D	22-APR-19 22:23	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-7	SW846 9012B/LACHAT	25-APR-19 15:31	KI	25-APR-19	RC	CN
JC86406-7	SW846 8260C	26-APR-19 12:22	EH			V8260TCL20
JC86406-8	Collected: 15-APR-19 12:45 By: EG			Received: 16-APR-19 By: DG		
PCTP-17R(18-20)						
JC86406-8	SW846 7471B	17-APR-19 14:36	LL	17-APR-19	LL	HG
JC86406-8	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-8	SW846 8270D	19-APR-19 03:22	CB	17-APR-19	SH	AB8270TCL20
JC86406-8	SW846 6010D	22-APR-19 22:28	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-8	SW846 9012B/LACHAT	25-APR-19 15:32	KI	25-APR-19	RC	CN
JC86406-8	SW846 8260C	25-APR-19 18:55	TDN			V8260TCL20
JC86406-9	Collected: 15-APR-19 13:05 By: EG			Received: 16-APR-19 By: DG		
PCTP-17R(24-25)						
JC86406-9	SW846 7471B	17-APR-19 14:38	LL	17-APR-19	LL	HG
JC86406-9	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-9	SW846 8270D	19-APR-19 00:48	CB	17-APR-19	SH	AB8270TCL20
JC86406-9	SW846 6010D	22-APR-19 22:34	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-9	SW846 9012B/LACHAT	25-APR-19 15:37	KI	25-APR-19	RC	CN
JC86406-9	SW846 8260C	26-APR-19 11:53	EH			V8260TCL20
JC86406-10	Collected: 15-APR-19 13:45 By: EG			Received: 16-APR-19 By: DG		
S-114(2-4)						

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86406-10	SW846 7471B	17-APR-19 14:40	LL	17-APR-19	LL	HG
JC86406-10	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-10	SW846 8270D	21-APR-19 08:16	CB	19-APR-19	CC	AB8270TCL20
JC86406-10	SW846 6010D	22-APR-19 21:30	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86406-10	SW846 8260C	24-APR-19 14:12	RS			V8260TCL20
JC86406-10	SW846 9012B/LACHAT	25-APR-19 15:12	KI	25-APR-19	RC	CN
JC86406-11	Collected: 15-APR-19 13:55 By: EG S-114(8-10)			Received: 16-APR-19 By: DG		
JC86406-11	SW846 7471B	17-APR-19 14:42	LL	17-APR-19	LL	HG
JC86406-11	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-11	SW846 8270D	19-APR-19 06:16	CB	17-APR-19	SH	AB8270TCL20
JC86406-11	SW846 6010D	22-APR-19 22:39	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CU,FE,K,MG,NA,NI,PB,SB,SE,TL,V,ZN
JC86406-11	SW846 6010D	23-APR-19 14:12	ND	19-APR-19	MR	CR,MN
JC86406-11	SW846 8260C	24-APR-19 17:13	RS			V8260TCL20
JC86406-11	SW846 9012B/LACHAT	25-APR-19 15:13	KI	25-APR-19	RC	CN
JC86406-11	SW846 8270D	26-APR-19 20:39	AR	17-APR-19	SH	AB8270TCL20
JC86406-12	Collected: 15-APR-19 14:00 By: EG S-114(14-15)			Received: 16-APR-19 By: DG		
JC86406-12	SW846 7471B	17-APR-19 15:42	LL	17-APR-19	LL	HG
JC86406-12	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-12	SW846 8270D	22-APR-19 21:22	YC	17-APR-19	SH	AB8270TCL20
JC86406-12	SW846 6010D	22-APR-19 22:44	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86406-12	SW846 9012B/LACHAT	25-APR-19 15:15	KI	25-APR-19	RC	CN
JC86406-12	SW846 8260C	26-APR-19 15:01	JTP			V8260TCL20
JC86406-12	SW846 8270D	27-APR-19 06:09	CS	17-APR-19	SH	AB8270TCL20
JC86406-12	SW846 8270D	27-APR-19 08:16	CS	17-APR-19	SH	AB8270TCL20
JC86406-13	Collected: 15-APR-19 14:10 By: EG S-114(23-25)			Received: 16-APR-19 By: DG		

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86406

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86406-13	SW846 7471B	17-APR-19 14:46	LL	17-APR-19	LL	HG
JC86406-13	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-13	SW846 8270D	19-APR-19 01:10	CB	17-APR-19	SH	AB8270TCL20
JC86406-13	SW846 6010D	22-APR-19 22:49	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-13	SW846 9012B/LACHAT	25-APR-19 15:16	KI	25-APR-19	RC	CN
JC86406-13	SW846 8260C	26-APR-19 15:13	EH			V8260TCL20
JC86406-14	Collected: 15-APR-19 15:20 By: EG S-109(2-4)			Received: 16-APR-19 By: DG		
JC86406-14	SW846 7471B	17-APR-19 14:15	LL	17-APR-19	LL	HG
JC86406-14	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-14	SW846 8270D	19-APR-19 06:37	CB	17-APR-19	SH	AB8270TCL20
JC86406-14	SW846 6010D	22-APR-19 22:55	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-14	SW846 8260C	24-APR-19 16:47	RS			V8260TCL20
JC86406-14	SW846 9012B/LACHAT	25-APR-19 15:20	KI	25-APR-19	RC	CN
JC86406-14	SW846 8260C	25-APR-19 19:37	TDN			V8260TCL20
JC86406-14	SW846 8270D	25-APR-19 23:27	AR	17-APR-19	SH	AB8270TCL20
JC86406-14	SW846 8260C	26-APR-19 13:34	JTP			V8260TCL20
JC86406-14	SW846 8270D	26-APR-19 20:10	AR	17-APR-19	SH	AB8270TCL20
JC86406-15	Collected: 15-APR-19 15:30 By: EG S-109(8-10)			Received: 16-APR-19 By: DG		
JC86406-15	SW846 7471B	17-APR-19 14:48	LL	17-APR-19	LL	HG
JC86406-15	SM2540 G 18TH ED MOD	18-APR-19 15:55	BG			SOL104
JC86406-15	SW846 8270D	22-APR-19 20:17	YC	17-APR-19	SH	AB8270TCL20
JC86406-15	SW846 6010D	22-APR-19 23:00	ND	19-APR-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86406-15	SW846 9012B/LACHAT	25-APR-19 15:22	KI	25-APR-19	RC	CN
JC86406-15	SW846 8260C	26-APR-19 14:45	EH			V8260TCL20

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/16/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-1.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-1.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-1.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-1.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-1.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-1.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-1.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-1.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-1.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-1.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-1.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-1.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-1.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-1.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-1.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-1.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-1.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-1.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-1.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-1.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-1.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-1.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-1.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-1.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-1.1
JC86406-1.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-1.1
JC86406-1.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-1.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-1.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-1.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-1.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-1.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-1.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-1.1
JC86406-1.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-1.1
JC86406-1.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-1.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-1.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-1.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-1.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-1.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-1.2	Dave Hunkele		05/30/19 04:59	Disposed

SGS Internal Chain of Custody

Job Number: JC86406
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Project: National Grid, Philly Coke, Philadelphia, PA
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-1.3	Secured Storage	Thien Nguyen	04/26/19 10:17	Retrieve from Storage
JC86406-1.3	Thien Nguyen	Secured Storage	04/26/19 10:17	Return to Storage
JC86406-1.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-1.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-1.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-1.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-1.5	Secured Storage	Thien Nguyen	04/25/19 13:56	Retrieve from Storage
JC86406-1.5	Thien Nguyen	GCMSI	04/25/19 13:56	Load on Instrument
JC86406-1.5	GCMSI	Thien Nguyen	05/16/19 09:11	Unload from Instrument
JC86406-1.5	Thien Nguyen		05/16/19 09:11	Depleted
JC86406-2.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-2.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-2.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-2.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-2.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-2.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-2.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-2.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-2.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-2.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-2.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-2.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-2.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-2.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-2.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-2.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-2.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-2.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-2.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-2.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-2.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-2.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-2.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-2.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-2.1
JC86406-2.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-2.1
JC86406-2.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-2.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-2.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-2.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-2.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage

SGS Internal Chain of Custody

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-2.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-2.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-2.1
JC86406-2.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-2.1
JC86406-2.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-2.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-2.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-2.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-2.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-2.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-2.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-2.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-2.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-2.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-3.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-3.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-3.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-3.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-3.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-3.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-3.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-3.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-3.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-3.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-3.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-3.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-3.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-3.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-3.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-3.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-3.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-3.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-3.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-3.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-3.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-3.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-3.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-3.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-3.1
JC86406-3.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-3.1
JC86406-3.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-3.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-3.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-3.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-3.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-3.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-3.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-3.1.1	GCMSZ	Angela Rastelli	04/26/19 11:24	Unload from Instrument
JC86406-3.1.1	Angela Rastelli	Extract Freezer	04/26/19 11:24	Return to Storage
JC86406-3.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-3.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-3.1
JC86406-3.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-3.1
JC86406-3.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-3.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-3.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-3.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-3.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-3.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-3.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-3.3	Secured Storage	Thien Nguyen	04/24/19 09:00	Retrieve from Storage
JC86406-3.3	Thien Nguyen	Secured Storage	04/24/19 09:00	Return to Storage
JC86406-3.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-4.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-4.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-4.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-4.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-4.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-4.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-4.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-4.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-4.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-4.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-4.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-4.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-4.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-4.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-4.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-4.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-4.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-4.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-4.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-4.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-4.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-4.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-4.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-4.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-4.1
JC86406-4.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-4.1
JC86406-4.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-4.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-4.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-4.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-4.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-4.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-4.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-4.1.1	GCMSZ	Angela Rastelli	04/26/19 11:24	Unload from Instrument
JC86406-4.1.1	Angela Rastelli	Extract Freezer	04/26/19 11:24	Return to Storage
JC86406-4.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-4.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-4.1
JC86406-4.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-4.1
JC86406-4.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-4.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-4.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-4.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-4.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-4.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-4.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-4.3	Secured Storage	Thien Nguyen	04/26/19 08:56	Retrieve from Storage
JC86406-4.3	Thien Nguyen	Secured Storage	04/26/19 08:56	Return to Storage
JC86406-4.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-4.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-4.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-4.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-4.5	Secured Storage	Thien Nguyen	04/25/19 13:56	Retrieve from Storage
JC86406-4.5	Thien Nguyen	GCMSI	04/25/19 13:56	Load on Instrument
JC86406-4.5	GCMSI	Thien Nguyen	05/16/19 09:11	Unload from Instrument
JC86406-4.5	Thien Nguyen		05/16/19 09:11	Depleted
JC86406-5.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-5.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-5.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-5.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-5.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-5.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-5.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-5.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-5.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-5.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-5.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-5.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-5.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-5.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-5.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-5.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-5.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-5.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-5.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-5.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-5.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-5.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-5.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-5.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-5.1
JC86406-5.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-5.1
JC86406-5.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-5.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-5.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-5.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-5.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-5.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-5.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-5.1.1	GCMSZ	Angela Rastelli	04/26/19 11:24	Unload from Instrument
JC86406-5.1.1	Angela Rastelli	Extract Freezer	04/26/19 11:24	Return to Storage
JC86406-5.1.1	Extract Freezer	Angela Rastelli	04/26/19 14:55	Retrieve from Storage
JC86406-5.1.1	Angela Rastelli	GCMSZ	04/26/19 14:55	Load on Instrument
JC86406-5.1.1	GCMSZ	Angela Rastelli	04/29/19 09:14	Unload from Instrument
JC86406-5.1.1	Angela Rastelli	Extract Freezer	04/29/19 09:15	Return to Storage
JC86406-5.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-5.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-5.1
JC86406-5.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-5.1
JC86406-5.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-5.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed

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Project: National Grid, Philly Coke, Philadelphia, PA
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-5.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-5.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-5.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-5.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-5.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-5.3	Secured Storage	Thien Nguyen	04/24/19 09:00	Retrieve from Storage
JC86406-5.3	Thien Nguyen	Secured Storage	04/24/19 09:00	Return to Storage
JC86406-5.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-6.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-6.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-6.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-6.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-6.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-6.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-6.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-6.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-6.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-6.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-6.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-6.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-6.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-6.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-6.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-6.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-6.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-6.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-6.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-6.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-6.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-6.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-6.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-6.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-6.1
JC86406-6.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-6.1
JC86406-6.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-6.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-6.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-6.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-6.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-6.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-6.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-6.1

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-6.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-6.1
JC86406-6.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-6.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-6.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-6.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-6.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-6.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-6.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-6.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-6.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-6.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-7.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-7.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-7.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-7.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-7.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-7.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-7.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-7.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-7.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-7.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-7.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-7.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-7.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-7.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-7.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-7.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-7.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-7.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-7.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-7.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-7.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-7.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-7.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-7.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-7.1
JC86406-7.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-7.1
JC86406-7.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-7.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-7.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-7.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument

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JC86406-7.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-7.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-7.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-7.1
JC86406-7.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-7.1
JC86406-7.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-7.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-7.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-7.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-7.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-7.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-7.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-7.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-7.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-7.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-7.5	Secured Storage	Thien Nguyen	04/26/19 10:40	Retrieve from Storage
JC86406-7.5	Thien Nguyen	GCMSY	04/26/19 10:40	Load on Instrument
JC86406-7.5	GCMSY	Prashant Shukla	04/27/19 09:59	Unload from Instrument
JC86406-7.5	Prashant Shukla		04/27/19 09:59	Depleted
JC86406-8.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-8.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-8.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-8.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-8.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-8.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-8.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-8.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-8.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-8.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-8.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-8.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-8.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-8.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-8.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-8.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-8.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-8.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-8.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-8.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-8.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-8.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-8.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-8.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-8.1
JC86406-8.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-8.1
JC86406-8.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-8.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-8.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-8.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-8.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-8.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-8.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-8.1
JC86406-8.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-8.1
JC86406-8.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-8.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-8.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-8.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-8.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-8.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-8.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-8.3	Secured Storage	Thien Nguyen	04/24/19 09:00	Retrieve from Storage
JC86406-8.3	Thien Nguyen	Secured Storage	04/24/19 09:00	Return to Storage
JC86406-8.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-9.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-9.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-9.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-9.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-9.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-9.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-9.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-9.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-9.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-9.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-9.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-9.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-9.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-9.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-9.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-9.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-9.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage

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JC86406-9.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-9.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-9.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-9.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-9.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-9.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-9.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-9.1
JC86406-9.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-9.1
JC86406-9.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-9.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-9.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-9.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-9.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-9.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-9.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-9.1
JC86406-9.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-9.1
JC86406-9.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-9.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-9.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-9.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-9.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-9.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-9.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-9.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-9.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-9.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-9.5	Secured Storage	Thien Nguyen	04/26/19 10:40	Retrieve from Storage
JC86406-9.5	Thien Nguyen	GCMSY	04/26/19 10:40	Load on Instrument
JC86406-9.5	GCMSY	Prashant Shukla	04/27/19 09:59	Unload from Instrument
JC86406-9.5	Prashant Shukla		04/27/19 09:59	Depleted
JC86406-10.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-10.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-10.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-10.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-10.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-10.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-10.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-10.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-10.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-10.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-10.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-10.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-10.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.1.1	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-10.1
JC86406-10.1.1	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-10.1
JC86406-10.1.1	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-10.1.1	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-10.2	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-10.2	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-10.2	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-10.2	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-10.2	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-10.2	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-10.2	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-10.2	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-10.2	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-10.2	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-10.2	Secured Storage	Sahara Feliciano	04/18/19 21:20	Retrieve from Storage
JC86406-10.2	Sahara Feliciano	Secured Staging Area	04/18/19 21:20	Return to Storage
JC86406-10.2	Secured Staging Area	Natasha Torres	04/19/19 04:20	Retrieve from Storage
JC86406-10.2	Natasha Torres	Secured Storage	04/19/19 10:09	Return to Storage
JC86406-10.2	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-10.2	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-10.2	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-10.2	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-10.2	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-10.2	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-10.2	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-10.2	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-10.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.2.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-10.2
JC86406-10.2.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-10.2
JC86406-10.2.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-10.2.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-10.2.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-10.2.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-10.2.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-10.2.1	Extract Freezer		05/28/19 09:00	Disposed

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JC86406-10.2.2	Natasha Torres	Organics Prep	04/19/19 04:27	Extract from JC86406-10.2
JC86406-10.2.2	Organics Prep	Natasha Torres	04/19/19 11:26	Extract from JC86406-10.2
JC86406-10.2.2	Natasha Torres	Extract Storage	04/19/19 11:26	Return to Storage
JC86406-10.2.2	Extract Storage	Carol Boykin	04/21/19 00:46	Retrieve from Storage
JC86406-10.2.2	Carol Boykin	GCMSM	04/21/19 00:46	Load on Instrument
JC86406-10.2.2	GCMSM	Yujia Chenge	04/22/19 09:29	Unload from Instrument
JC86406-10.2.2	Yujia Chenge	Extract Freezer	04/22/19 09:29	Return to Storage
JC86406-10.2.2	Extract Freezer		05/30/19 09:00	Disposed
JC86406-10.3	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-10.3	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-10.3	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-10.3	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-10.3	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-10.3	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-10.3	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-10.3	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-10.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.4	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-10.4	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-10.4	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-10.4	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-10.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.10	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-10.10	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-10.10	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.11	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-10.11	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-10.11	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-10.12	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-10.12	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-10.12	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-11.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-11.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-11.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-11.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-11.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-11.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-11.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/16/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-11.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-11.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-11.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-11.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-11.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-11.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-11.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-11.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-11.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-11.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-11.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-11.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-11.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-11.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-11.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-11.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-11.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-11.1
JC86406-11.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-11.1
JC86406-11.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-11.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-11.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-11.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-11.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-11.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-11.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-11.1.1	GCMSZ	Angela Rastelli	04/29/19 09:14	Unload from Instrument
JC86406-11.1.1	Angela Rastelli	Extract Freezer	04/29/19 09:15	Return to Storage
JC86406-11.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-11.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-11.1
JC86406-11.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-11.1
JC86406-11.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-11.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-11.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-11.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-11.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-11.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-11.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-11.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-11.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-11.4	Dave Hunkele		05/30/19 04:59	Disposed

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/16/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-12.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-12.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-12.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-12.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-12.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-12.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-12.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-12.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-12.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-12.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-12.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-12.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-12.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-12.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-12.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-12.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-12.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-12.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-12.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-12.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-12.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-12.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-12.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-12.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-12.1
JC86406-12.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-12.1
JC86406-12.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-12.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-12.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-12.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-12.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-12.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-12.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-12.1.1	GCMSZ	Yujia Chenge	04/25/19 15:49	Unload from Instrument
JC86406-12.1.1	Yujia Chenge	GCMS2P	04/25/19 15:49	Load on Instrument
JC86406-12.1.1	GCMS2P	Yujia Chenge	04/25/19 15:49	Unload from Instrument
JC86406-12.1.1	Yujia Chenge	Extract Freezer	04/25/19 15:49	Return to Storage
JC86406-12.1.1	Extract Freezer	Christopher Sowa	04/27/19 02:24	Retrieve from Storage
JC86406-12.1.1	Christopher Sowa	GCMS2P	04/27/19 02:24	Load on Instrument
JC86406-12.1.1	GCMS2P	Yujia Chenge	04/30/19 10:10	Unload from Instrument
JC86406-12.1.1	Yujia Chenge	Extract Freezer	04/30/19 10:10	Return to Storage
JC86406-12.1.1	Extract Freezer		05/28/19 09:00	Disposed

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-12.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-12.1
JC86406-12.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-12.1
JC86406-12.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-12.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-12.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-12.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-12.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-12.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-12.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-12.3	Secured Storage	Thien Nguyen	04/24/19 09:00	Retrieve from Storage
JC86406-12.3	Thien Nguyen	Secured Storage	04/24/19 09:00	Return to Storage
JC86406-12.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-13.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-13.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-13.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-13.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-13.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-13.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-13.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-13.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-13.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-13.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-13.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-13.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-13.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-13.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-13.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-13.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-13.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-13.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-13.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-13.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-13.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-13.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-13.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-13.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-13.1
JC86406-13.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-13.1
JC86406-13.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-13.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-13.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-13.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-13.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-13.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-13.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-13.1
JC86406-13.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-13.1
JC86406-13.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-13.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-13.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-13.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-13.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-13.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-13.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-13.3	Secured Storage	Thien Nguyen	04/24/19 09:00	Retrieve from Storage
JC86406-13.3	Thien Nguyen	Secured Storage	04/24/19 09:00	Return to Storage
JC86406-13.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-13.5	Secured Storage	Thien Nguyen	04/26/19 10:40	Retrieve from Storage
JC86406-13.5	Thien Nguyen	GCMSY	04/26/19 10:40	Load on Instrument
JC86406-13.5	GCMSY	Prashant Shukla	04/27/19 09:59	Unload from Instrument
JC86406-13.5	Prashant Shukla		04/27/19 09:59	Depleted
JC86406-14.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-14.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-14.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage
JC86406-14.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-14.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-14.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-14.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-14.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-14.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-14.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-14.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-14.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-14.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-14.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-14.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-14.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-14.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-14.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-14.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-14.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-14.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-14.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-14.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-14.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-14.1
JC86406-14.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-14.1
JC86406-14.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-14.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-14.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-14.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-14.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-14.1.1	Extract Freezer	Angela Rastelli	04/25/19 15:36	Retrieve from Storage
JC86406-14.1.1	Angela Rastelli	GCMSZ	04/25/19 15:37	Load on Instrument
JC86406-14.1.1	GCMSZ	Angela Rastelli	04/29/19 09:14	Unload from Instrument
JC86406-14.1.1	Angela Rastelli	Extract Freezer	04/29/19 09:15	Return to Storage
JC86406-14.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-14.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-14.1
JC86406-14.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-14.1
JC86406-14.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-14.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-14.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-14.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-14.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-14.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-14.2	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-14.3	Secured Storage	Thien Nguyen	04/26/19 08:56	Retrieve from Storage
JC86406-14.3	Thien Nguyen	Secured Storage	04/26/19 08:56	Return to Storage
JC86406-14.3	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-14.4	Secured Storage	Thien Nguyen	04/24/19 13:31	Retrieve from Storage
JC86406-14.4	Thien Nguyen	GCMS3V	04/24/19 13:31	Load on Instrument
JC86406-14.4	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-14.5	Secured Storage	Thien Nguyen	04/25/19 13:56	Retrieve from Storage
JC86406-14.5	Thien Nguyen	GCMSI	04/25/19 13:56	Load on Instrument
JC86406-14.5	GCMSI	Thien Nguyen	05/16/19 09:11	Unload from Instrument
JC86406-14.5	Thien Nguyen		05/16/19 09:11	Depleted
JC86406-15.1	Secured Storage	Matthew Robbins	04/16/19 18:57	Retrieve from Storage
JC86406-15.1	Matthew Robbins	Secured Staging Area	04/16/19 18:57	Return to Storage
JC86406-15.1	Secured Staging Area	Lindsey Lee	04/17/19 07:29	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/16/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-15.1	Lindsey Lee	Secured Storage	04/17/19 12:16	Return to Storage
JC86406-15.1	Secured Storage	Todd Shoemaker	04/17/19 13:41	Retrieve from Storage
JC86406-15.1	Todd Shoemaker	Secured Storage	04/17/19 13:41	Return to Storage
JC86406-15.1	Secured Storage	Todd Shoemaker	04/17/19 13:43	Retrieve from Storage
JC86406-15.1	Todd Shoemaker	Secured Staging Area	04/17/19 13:43	Return to Storage
JC86406-15.1	Secured Staging Area	Sarah Halim	04/17/19 16:16	Retrieve from Storage
JC86406-15.1	Sarah Halim	Secured Storage	04/17/19 23:39	Return to Storage
JC86406-15.1	Secured Storage	Todd Shoemaker	04/19/19 14:42	Retrieve from Storage
JC86406-15.1	Todd Shoemaker	Secured Staging Area	04/19/19 14:43	Return to Storage
JC86406-15.1	Secured Staging Area	Moustafa Ramadan	04/19/19 18:48	Retrieve from Storage
JC86406-15.1	Moustafa Ramadan	Secured Storage	04/19/19 18:50	Return to Storage
JC86406-15.1	Secured Storage	Benjamin Gaines	04/24/19 10:32	Retrieve from Storage
JC86406-15.1	Benjamin Gaines	Secured Staging Area	04/24/19 10:32	Return to Storage
JC86406-15.1	Secured Staging Area	Ruchitaben Chauhan	04/24/19 11:24	Retrieve from Storage
JC86406-15.1	Ruchitaben Chauhan	Secured Storage	04/24/19 17:52	Return to Storage
JC86406-15.1	Secured Storage	Benjamin Gaines	04/25/19 08:28	Retrieve from Storage
JC86406-15.1	Benjamin Gaines	Secured Staging Area	04/25/19 08:28	Return to Storage
JC86406-15.1	Secured Staging Area	Ruchitaben Chauhan	04/25/19 09:27	Retrieve from Storage
JC86406-15.1	Ruchitaben Chauhan	Secured Storage	04/25/19 17:04	Return to Storage
JC86406-15.1	Dave Hunkele		05/30/19 04:59	Disposed
JC86406-15.1.1	Sarah Halim	Organics Prep	04/17/19 16:26	Extract from JC86406-15.1
JC86406-15.1.1	Organics Prep	Sarah Halim	04/17/19 23:55	Extract from JC86406-15.1
JC86406-15.1.1	Sarah Halim	Extract Storage	04/17/19 23:55	Return to Storage
JC86406-15.1.1	Extract Storage	Carol Boykin	04/18/19 22:47	Retrieve from Storage
JC86406-15.1.1	Carol Boykin	GCMS2P	04/18/19 22:47	Load on Instrument
JC86406-15.1.1	GCMS2P	Angela Rastelli	04/19/19 13:19	Unload from Instrument
JC86406-15.1.1	Angela Rastelli	Extract Freezer	04/19/19 13:19	Return to Storage
JC86406-15.1.1	Extract Freezer	Yujia Chenge	04/22/19 15:12	Retrieve from Storage
JC86406-15.1.1	Yujia Chenge	GCMS2P	04/22/19 15:12	Load on Instrument
JC86406-15.1.1	GCMS2P	Angela Rastelli	04/23/19 11:39	Unload from Instrument
JC86406-15.1.1	Angela Rastelli	Extract Freezer	04/23/19 11:40	Return to Storage
JC86406-15.1.1	Extract Freezer		05/28/19 09:00	Disposed
JC86406-15.1.2	Moustafa Ramadan	Metals Digestion	04/19/19 18:49	Digestate from JC86406-15.1
JC86406-15.1.2	Metals Digestion	Moustafa Ramadan	04/19/19 18:49	Digestate from JC86406-15.1
JC86406-15.1.2	Moustafa Ramadan	Metals Digestate Storage	04/19/19 18:49	Return to Storage
JC86406-15.1.2	Metals Digestate Storage		06/26/19 09:00	Disposed
JC86406-15.2	Secured Storage	Todd Shoemaker	04/18/19 13:45	Retrieve from Storage
JC86406-15.2	Todd Shoemaker	Secured Staging Area	04/18/19 13:46	Return to Storage
JC86406-15.2	Secured Staging Area	Benjamin Gaines	04/18/19 14:41	Retrieve from Storage
JC86406-15.2	Benjamin Gaines	Secured Storage	04/18/19 16:03	Return to Storage
JC86406-15.2	Dave Hunkele		05/30/19 04:59	Disposed

SGS Internal Chain of Custody

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/16/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86406-15.5	Secured Storage	Thien Nguyen	04/26/19 10:40	Retrieve from Storage
JC86406-15.5	Thien Nguyen	GCMSY	04/26/19 10:40	Load on Instrument
JC86406-15.5	GCMSY	Prashant Shukla	04/27/19 09:59	Unload from Instrument
JC86406-15.5	Prashant Shukla		04/27/19 09:59	Depleted

MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1778-MB	3V44287.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/kg	
71-43-2	Benzene	ND	0.50	0.38	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.43	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.44	ug/kg	
75-25-2	Bromoform	ND	5.0	0.40	ug/kg	
74-83-9	Bromomethane	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.55	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.35	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.69	ug/kg	
67-66-3	Chloroform	ND	2.0	0.37	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.41	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.34	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.31	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.36	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.34	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.64	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.96	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.41	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.35	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.33	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
76-13-1	Freon 113	ND	5.0	0.76	ug/kg	
591-78-6	2-Hexanone	ND	5.0	1.3	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.70	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.71	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1778-MB	3V44287.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	5.0	2.5	ug/kg	
100-42-5	Styrene	ND	2.0	0.58	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.39	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.46	ug/kg	
108-88-3	Toluene	ND	1.0	0.38	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.43	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.34	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.47	ug/kg	
	m,p-Xylene	ND	1.0	0.75	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.58	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	96%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	100%	79-127%

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9093-MB	I225704.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/kg	
71-43-2	Benzene	ND	0.50	0.38	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.43	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.44	ug/kg	
75-25-2	Bromoform	ND	5.0	0.40	ug/kg	
74-83-9	Bromomethane	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.55	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.35	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.69	ug/kg	
67-66-3	Chloroform	ND	2.0	0.37	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.41	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.34	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.31	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.36	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.34	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.64	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.96	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.41	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.35	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.33	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
76-13-1	Freon 113	ND	5.0	0.76	ug/kg	
591-78-6	2-Hexanone	ND	5.0	1.3	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.70	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.71	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9093-MB	I225704.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	5.0	2.5	ug/kg	
100-42-5	Styrene	ND	2.0	0.58	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.39	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.46	ug/kg	
108-88-3	Toluene	ND	1.0	0.38	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.43	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.34	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.47	ug/kg	
	m,p-Xylene	ND	1.0	0.75	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.58	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	114%	75-130%
2037-26-5	Toluene-D8	95%	80-120%
460-00-4	4-Bromofluorobenzene	104%	79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10643-MB	D264046.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	250	ug/kg	
71-43-2	Benzene	ND	25	19	ug/kg	
74-97-5	Bromochloromethane	ND	250	22	ug/kg	
75-27-4	Bromodichloromethane	ND	100	22	ug/kg	
75-25-2	Bromoform	ND	250	20	ug/kg	
74-83-9	Bromomethane	ND	250	50	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	190	ug/kg	
75-15-0	Carbon disulfide	ND	100	46	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	28	ug/kg	
108-90-7	Chlorobenzene	ND	100	18	ug/kg	
75-00-3	Chloroethane	ND	250	34	ug/kg	
67-66-3	Chloroform	ND	100	19	ug/kg	
74-87-3	Chloromethane	ND	250	98	ug/kg	
110-82-7	Cyclohexane	ND	100	20	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	42	ug/kg	
124-48-1	Dibromochloromethane	ND	100	17	ug/kg	
106-93-4	1,2-Dibromoethane	ND	50	16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	50	15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	50	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	50	17	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	32	ug/kg	
75-34-3	1,1-Dichloroethane	ND	50	19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	24	ug/kg	
75-35-4	1,1-Dichloroethene	ND	50	33	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	50	48	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	50	33	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	20	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	18	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	16	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
76-13-1	Freon 113	ND	250	38	ug/kg	
591-78-6	2-Hexanone	ND	250	64	ug/kg	
98-82-8	Isopropylbenzene	ND	100	35	ug/kg	
79-20-9	Methyl Acetate	ND	250	70	ug/kg	
108-87-2	Methylcyclohexane	ND	100	35	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	18	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10643-MB	D264046.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	78	ug/kg	
75-09-2	Methylene chloride	ND	250	130	ug/kg	
100-42-5	Styrene	ND	100	29	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/kg	
127-18-4	Tetrachloroethene	ND	100	23	ug/kg	
108-88-3	Toluene	ND	50	19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	50	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	21	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	17	ug/kg	
79-01-6	Trichloroethene	ND	50	38	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	34	ug/kg	
75-01-4	Vinyl chloride	ND	100	23	ug/kg	
	m,p-Xylene	ND	50	37	ug/kg	
95-47-6	o-Xylene	ND	50	29	ug/kg	
1330-20-7	Xylene (total)	ND	50	29	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	92%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	96%	79-127%

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-MB	D264069.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	250	ug/kg	
71-43-2	Benzene	ND	25	19	ug/kg	
74-97-5	Bromochloromethane	ND	250	22	ug/kg	
75-27-4	Bromodichloromethane	ND	100	22	ug/kg	
75-25-2	Bromoform	ND	250	20	ug/kg	
74-83-9	Bromomethane	ND	250	50	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	190	ug/kg	
75-15-0	Carbon disulfide	ND	100	46	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	28	ug/kg	
108-90-7	Chlorobenzene	ND	100	18	ug/kg	
75-00-3	Chloroethane	ND	250	34	ug/kg	
67-66-3	Chloroform	ND	100	19	ug/kg	
74-87-3	Chloromethane	ND	250	98	ug/kg	
110-82-7	Cyclohexane	ND	100	20	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	42	ug/kg	
124-48-1	Dibromochloromethane	ND	100	17	ug/kg	
106-93-4	1,2-Dibromoethane	ND	50	16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	50	15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	50	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	50	17	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	32	ug/kg	
75-34-3	1,1-Dichloroethane	ND	50	19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	24	ug/kg	
75-35-4	1,1-Dichloroethene	ND	50	33	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	50	48	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	50	33	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	20	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	18	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	16	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
76-13-1	Freon 113	ND	250	38	ug/kg	
591-78-6	2-Hexanone	ND	250	64	ug/kg	
98-82-8	Isopropylbenzene	ND	100	35	ug/kg	
79-20-9	Methyl Acetate	ND	250	70	ug/kg	
108-87-2	Methylcyclohexane	ND	100	35	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	18	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-MB	D264069.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	78	ug/kg	
75-09-2	Methylene chloride	ND	250	130	ug/kg	
100-42-5	Styrene	ND	100	29	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/kg	
127-18-4	Tetrachloroethene	ND	100	23	ug/kg	
108-88-3	Toluene	ND	50	19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	50	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	21	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	17	ug/kg	
79-01-6	Trichloroethene	ND	50	38	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	34	ug/kg	
75-01-4	Vinyl chloride	ND	100	23	ug/kg	
	m,p-Xylene	ND	50	37	ug/kg	
95-47-6	o-Xylene	ND	50	29	ug/kg	
1330-20-7	Xylene (total)	ND	50	29	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	75-127%
17060-07-0	1,2-Dichloroethane-D4	89%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	96%	79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8016-MB	Y184759.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/kg	
71-43-2	Benzene	ND	0.50	0.38	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.43	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.44	ug/kg	
75-25-2	Bromoform	ND	5.0	0.40	ug/kg	
74-83-9	Bromomethane	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.55	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.35	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.69	ug/kg	
67-66-3	Chloroform	ND	2.0	0.37	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.41	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.34	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.31	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.36	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.34	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.64	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.96	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.41	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.35	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.33	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
76-13-1	Freon 113	ND	5.0	0.76	ug/kg	
591-78-6	2-Hexanone	ND	5.0	1.3	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.70	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.71	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8016-MB	Y184759.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	5.0	2.5	ug/kg	
100-42-5	Styrene	ND	2.0	0.58	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.39	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.46	ug/kg	
108-88-3	Toluene	ND	1.0	0.38	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.43	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.34	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.47	ug/kg	
	m,p-Xylene	ND	1.0	0.75	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.58	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	75-127%
17060-07-0	1,2-Dichloroethane-D4	88%	75-130%
2037-26-5	Toluene-D8	89%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-MB2	D264110.D	1	04/29/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3MS, JC86406-3MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	250	ug/kg	
71-43-2	Benzene	ND	25	19	ug/kg	
74-97-5	Bromochloromethane	ND	250	22	ug/kg	
75-27-4	Bromodichloromethane	ND	100	22	ug/kg	
75-25-2	Bromoform	ND	250	20	ug/kg	
74-83-9	Bromomethane	ND	250	50	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	190	ug/kg	
75-15-0	Carbon disulfide	ND	100	46	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	28	ug/kg	
108-90-7	Chlorobenzene	ND	100	18	ug/kg	
75-00-3	Chloroethane	ND	250	34	ug/kg	
67-66-3	Chloroform	ND	100	19	ug/kg	
74-87-3	Chloromethane	ND	250	98	ug/kg	
110-82-7	Cyclohexane	ND	100	20	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	42	ug/kg	
124-48-1	Dibromochloromethane	ND	100	17	ug/kg	
106-93-4	1,2-Dibromoethane	ND	50	16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	50	15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	50	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	50	17	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	32	ug/kg	
75-34-3	1,1-Dichloroethane	ND	50	19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	24	ug/kg	
75-35-4	1,1-Dichloroethene	ND	50	33	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	50	48	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	50	33	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	20	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	18	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	16	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
76-13-1	Freon 113	ND	250	38	ug/kg	
591-78-6	2-Hexanone	ND	250	64	ug/kg	
98-82-8	Isopropylbenzene	ND	100	35	ug/kg	
79-20-9	Methyl Acetate	ND	250	70	ug/kg	
108-87-2	Methylcyclohexane	ND	100	35	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	18	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-MB2	D264110.D	1	04/29/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3MS, JC86406-3MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	78	ug/kg	
75-09-2	Methylene chloride	ND	250	130	ug/kg	
100-42-5	Styrene	ND	100	29	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/kg	
127-18-4	Tetrachloroethene	ND	100	23	ug/kg	
108-88-3	Toluene	ND	50	19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	50	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	21	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	17	ug/kg	
79-01-6	Trichloroethene	ND	50	38	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	34	ug/kg	
75-01-4	Vinyl chloride	ND	100	23	ug/kg	
	m,p-Xylene	ND	50	37	ug/kg	
95-47-6	o-Xylene	ND	50	29	ug/kg	
1330-20-7	Xylene (total)	ND	50	29	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	75-130%
2037-26-5	Toluene-D8	94%	80-120%
460-00-4	4-Bromofluorobenzene	94%	79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1778-BS	3V44285.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	205	103	48-149
71-43-2	Benzene	50	46.6	93	74-117
74-97-5	Bromochloromethane	50	47.9	96	82-121
75-27-4	Bromodichloromethane	50	44.9	90	78-119
75-25-2	Bromoform	50	45.5	91	76-130
74-83-9	Bromomethane	50	42.3	85	58-137
78-93-3	2-Butanone (MEK)	200	197	99	65-143
75-15-0	Carbon disulfide	50	47.1	94	66-140
56-23-5	Carbon tetrachloride	50	45.3	91	69-136
108-90-7	Chlorobenzene	50	44.4	89	79-117
75-00-3	Chloroethane	50	45.9	92	62-139
67-66-3	Chloroform	50	45.1	90	76-119
74-87-3	Chloromethane	50	40.1	80	52-144
110-82-7	Cyclohexane	50	57.0	114	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	47.5	95	72-124
124-48-1	Dibromochloromethane	50	45.9	92	78-122
106-93-4	1,2-Dibromoethane	50	46.0	92	80-116
95-50-1	1,2-Dichlorobenzene	50	45.1	90	77-117
541-73-1	1,3-Dichlorobenzene	50	44.3	89	75-117
106-46-7	1,4-Dichlorobenzene	50	43.0	86	76-115
75-71-8	Dichlorodifluoromethane	50	51.3	103	43-156
75-34-3	1,1-Dichloroethane	50	47.2	94	75-124
107-06-2	1,2-Dichloroethane	50	44.8	90	74-124
75-35-4	1,1-Dichloroethene	50	45.8	92	64-129
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	74-118
156-60-5	trans-1,2-Dichloroethene	50	45.1	90	71-125
78-87-5	1,2-Dichloropropane	50	45.3	91	80-119
10061-01-5	cis-1,3-Dichloropropene	50	45.7	91	80-119
10061-02-6	trans-1,3-Dichloropropene	50	47.2	94	78-119
100-41-4	Ethylbenzene	50	47.1	94	75-118
76-13-1	Freon 113	50	49.6	99	60-181
591-78-6	2-Hexanone	200	208	104	63-138
98-82-8	Isopropylbenzene	50	51.0	102	74-122
79-20-9	Methyl Acetate	50	48.5	97	61-140
108-87-2	Methylcyclohexane	50	54.6	109	67-136
1634-04-4	Methyl Tert Butyl Ether	50	46.4	93	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1778-BS	3V44285.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	201	101	73-136
75-09-2	Methylene chloride	50	45.0	90	73-120
100-42-5	Styrene	50	49.0	98	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	46.6	93	72-120
127-18-4	Tetrachloroethene	50	47.1	94	69-128
108-88-3	Toluene	50	45.7	91	74-117
87-61-6	1,2,3-Trichlorobenzene	50	47.9	96	72-133
120-82-1	1,2,4-Trichlorobenzene	50	47.8	96	73-132
71-55-6	1,1,1-Trichloroethane	50	45.7	91	73-131
79-00-5	1,1,2-Trichloroethane	50	46.3	93	79-117
79-01-6	Trichloroethene	50	45.4	91	80-120
75-69-4	Trichlorofluoromethane	50	48.0	96	63-141
75-01-4	Vinyl chloride	50	46.8	94	55-145
	m,p-Xylene	100	96.0	96	75-120
95-47-6	o-Xylene	50	49.9	100	75-119
1330-20-7	Xylene (total)	150	146	97	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	102%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9093-BS	I225702.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	235	118	48-149
71-43-2	Benzene	50	48.5	97	74-117
74-97-5	Bromochloromethane	50	51.8	104	82-121
75-27-4	Bromodichloromethane	50	51.3	103	78-119
75-25-2	Bromoform	50	53.7	107	76-130
74-83-9	Bromomethane	50	57.0	114	58-137
78-93-3	2-Butanone (MEK)	200	229	115	65-143
75-15-0	Carbon disulfide	50	45.6	91	66-140
56-23-5	Carbon tetrachloride	50	55.1	110	69-136
108-90-7	Chlorobenzene	50	49.8	100	79-117
75-00-3	Chloroethane	50	53.5	107	62-139
67-66-3	Chloroform	50	51.7	103	76-119
74-87-3	Chloromethane	50	50.1	100	52-144
110-82-7	Cyclohexane	50	51.7	103	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	51.5	103	72-124
124-48-1	Dibromochloromethane	50	50.6	101	78-122
106-93-4	1,2-Dibromoethane	50	60.6	121* [a]	80-116
95-50-1	1,2-Dichlorobenzene	50	49.7	99	77-117
541-73-1	1,3-Dichlorobenzene	50	50.0	100	75-117
106-46-7	1,4-Dichlorobenzene	50	49.2	98	76-115
75-71-8	Dichlorodifluoromethane	50	58.2	116	43-156
75-34-3	1,1-Dichloroethane	50	48.9	98	75-124
107-06-2	1,2-Dichloroethane	50	52.9	106	74-124
75-35-4	1,1-Dichloroethene	50	51.2	102	64-129
156-59-2	cis-1,2-Dichloroethene	50	47.5	95	74-118
156-60-5	trans-1,2-Dichloroethene	50	49.7	99	71-125
78-87-5	1,2-Dichloropropane	50	44.5	89	80-119
10061-01-5	cis-1,3-Dichloropropene	50	49.1	98	80-119
10061-02-6	trans-1,3-Dichloropropene	50	51.7	103	78-119
100-41-4	Ethylbenzene	50	48.4	97	75-118
76-13-1	Freon 113	50	55.8	112	60-181
591-78-6	2-Hexanone	200	198	99	63-138
98-82-8	Isopropylbenzene	50	49.1	98	74-122
79-20-9	Methyl Acetate	50	46.5	93	61-140
108-87-2	Methylcyclohexane	50	45.6	91	67-136
1634-04-4	Methyl Tert Butyl Ether	50	50.2	100	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9093-BS	I225702.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	209	105	73-136
75-09-2	Methylene chloride	50	46.2	92	73-120
100-42-5	Styrene	50	47.8	96	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	48.8	98	72-120
127-18-4	Tetrachloroethene	50	52.4	105	69-128
108-88-3	Toluene	50	49.5	99	74-117
87-61-6	1,2,3-Trichlorobenzene	50	47.8	96	72-133
120-82-1	1,2,4-Trichlorobenzene	50	50.2	100	73-132
71-55-6	1,1,1-Trichloroethane	50	54.4	109	73-131
79-00-5	1,1,2-Trichloroethane	50	47.1	94	79-117
79-01-6	Trichloroethene	50	50.9	102	80-120
75-69-4	Trichlorofluoromethane	50	57.5	115	63-141
75-01-4	Vinyl chloride	50	57.7	115	55-145
	m,p-Xylene	100	96.4	96	75-120
95-47-6	o-Xylene	50	47.2	94	75-119
1330-20-7	Xylene (total)	150	144	96	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	106%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	100%	79-127%

(a) High percent recoveries and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10643-BS	D264044.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	12200	122	48-149
71-43-2	Benzene	2500	2410	96	74-117
74-97-5	Bromochloromethane	2500	2570	103	82-121
75-27-4	Bromodichloromethane	2500	2300	92	78-119
75-25-2	Bromoform	2500	2380	95	76-130
74-83-9	Bromomethane	2500	2680	107	58-137
78-93-3	2-Butanone (MEK)	10000	11400	114	65-143
75-15-0	Carbon disulfide	2500	2680	107	66-140
56-23-5	Carbon tetrachloride	2500	2260	90	69-136
108-90-7	Chlorobenzene	2500	2230	89	79-117
75-00-3	Chloroethane	2500	2480	99	62-139
67-66-3	Chloroform	2500	2320	93	76-119
74-87-3	Chloromethane	2500	2120	85	52-144
110-82-7	Cyclohexane	2500	2800	112	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2610	104	72-124
124-48-1	Dibromochloromethane	2500	2380	95	78-122
106-93-4	1,2-Dibromoethane	2500	2600	104	80-116
95-50-1	1,2-Dichlorobenzene	2500	2490	100	77-117
541-73-1	1,3-Dichlorobenzene	2500	2440	98	75-117
106-46-7	1,4-Dichlorobenzene	2500	2410	96	76-115
75-71-8	Dichlorodifluoromethane	2500	1750	70	43-156
75-34-3	1,1-Dichloroethane	2500	2490	100	75-124
107-06-2	1,2-Dichloroethane	2500	2010	80	74-124
75-35-4	1,1-Dichloroethene	2500	2550	102	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2530	101	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2570	103	71-125
78-87-5	1,2-Dichloropropane	2500	2440	98	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2370	95	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2290	92	78-119
100-41-4	Ethylbenzene	2500	2330	93	75-118
76-13-1	Freon 113	2500	2350	94	60-181
591-78-6	2-Hexanone	10000	10200	102	63-138
98-82-8	Isopropylbenzene	2500	2450	98	74-122
79-20-9	Methyl Acetate	2500	2690	108	61-140
108-87-2	Methylcyclohexane	2500	2510	100	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2420	97	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10643-BS	D264044.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	10200	102	73-136
75-09-2	Methylene chloride	2500	2620	105	73-120
100-42-5	Styrene	2500	2350	94	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2440	98	72-120
127-18-4	Tetrachloroethene	2500	2270	91	69-128
108-88-3	Toluene	2500	2320	93	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2240	90	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2400	96	73-132
71-55-6	1,1,1-Trichloroethane	2500	2300	92	73-131
79-00-5	1,1,2-Trichloroethane	2500	2390	96	79-117
79-01-6	Trichloroethene	2500	2270	91	80-120
75-69-4	Trichlorofluoromethane	2500	2300	92	63-141
75-01-4	Vinyl chloride	2500	2260	90	55-145
	m,p-Xylene	5000	4700	94	75-120
95-47-6	o-Xylene	2500	2340	94	75-119
1330-20-7	Xylene (total)	7500	7040	94	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	89%	75-130%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	94%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-BS	D264067.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	13600	136	48-149
71-43-2	Benzene	2500	2760	110	74-117
74-97-5	Bromochloromethane	2500	2910	116	82-121
75-27-4	Bromodichloromethane	2500	2650	106	78-119
75-25-2	Bromoform	2500	2780	111	76-130
74-83-9	Bromomethane	2500	2920	117	58-137
78-93-3	2-Butanone (MEK)	10000	12300	123	65-143
75-15-0	Carbon disulfide	2500	2960	118	66-140
56-23-5	Carbon tetrachloride	2500	2590	104	69-136
108-90-7	Chlorobenzene	2500	2540	102	79-117
75-00-3	Chloroethane	2500	2670	107	62-139
67-66-3	Chloroform	2500	2610	104	76-119
74-87-3	Chloromethane	2500	2420	97	52-144
110-82-7	Cyclohexane	2500	2830	113	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2890	116	72-124
124-48-1	Dibromochloromethane	2500	2770	111	78-122
106-93-4	1,2-Dibromoethane	2500	2950	118* [a]	80-116
95-50-1	1,2-Dichlorobenzene	2500	2870	115	77-117
541-73-1	1,3-Dichlorobenzene	2500	2810	112	75-117
106-46-7	1,4-Dichlorobenzene	2500	2790	112	76-115
75-71-8	Dichlorodifluoromethane	2500	2120	85	43-156
75-34-3	1,1-Dichloroethane	2500	2800	112	75-124
107-06-2	1,2-Dichloroethane	2500	2270	91	74-124
75-35-4	1,1-Dichloroethene	2500	2800	112	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2880	115	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2900	116	71-125
78-87-5	1,2-Dichloropropane	2500	2810	112	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2730	109	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2630	105	78-119
100-41-4	Ethylbenzene	2500	2670	107	75-118
76-13-1	Freon 113	2500	2630	105	60-181
591-78-6	2-Hexanone	10000	11800	118	63-138
98-82-8	Isopropylbenzene	2500	2840	114	74-122
79-20-9	Methyl Acetate	2500	3000	120	61-140
108-87-2	Methylcyclohexane	2500	2810	112	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2820	113	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10644-BS	D264067.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	11500	115	73-136
75-09-2	Methylene chloride	2500	2960	118	73-120
100-42-5	Styrene	2500	2690	108	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2770	111	72-120
127-18-4	Tetrachloroethene	2500	2650	106	69-128
108-88-3	Toluene	2500	2670	107	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2680	107	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2860	114	73-132
71-55-6	1,1,1-Trichloroethane	2500	2640	106	73-131
79-00-5	1,1,2-Trichloroethane	2500	2810	112	79-117
79-01-6	Trichloroethene	2500	2610	104	80-120
75-69-4	Trichlorofluoromethane	2500	2410	96	63-141
75-01-4	Vinyl chloride	2500	2500	100	55-145
	m,p-Xylene	5000	5420	108	75-120
95-47-6	o-Xylene	2500	2690	108	75-119
1330-20-7	Xylene (total)	7500	8110	108	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	75-127%
17060-07-0	1,2-Dichloroethane-D4	88%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	94%	79-127%

(a) High percent recoveries and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8016-BS	Y184757.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	202	101	48-149
71-43-2	Benzene	50	50.7	101	74-117
74-97-5	Bromochloromethane	50	56.8	114	82-121
75-27-4	Bromodichloromethane	50	51.5	103	78-119
75-25-2	Bromoform	50	48.8	98	76-130
74-83-9	Bromomethane	50	51.1	102	58-137
78-93-3	2-Butanone (MEK)	200	224	112	65-143
75-15-0	Carbon disulfide	50	55.9	112	66-140
56-23-5	Carbon tetrachloride	50	59.0	118	69-136
108-90-7	Chlorobenzene	50	44.4	89	79-117
75-00-3	Chloroethane	50	55.2	110	62-139
67-66-3	Chloroform	50	52.6	105	76-119
74-87-3	Chloromethane	50	52.1	104	52-144
110-82-7	Cyclohexane	50	52.6	105	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	47.6	95	72-124
124-48-1	Dibromochloromethane	50	48.1	96	78-122
106-93-4	1,2-Dibromoethane	50	46.1	92	80-116
95-50-1	1,2-Dichlorobenzene	50	43.4	87	77-117
541-73-1	1,3-Dichlorobenzene	50	44.7	89	75-117
106-46-7	1,4-Dichlorobenzene	50	43.3	87	76-115
75-71-8	Dichlorodifluoromethane	50	53.1	106	43-156
75-34-3	1,1-Dichloroethane	50	53.7	107	75-124
107-06-2	1,2-Dichloroethane	50	49.9	100	74-124
75-35-4	1,1-Dichloroethene	50	56.8	114	64-129
156-59-2	cis-1,2-Dichloroethene	50	54.3	109	74-118
156-60-5	trans-1,2-Dichloroethene	50	53.8	108	71-125
78-87-5	1,2-Dichloropropane	50	51.9	104	80-119
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	80-119
10061-02-6	trans-1,3-Dichloropropene	50	44.3	89	78-119
100-41-4	Ethylbenzene	50	45.5	91	75-118
76-13-1	Freon 113	50	61.5	123	60-181
591-78-6	2-Hexanone	200	181	91	63-138
98-82-8	Isopropylbenzene	50	47.8	96	74-122
79-20-9	Methyl Acetate	50	54.2	108	61-140
108-87-2	Methylcyclohexane	50	56.2	112	67-136
1634-04-4	Methyl Tert Butyl Ether	50	56.9	114	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8016-BS	Y184757.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	207	104	73-136
75-09-2	Methylene chloride	50	53.9	108	73-120
100-42-5	Styrene	50	47.8	96	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	42.7	85	72-120
127-18-4	Tetrachloroethene	50	45.2	90	69-128
108-88-3	Toluene	50	42.9	86	74-117
87-61-6	1,2,3-Trichlorobenzene	50	51.4	103	72-133
120-82-1	1,2,4-Trichlorobenzene	50	49.7	99	73-132
71-55-6	1,1,1-Trichloroethane	50	57.9	116	73-131
79-00-5	1,1,2-Trichloroethane	50	43.6	87	79-117
79-01-6	Trichloroethene	50	54.4	109	80-120
75-69-4	Trichlorofluoromethane	50	55.8	112	63-141
75-01-4	Vinyl chloride	50	56.6	113	55-145
	m,p-Xylene	100	91.6	92	75-120
95-47-6	o-Xylene	50	47.1	94	75-119
1330-20-7	Xylene (total)	150	139	93	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	75-127%
17060-07-0	1,2-Dichloroethane-D4	95%	75-130%
2037-26-5	Toluene-D8	87%	80-120%
460-00-4	4-Bromofluorobenzene	96%	79-127%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86863-3MS	I225711.D	1	04/25/19	TDN	n/a	n/a	VI9093
JC86863-3	I225710.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	JC86863-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	ND		406	386	95	10-157
71-43-2	Benzene	ND		101	87.9	87	58-125
74-97-5	Bromochloromethane	ND		101	93.9	93	60-127
75-27-4	Bromodichloromethane	ND		101	89.3	88	57-128
75-25-2	Bromoform	ND		101	82.8	82	48-133
74-83-9	Bromomethane	ND		101	107	105	31-141
78-93-3	2-Butanone (MEK)	ND		406	339	84	29-146
75-15-0	Carbon disulfide	ND		101	81.2	80	47-145
56-23-5	Carbon tetrachloride	ND		101	94.1	93	51-143
108-90-7	Chlorobenzene	ND		101	79.3	78	54-130
75-00-3	Chloroethane	ND		101	99.6	98	22-153
67-66-3	Chloroform	ND		101	94.0	93	61-125
74-87-3	Chloromethane	ND		101	92.5	91	43-142
110-82-7	Cyclohexane	ND		101	79.7	79	37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		101	69.1	68	41-127
124-48-1	Dibromochloromethane	ND		101	87.2	86	56-127
106-93-4	1,2-Dibromoethane	ND		101	104	103	54-121
95-50-1	1,2-Dichlorobenzene	ND		101	65.8	65	41-134
541-73-1	1,3-Dichlorobenzene	ND		101	66.3	65	41-135
106-46-7	1,4-Dichlorobenzene	ND		101	65.5	65	41-133
75-71-8	Dichlorodifluoromethane	ND		101	102	101	30-153
75-34-3	1,1-Dichloroethane	ND		101	90.9	90	61-131
107-06-2	1,2-Dichloroethane	ND		101	98.9	97	56-126
75-35-4	1,1-Dichloroethene	ND		101	93.2	92	53-132
156-59-2	cis-1,2-Dichloroethene	ND		101	88.6	87	57-125
156-60-5	trans-1,2-Dichloroethene	ND		101	91.6	90	56-130
78-87-5	1,2-Dichloropropane	ND		101	81.2	80	63-126
10061-01-5	cis-1,3-Dichloropropene	ND		101	84.3	83	55-126
10061-02-6	trans-1,3-Dichloropropene	ND		101	88.1	87	51-126
100-41-4	Ethylbenzene	ND		101	77.2	76	49-132
76-13-1	Freon 113	ND		101	93.1	92	42-179
591-78-6	2-Hexanone	ND		406	309	76	25-150
98-82-8	Isopropylbenzene	ND		101	70.5	69	43-141
79-20-9	Methyl Acetate	ND		101	76.1	75	32-158
108-87-2	Methylcyclohexane	ND		101	60.2	59	22-158
1634-04-4	Methyl Tert Butyl Ether	ND		101	94.6	93	58-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86863-3MS	I225711.D	1	04/25/19	TDN	n/a	n/a	VI9093
JC86863-3	I225710.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	JC86863-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		406	332	82	40-140
75-09-2	Methylene chloride	ND		101	87.1	86	57-123
100-42-5	Styrene	ND		101	72.7	72	46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		101	80.4	79	44-127
127-18-4	Tetrachloroethene	ND		101	79.6	78	39-154
108-88-3	Toluene	ND		101	85.6	84	54-127
87-61-6	1,2,3-Trichlorobenzene	ND		101	37.5	37	17-151
120-82-1	1,2,4-Trichlorobenzene	ND		101	44.3	44	19-153
71-55-6	1,1,1-Trichloroethane	ND		101	98.7	97	57-138
79-00-5	1,1,2-Trichloroethane	ND		101	83.3	82	53-127
79-01-6	Trichloroethene	ND		101	82.7	82	52-140
75-69-4	Trichlorofluoromethane	ND		101	103	102	46-142
75-01-4	Vinyl chloride	ND		101	106	104	43-146
	m,p-Xylene	ND		203	150	74	45-137
95-47-6	o-Xylene	ND		101	72.4	71	48-135
1330-20-7	Xylene (total)	ND		304	222	73	46-137

CAS No.	Surrogate Recoveries	MS	JC86863-3	Limits
1868-53-7	Dibromofluoromethane	101%	110%	75-127%
17060-07-0	1,2-Dichloroethane-D4	107%	123%	75-130%
2037-26-5	Toluene-D8	100%	105%	80-120%
460-00-4	4-Bromofluorobenzene	107%	123%	79-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86406-10MS	3V44297.D	1	04/24/19	RS	n/a	n/a	V3V1778
JC86406-10MSD	3V44298.D	1	04/24/19	RS	n/a	n/a	V3V1778
JC86406-10	3V44288.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	JC86406-10 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	28.1		208	160	63	256	155	50	3	10-157/31
71-43-2	Benzene	ND		51.9	37.8	73	64.1	43.1	67	13	58-125/22
74-97-5	Bromochloromethane	ND		51.9	36.4	70	64.1	40.1	63	10	60-127/22
75-27-4	Bromodichloromethane	ND		51.9	36.4	70	64.1	42.5	66	15	57-128/22
75-25-2	Bromoform	ND		51.9	38.2	74	64.1	42.7	67	11	48-133/21
74-83-9	Bromomethane	ND		51.9	36.8	71	64.1	42.3	66	14	31-141/28
78-93-3	2-Butanone (MEK)	ND		208	158	76	256	167	65	6	29-146/27
75-15-0	Carbon disulfide	ND		51.9	34.6	67	64.1	38.3	60	10	47-145/24
56-23-5	Carbon tetrachloride	ND		51.9	39.1	75	64.1	43.7	68	11	51-143/25
108-90-7	Chlorobenzene	ND		51.9	36.9	71	64.1	42.4	66	14	54-130/22
75-00-3	Chloroethane	ND		51.9	40.7	78	64.1	46.0	72	12	22-153/32
67-66-3	Chloroform	ND		51.9	35.2	68	64.1	39.8	62	12	61-125/22
74-87-3	Chloromethane	ND		51.9	35.6	69	64.1	42.6	66	18	43-142/27
110-82-7	Cyclohexane	ND		51.9	48.0	92	64.1	52.9	83	10	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		51.9	44.3	85	64.1	42.5	66	4	41-127/23
124-48-1	Dibromochloromethane	ND		51.9	39.0	75	64.1	44.0	69	12	56-127/21
106-93-4	1,2-Dibromoethane	ND		51.9	40.5	78	64.1	43.9	69	8	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		51.9	37.9	73	64.1	40.5	63	7	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		51.9	37.4	72	64.1	40.1	63	7	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		51.9	36.5	70	64.1	39.1	61	7	41-133/22
75-71-8	Dichlorodifluoromethane	ND		51.9	44.0	85	64.1	50.8	79	14	30-153/29
75-34-3	1,1-Dichloroethane	ND		51.9	37.5	72	64.1	41.9	65	11	61-131/23
107-06-2	1,2-Dichloroethane	ND		51.9	36.4	70	64.1	41.8	65	14	56-126/21
75-35-4	1,1-Dichloroethene	ND		51.9	35.7	69	64.1	40.1	63	12	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		51.9	35.3	68	64.1	39.1	61	10	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		51.9	34.7	67	64.1	38.3	60	10	56-130/23
78-87-5	1,2-Dichloropropane	ND		51.9	37.3	72	64.1	43.2	67	15	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		51.9	36.8	71	64.1	43.4	68	16	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		51.9	39.5	76	64.1	43.5	68	10	51-126/21
100-41-4	Ethylbenzene	ND		51.9	40.7	78	64.1	45.5	71	11	49-132/23
76-13-1	Freon 113	ND		51.9	40.3	78	64.1	45.6	71	12	42-179/25
591-78-6	2-Hexanone	ND		208	181	87	256	190	74	5	25-150/25
98-82-8	Isopropylbenzene	ND		51.9	43.4	84	64.1	47.8	75	10	43-141/25
79-20-9	Methyl Acetate	ND		51.9	63.5	122	64.1	54.1	84	16	32-158/26
108-87-2	Methylcyclohexane	ND		51.9	38.8	75	64.1	43.1	67	11	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		51.9	40.4	78	64.1	45.4	71	12	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86406-10MS	3V44297.D	1	04/24/19	RS	n/a	n/a	V3V1778
JC86406-10MSD	3V44298.D	1	04/24/19	RS	n/a	n/a	V3V1778
JC86406-10	3V44288.D	1	04/24/19	RS	n/a	n/a	V3V1778

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-2, JC86406-6, JC86406-10, JC86406-11

CAS No.	Compound	JC86406-10 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		208	171	82	256	184	72	7	40-140/24
75-09-2	Methylene chloride	ND		51.9	35.0	67	64.1	39.1	61	11	57-123/23
100-42-5	Styrene	ND		51.9	40.5	78	64.1	46.3	72	13	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		51.9	41.1	79	64.1	40.3	63	2	44-127/26
127-18-4	Tetrachloroethene	ND		51.9	40.0	77	64.1	44.0	69	10	39-154/26
108-88-3	Toluene	ND		51.9	39.4	76	64.1	43.9	69	11	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		51.9	33.9	65	64.1	41.6	65	20	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		51.9	34.6	67	64.1	41.6	65	18	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		51.9	40.1	77	64.1	44.3	69	10	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		51.9	40.1	77	64.1	44.0	69	9	53-127/22
79-01-6	Trichloroethene	ND		51.9	38.8	75	64.1	44.4	69	13	52-140/24
75-69-4	Trichlorofluoromethane	ND		51.9	41.4	80	64.1	47.2	74	13	46-142/27
75-01-4	Vinyl chloride	ND		51.9	42.0	81	64.1	48.4	76	14	43-146/26
	m,p-Xylene	ND		104	82.4	79	128	92.6	72	12	45-137/23
95-47-6	o-Xylene	ND		51.9	42.4	82	64.1	47.5	74	11	48-135/22
1330-20-7	Xylene (total)	ND		156	125	80	192	140	73	11	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86406-10	Limits
1868-53-7	Dibromofluoromethane	95%	93%	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	96%	93%	104%	75-130%
2037-26-5	Toluene-D8	104%	102%	101%	80-120%
460-00-4	4-Bromofluorobenzene	106%	98%	105%	79-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86424-5MS	D264055.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5MSD	D264056.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5	D264050.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5	D264053.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	JC86424-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	a	118000	127000	108	118000	130000	110	2	10-157/31
71-43-2	Benzene	473	a	29400	27700	92	29400	28800	96	4	58-125/22
74-97-5	Bromochloromethane	ND	a	29400	28000	95	29400	29900	102	7	60-127/22
75-27-4	Bromodichloromethane	ND	a	29400	26400	90	29400	27200	92	3	57-128/22
75-25-2	Bromoform	ND	a	29400	27600	94	29400	28500	97	3	48-133/21
74-83-9	Bromomethane	ND	a	29400	28100	95	29400	28500	97	1	31-141/28
78-93-3	2-Butanone (MEK)	ND	a	118000	121000	103	118000	126000	107	4	29-146/27
75-15-0	Carbon disulfide	ND	a	29400	29700	101	29400	30900	105	4	47-145/24
56-23-5	Carbon tetrachloride	ND	a	29400	25800	88	29400	26700	91	3	51-143/25
108-90-7	Chlorobenzene	ND	a	29400	25700	87	29400	26600	90	3	54-130/22
75-00-3	Chloroethane	ND	a	29400	26500	90	29400	26700	91	1	22-153/32
67-66-3	Chloroform	ND	a	29400	25500	87	29400	26800	91	5	61-125/22
74-87-3	Chloromethane	ND	a	29400	22600	77	29400	22800	77	1	43-142/27
110-82-7	Cyclohexane	2300	a	29400	32700	103	29400	33600	106	3	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND	a	29400	28500	97	29400	29700	101	4	41-127/23
124-48-1	Dibromochloromethane	ND	a	29400	27000	92	29400	28100	95	4	56-127/21
106-93-4	1,2-Dibromoethane	ND	a	29400	29500	100	29400	30400	103	3	54-121/21
95-50-1	1,2-Dichlorobenzene	1230	a	29400	29600	96	29400	30600	100	3	41-134/22
541-73-1	1,3-Dichlorobenzene	ND	a	29400	28200	96	29400	29100	99	3	41-135/22
106-46-7	1,4-Dichlorobenzene	ND	a	29400	27400	93	29400	28500	97	4	41-133/22
75-71-8	Dichlorodifluoromethane	ND	a	29400	18200	62	29400	18200	62	0	30-153/29
75-34-3	1,1-Dichloroethane	7130	a	29400	33800	91	29400	34700	94	3	61-131/23
107-06-2	1,2-Dichloroethane	ND	a	29400	22400	76	29400	23100	78	3	56-126/21
75-35-4	1,1-Dichloroethene	ND	a	29400	28200	96	29400	29800	101	6	53-132/23
156-59-2	cis-1,2-Dichloroethene	13000	a	29400	39100	89	29400	40700	94	4	57-125/22
156-60-5	trans-1,2-Dichloroethene	1140	a	29400	29900	98	29400	31200	102	4	56-130/23
78-87-5	1,2-Dichloropropane	ND	a	29400	27900	95	29400	28900	98	4	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND	a	29400	26700	91	29400	27800	94	4	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND	a	29400	26500	90	29400	27200	92	3	51-126/21
100-41-4	Ethylbenzene	59000	a	29400	78200	65	29400	78200	65	0	49-132/23
76-13-1	Freon 113	ND	a	29400	27700	94	29400	28500	97	3	42-179/25
591-78-6	2-Hexanone	ND	a	118000	121000	103	118000	122000	104	1	25-150/25
98-82-8	Isopropylbenzene	2830	a	29400	31700	98	29400	32200	100	2	43-141/25
79-20-9	Methyl Acetate	ND	a	29400	30400	103	29400	31000	105	2	32-158/26
108-87-2	Methylcyclohexane	10800	a	29400	40900	102	29400	41200	103	1	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND	a	29400	27900	95	29400	28800	98	3	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86424-5MS	D264055.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5MSD	D264056.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5	D264050.D	1	04/25/19	TDN	n/a	n/a	VD10643
JC86424-5	D264053.D	1	04/25/19	TDN	n/a	n/a	VD10643

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-8

CAS No.	Compound	JC86424-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND [a]		118000	116000	99	118000	119000	101	3	40-140/24
75-09-2	Methylene chloride	ND [a]		29400	29200	99	29400	30300	103	4	57-123/23
100-42-5	Styrene	ND [a]		29400	28500	97	29400	29100	99	2	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND [a]		29400	29300	100	29400	30200	103	3	44-127/26
127-18-4	Tetrachloroethene	3120 [a]		29400	29700	90	29400	30700	94	3	39-154/26
108-88-3	Toluene	301000 [c]		29400	215000	-20* [b]	29400	215000	-20* [b]	0	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND [a]		29400	26700	91	29400	28400	96	6	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND [a]		29400	29200	99	29400	30500	104	4	19-153/32
71-55-6	1,1,1-Trichloroethane	ND [a]		29400	26200	89	29400	27000	92	3	57-138/24
79-00-5	1,1,2-Trichloroethane	ND [a]		29400	30100	102	29400	30600	104	2	53-127/22
79-01-6	Trichloroethene	ND [a]		29400	26200	89	29400	27400	93	4	52-140/24
75-69-4	Trichlorofluoromethane	ND [a]		29400	24900	85	29400	25400	86	2	46-142/27
75-01-4	Vinyl chloride	341 [a]	J	29400	24700	83	29400	24900	83	1	43-146/26
	m,p-Xylene	169000 [a]		58900	204000	59	58900	204000	59	0	45-137/23
95-47-6	o-Xylene	48000 [a]		29400	69800	74	29400	70200	75	1	48-135/22
1330-20-7	Xylene (total)	217000 [a]		88300	274000	65	88300	274000	65	0	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86424-5	JC86424-5	Limits
1868-53-7	Dibromofluoromethane	97%	98%	102%	97%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	86%	91%	88%	75-130%
2037-26-5	Toluene-D8	104%	103%	101%	100%	80-120%
460-00-4	4-Bromofluorobenzene	97%	96%	98%	97%	79-127%

(a) Result is from Run #3.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86717-12MS	Y184765.D	1	04/26/19	EH	n/a	n/a	VY8016
JC86717-12MSD	Y184766.D	1	04/26/19	EH	n/a	n/a	VY8016
JC86717-12	Y184760.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	JC86717-12 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		324	276	85	324	281	87	2	10-157/31
71-43-2	Benzene	ND		81	63.2	78	81	67.0	83	6	58-125/22
74-97-5	Bromochloromethane	ND		81	71.0	88	81	74.9	92	5	60-127/22
75-27-4	Bromodichloromethane	ND		81	60.4	75	81	63.6	78	5	57-128/22
75-25-2	Bromoform	ND		81	49.2	61	81	53.4	66	8	48-133/21
74-83-9	Bromomethane	ND		81	63.1	78	81	68.2	84	8	31-141/28
78-93-3	2-Butanone (MEK)	ND		324	302	93	324	318	98	5	29-146/27
75-15-0	Carbon disulfide	ND		81	62.2	77	81	66.0	81	6	47-145/24
56-23-5	Carbon tetrachloride	ND		81	65.4	81	81	70.0	86	7	51-143/25
108-90-7	Chlorobenzene	ND		81	44.1	54	81	46.7	58	6	54-130/22
75-00-3	Chloroethane	ND		81	75.0	93	81	77.8	96	4	22-153/32
67-66-3	Chloroform	ND		81	65.9	81	81	69.8	86	6	61-125/22
74-87-3	Chloromethane	ND		81	75.2	93	81	72.0	89	4	43-142/27
110-82-7	Cyclohexane	ND		81	50.6	62	81	53.8	66	6	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		81	47.4	59	81	52.7	65	11	41-127/23
124-48-1	Dibromochloromethane	ND		81	54.0	67	81	57.2	71	6	56-127/21
106-93-4	1,2-Dibromoethane	ND		81	54.5	67	81	58.1	72	6	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		81	32.6	40* [a]	81	34.6	43	6	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		81	33.1	41	81	34.8	43	5	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		81	32.4	40* [a]	81	34.3	42	6	41-133/22
75-71-8	Dichlorodifluoromethane	ND		81	57.3	71	81	65.1	80	13	30-153/29
75-34-3	1,1-Dichloroethane	ND		81	72.0	89	81	76.4	94	6	61-131/23
107-06-2	1,2-Dichloroethane	ND		81	60.4	75	81	64.8	80	7	56-126/21
75-35-4	1,1-Dichloroethene	ND		81	75.7	93	81	79.8	98	5	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		81	66.6	82	81	70.7	87	6	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		81	65.5	81	81	67.0	83	2	56-130/23
78-87-5	1,2-Dichloropropane	ND		81	64.6	80	81	68.6	85	6	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		81	59.1	73	81	62.0	77	5	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		81	48.8	60	81	51.3	63	5	51-126/21
100-41-4	Ethylbenzene	ND		81	43.3	53	81	46.4	57	7	49-132/23
76-13-1	Freon 113	ND		81	67.3	83	81	70.6	87	5	42-179/25
591-78-6	2-Hexanone	ND		324	232	72	324	240	74	3	25-150/25
98-82-8	Isopropylbenzene	ND		81	38.0	47	81	40.7	50	7	43-141/25
79-20-9	Methyl Acetate	ND		81	90.5	112	81	101	125	11	32-158/26
108-87-2	Methylcyclohexane	ND		81	37.3	46	81	39.8	49	6	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		81	75.4	93	81	78.2	97	4	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86717-12MS	Y184765.D	1	04/26/19	EH	n/a	n/a	VY8016
JC86717-12MSD	Y184766.D	1	04/26/19	EH	n/a	n/a	VY8016
JC86717-12	Y184760.D	1	04/26/19	EH	n/a	n/a	VY8016

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-7, JC86406-9, JC86406-13, JC86406-15

CAS No.	Compound	JC86717-12 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		324	281	87	324	300	93	7	40-140/24
75-09-2	Methylene chloride	ND		81	73.0	90	81	77.0	95	5	57-123/23
100-42-5	Styrene	ND		81	43.4	54	81	46.6	58	7	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		81	46.0	57	81	49.7	61	8	44-127/26
127-18-4	Tetrachloroethene	0.90	J	81	43.6	53	81	47.2	57	8	39-154/26
108-88-3	Toluene	ND		81	50.0	62	81	52.8	65	5	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		81	22.4	28	81	23.6	29	5	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		81	22.3	28	81	23.7	29	6	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		81	68.6	85	81	73.8	91	7	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		81	53.1	66	81	57.6	71	8	53-127/22
79-01-6	Trichloroethene	ND		81	61.0	75	81	65.2	80	7	52-140/24
75-69-4	Trichlorofluoromethane	ND		81	67.8	84	81	74.0	91	9	46-142/27
75-01-4	Vinyl chloride	ND		81	71.6	88	81	80.5	99	12	43-146/26
	m,p-Xylene	ND		162	85.8	53	162	90.8	56	6	45-137/23
95-47-6	o-Xylene	ND		81	42.9	53	81	46.0	57	7	48-135/22
1330-20-7	Xylene (total)	ND		243	129	53	243	137	56	6	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86717-12	Limits
1868-53-7	Dibromofluoromethane	109%	110%	115%	75-127%
17060-07-0	1,2-Dichloroethane-D4	91%	90%	101%	75-130%
2037-26-5	Toluene-D8	91%	90%	87%	80-120%
460-00-4	4-Bromofluorobenzene	96%	95%	101%	79-127%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86406-3MS	D264111.D	1	04/29/19	JTP	n/a	n/a	VD10644
JC86406-3MSD	D264112.D	1	04/29/19	JTP	n/a	n/a	VD10644
JC86406-3 [a]	D264076.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	JC86406-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		30800	37400	122	30800	40100	130	7	10-157/31
71-43-2	Benzene	196		7690	7190	91	7690	7690	97	7	58-125/22
74-97-5	Bromochloromethane	ND		7690	7620	99	7690	8220	107	8	60-127/22
75-27-4	Bromodichloromethane	ND		7690	6770	88	7690	7220	94	6	57-128/22
75-25-2	Bromoform	ND		7690	6790	88	7690	7610	99	11	48-133/21
74-83-9	Bromomethane	ND		7690	3350	44	7690	3710	48	10	31-141/28
78-93-3	2-Butanone (MEK)	ND		30800	34000	110	30800	36600	119	7	29-146/27
75-15-0	Carbon disulfide	51000		7690	29800	-276* [b]	7690	29500	-279* [b]	1	47-145/24
56-23-5	Carbon tetrachloride	ND		7690	6640	86	7690	7270	95	9	51-143/25
108-90-7	Chlorobenzene	ND		7690	6330	82	7690	6970	91	10	54-130/22
75-00-3	Chloroethane	ND		7690	3370	44	7690	3840	50	13	22-153/32
67-66-3	Chloroform	ND		7690	6760	88	7690	7230	94	7	61-125/22
74-87-3	Chloromethane	ND		7690	6840	89	7690	6390	83	7	43-142/27
110-82-7	Cyclohexane	ND		7690	7540	98	7690	7770	101	3	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		7690	7860	102	7690	8480	110	8	41-127/23
124-48-1	Dibromochloromethane	ND		7690	6720	87	7690	7440	97	10	56-127/21
106-93-4	1,2-Dibromoethane	ND		7690	7220	94	7690	7950	103	10	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		7690	7010	91	7690	7710	100	10	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		7690	6830	89	7690	7450	97	9	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		7690	6780	88	7690	7410	96	9	41-133/22
75-71-8	Dichlorodifluoromethane	ND		7690	6010	78	7690	5460	71	10	30-153/29
75-34-3	1,1-Dichloroethane	ND		7690	7260	94	7690	7680	100	6	61-131/23
107-06-2	1,2-Dichloroethane	ND		7690	5790	75	7690	6140	80	6	56-126/21
75-35-4	1,1-Dichloroethene	ND		7690	7410	96	7690	8010	104	8	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		7690	7550	98	7690	8150	106	8	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		7690	7560	98	7690	8210	107	8	56-130/23
78-87-5	1,2-Dichloropropane	ND		7690	7110	92	7690	7670	100	8	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		7690	6860	89	7690	7410	96	8	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		7690	6280	82	7690	6920	90	10	51-126/21
100-41-4	Ethylbenzene	3100		7690	8030	64	7690	8700	73	8	49-132/23
76-13-1	Freon 113	ND		7690	6530	85	7690	7100	92	8	42-179/25
591-78-6	2-Hexanone	ND		30800	28800	94	30800	31700	103	10	25-150/25
98-82-8	Isopropylbenzene	2410		7690	8410	78	7690	9240	89	9	43-141/25
79-20-9	Methyl Acetate	3140		7690	9550	83	7690	9830	87	3	32-158/26
108-87-2	Methylcyclohexane	466	J	7690	7570	92	7690	8050	99	6	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		7690	7200	94	7690	7840	102	9	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86406-3MS	D264111.D	1	04/29/19	JTP	n/a	n/a	VD10644
JC86406-3MSD	D264112.D	1	04/29/19	JTP	n/a	n/a	VD10644
JC86406-3 [a]	D264076.D	1	04/26/19	JTP	n/a	n/a	VD10644

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-3, JC86406-5, JC86406-12

CAS No.	Compound	JC86406-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		30800	29900	97	30800	32200	105	7	40-140/24
75-09-2	Methylene chloride	ND		7690	7760	101	7690	8320	108	7	57-123/23
100-42-5	Styrene	ND		7690	6700	87	7690	7330	95	9	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		7690	6410	83	7690	7030	91	9	44-127/26
127-18-4	Tetrachloroethene	ND		7690	6580	86	7690	7400	96	12	39-154/26
108-88-3	Toluene	1250		7690	7290	79	7690	8030	88	10	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		7690	6530	85	7690	7170	93	9	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		7690	7280	95	7690	7950	103	9	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		7690	6810	89	7690	7350	96	8	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		7690	6820	89	7690	7450	97	9	53-127/22
79-01-6	Trichloroethene	ND		7690	6720	87	7690	7230	94	7	52-140/24
75-69-4	Trichlorofluoromethane	ND		7690	6140	80	7690	6410	83	4	46-142/27
75-01-4	Vinyl chloride	ND		7690	7140	93	7690	6840	89	4	43-146/26
	m,p-Xylene	2990		15400	14800	77	15400	16100	85	8	45-137/23
95-47-6	o-Xylene	3880		7690	8630	62	7690	9360	71	8	48-135/22
1330-20-7	Xylene (total)	6870		23100	23400	72	23100	25400	80	8	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86406-3	Limits
1868-53-7	Dibromofluoromethane	100%	99%	99%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	83%	90%	75-130%
2037-26-5	Toluene-D8	95%	96%	97%	80-120%
460-00-4	4-Bromofluorobenzene	88%	90%	94%	79-127%

(a) Diluted due to high concentration of non-target compound.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86863-1DUP	I225709.D	1	04/25/19	TDN	n/a	n/a	VI9093
JC86863-1 [a]	I225705.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	JC86863-1 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	47.0		9.7		132* [b]	40
71-43-2	Benzene	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30
108-87-2	Methylcyclohexane	ND		ND		nc	30
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86863-1DUP	I225709.D	1	04/25/19	TDN	n/a	n/a	VI9093
JC86863-1 [a]	I225705.D	1	04/25/19	TDN	n/a	n/a	VI9093

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC86406-1, JC86406-4, JC86406-14

CAS No.	Compound	JC86863-1 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	36
100-42-5	Styrene	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	24
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	32
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	33

CAS No.	Surrogate Recoveries	DUP	JC86863-1	Limits
1868-53-7	Dibromofluoromethane	105%	107%	75-127%
17060-07-0	1,2-Dichloroethane-D4	112%	114%	75-130%
2037-26-5	Toluene-D8	95%	96%	80-120%
460-00-4	4-Bromofluorobenzene	104%	105%	79-127%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Outside control limits due to sample non-homogeneity.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-BFB
Lab File ID: 3V44238.D
Instrument ID: GCMS3V
Injection Date: 04/22/19
Injection Time: 14:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18939	17.7		Pass
75	30.0 - 60.0% of mass 95	50821	47.5		Pass
95	Base peak, 100% relative abundance	107059	100.0		Pass
96	5.0 - 9.0% of mass 95	7528	7.03		Pass
173	Less than 2.0% of mass 174	246	0.23	(0.29) [a]	Pass
174	50.0 - 120.0% of mass 95	85189	79.6		Pass
175	5.0 - 9.0% of mass 174	6483	6.06	(7.61) [a]	Pass
176	95.0 - 101.0% of mass 174	81992	76.6	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	5450	5.09	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3V1775-IC1775	3V44239.D	04/22/19	15:02	00:32	Initial cal 2
V3V1775-IC1775	3V44240.D	04/22/19	15:28	00:58	Initial cal 0.5
V3V1775-IC1775	3V44241.D	04/22/19	15:54	01:24	Initial cal 1
V3V1775-IC1775	3V44242.D	04/22/19	16:20	01:50	Initial cal 4
V3V1775-IC1775	3V44243.D	04/22/19	16:45	02:15	Initial cal 8
V3V1775-IC1775	3V44244.D	04/22/19	17:11	02:41	Initial cal 20
V3V1775-ICC1775	3V44245.D	04/22/19	17:37	03:07	Initial cal 50
V3V1775-IC1775	3V44246.D	04/22/19	18:03	03:33	Initial cal 100
V3V1775-IC1775	3V44247.D	04/22/19	18:29	03:59	Initial cal 200
V3V1775-ICV1775	3V44250.D	04/22/19	19:46	05:16	Initial cal verification 50
V3V1775-ICV1775	3V44251.D	04/22/19	20:12	05:42	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1778-BFB
Lab File ID: 3V44284.D
Instrument ID: GCMS3V
Injection Date: 04/24/19
Injection Time: 12:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15249	17.7		Pass
75	30.0 - 60.0% of mass 95	40251	46.6		Pass
95	Base peak, 100% relative abundance	86368	100.0		Pass
96	5.0 - 9.0% of mass 95	5623	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	68723	79.6		Pass
175	5.0 - 9.0% of mass 174	5086	5.89	(7.40) [a]	Pass
176	95.0 - 101.0% of mass 174	67952	78.7	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4390	5.08	(6.46) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3V1778-CC1775	3V44284.D	04/24/19	12:21	00:00	Continuing cal 50
V3V1778-BS	3V44285.D	04/24/19	12:53	00:32	Blank Spike
V3V1778-MB	3V44287.D	04/24/19	13:46	01:25	Method Blank
JC86406-10	3V44288.D	04/24/19	14:12	01:51	S-114(2-4)
JC86406-1	3V44289.D	04/24/19	14:38	02:17	S-108(2-4)
JC86406-2	3V44290.D	04/24/19	15:04	02:43	S-108(8-10)
JC86406-6	3V44292.D	04/24/19	15:56	03:35	PCTP-17R(7-9)
JC86406-14	3V44294.D	04/24/19	16:47	04:26	S-109(2-4)
JC86406-11	3V44295.D	04/24/19	17:13	04:52	S-114(8-10)
JC86406-10MS	3V44297.D	04/24/19	18:05	05:44	Matrix Spike
JC86406-10MSD	3V44298.D	04/24/19	18:31	06:10	Matrix Spike Duplicate
ZZZZZZ	3V44300.D	04/24/19	19:23	07:02	(unrelated sample)
ZZZZZZ	3V44303.D	04/24/19	20:41	08:20	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VD10606-BFB	**Injection Date:**	03/14/19
Lab File ID:	D263009.D	**Injection Time:**	17:27
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14132	19.5		Pass
75	30.0 - 60.0% of mass 95	36037	49.8		Pass
95	Base peak, 100% relative abundance	72394	100.0		Pass
96	5.0 - 9.0% of mass 95	4865	6.72		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	59349	82.0		Pass
175	5.0 - 9.0% of mass 174	4244	5.86	(7.15) [a]	Pass
176	95.0 - 101.0% of mass 174	58248	80.5	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	3842	5.31	(6.60) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10606-IC10606	D263011.D	03/14/19	18:32	01:05	Initial cal 0.5
VD10606-IC10606	D263012.D	03/14/19	19:01	01:34	Initial cal 1
VD10606-IC10606	D263013.D	03/14/19	19:30	02:03	Initial cal 2
VD10606-IC10606	D263014.D	03/14/19	19:58	02:31	Initial cal 4
VD10606-IC10606	D263015.D	03/14/19	20:27	03:00	Initial cal 8
VD10606-IC10606	D263016.D	03/14/19	20:56	03:29	Initial cal 20
VD10606-ICC10606	D263017.D	03/14/19	21:25	03:58	Initial cal 50
VD10606-IC10606	D263018.D	03/14/19	21:54	04:27	Initial cal 100
VD10606-IC10606	D263019.D	03/14/19	22:23	04:56	Initial cal 200
VD10606-ICV10606	D263022.D	03/14/19	23:49	06:22	Initial cal verification 50
VD10606-ICV10606	D263023.D	03/15/19	00:18	06:51	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VD10643-BFB	**Injection Date:**	04/25/19
Lab File ID:	D264041.D	**Injection Time:**	07:36
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12537	17.8		Pass
75	30.0 - 60.0% of mass 95	33813	48.0		Pass
95	Base peak, 100% relative abundance	70395	100.0		Pass
96	5.0 - 9.0% of mass 95	4987	7.08		Pass
173	Less than 2.0% of mass 174	299	0.42	(0.52) [a]	Pass
174	50.0 - 150.0% of mass 95	56963	80.9		Pass
175	5.0 - 9.0% of mass 174	4185	5.95	(7.35) [a]	Pass
176	95.0 - 101.0% of mass 174	55131	78.3	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3598	5.11	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10643-CC10606	D264041.D	04/25/19	07:36	00:00	Continuing cal 50
VD10643-BS	D264044.D	04/25/19	09:09	01:33	Blank Spike
VD10643-MB	D264046.D	04/25/19	10:07	02:31	Method Blank
ZZZZZZ	D264046A.D	04/25/19	10:07	02:31	(unrelated sample)
ZZZZZZ	D264047.D	04/25/19	10:36	03:00	(unrelated sample)
ZZZZZZ	D264048.D	04/25/19	11:05	03:29	(unrelated sample)
ZZZZZZ	D264049.D	04/25/19	11:33	03:57	(unrelated sample)
JC86424-5	D264050.D	04/25/19	12:02	04:26	(used for QC only; not part of job JC86406)
ZZZZZZ	D264051.D	04/25/19	12:31	04:55	(unrelated sample)
JC86424-5	D264053.D	04/25/19	13:43	06:07	(used for QC only; not part of job JC86406)
JC86424-5	D264054.D	04/25/19	14:12	06:36	(used for QC only; not part of job JC86406)
JC86424-5MS	D264055.D	04/25/19	14:41	07:05	Matrix Spike
JC86424-5MSD	D264056.D	04/25/19	15:10	07:34	Matrix Spike Duplicate
ZZZZZZ	D264058.D	04/25/19	16:07	08:31	(unrelated sample)
JC86406-8	D264060.D	04/25/19	18:55	11:19	PCTP-17R(18-20)

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VD10644-BFB	**Injection Date:**	04/26/19
Lab File ID:	D264064.D	**Injection Time:**	07:54
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	13297	17.0		Pass
75	30.0 - 60.0% of mass 95	36739	46.9		Pass
95	Base peak, 100% relative abundance	78291	100.0		Pass
96	5.0 - 9.0% of mass 95	5258	6.72		Pass
173	Less than 2.0% of mass 174	163	0.21	(0.26) [a]	Pass
174	50.0 - 150.0% of mass 95	63749	81.4		Pass
175	5.0 - 9.0% of mass 174	4619	5.90	(7.25) [a]	Pass
176	95.0 - 101.0% of mass 174	62424	79.7	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4170	5.33	(6.68) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10644-CC10606	D264064.D	04/26/19	07:54	00:00	Continuing cal 50
VD10644-BS	D264067.D	04/26/19	09:24	01:30	Blank Spike
ZZZZZZ	D264069A.D	04/26/19	10:22	02:28	(unrelated sample)
VD10644-MB	D264069.D	04/26/19	10:22	02:28	Method Blank
ZZZZZZ	D264070.D	04/26/19	10:51	02:57	(unrelated sample)
JC86406-1	D264071.D	04/26/19	11:20	03:26	S-108(2-4)
JC86406-14	D264075.D	04/26/19	13:34	05:40	S-109(2-4)
JC86406-3	D264076.D	04/26/19	14:03	06:09	S-108(15-17)
JC86406-5	D264077.D	04/26/19	14:32	06:38	PCTP-17R(5-6)
JC86406-12	D264078.D	04/26/19	15:01	07:07	S-114(14-15)
ZZZZZZ	D264087.D	04/26/19	19:21	11:27	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VD10645-BFB	**Injection Date:**	04/29/19
Lab File ID:	D264106.D	**Injection Time:**	10:24
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11967	16.6		Pass
75	30.0 - 60.0% of mass 95	33200	46.0		Pass
95	Base peak, 100% relative abundance	72157	100.0		Pass
96	5.0 - 9.0% of mass 95	4881	6.76		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	63056	87.4		Pass
175	5.0 - 9.0% of mass 174	4611	6.39	(7.31) [a]	Pass
176	95.0 - 101.0% of mass 174	60755	84.2	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	4004	5.55	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10645-CC10606	D264106.D	04/29/19	10:24	00:00	Continuing cal 50
VD10645-BS	D264108.D	04/29/19	11:21	00:57	Blank Spike
VD10644-BS2	D264108A.D	04/29/19	11:21	00:57	Blank Spike
VD10645-MB	D264110.D	04/29/19	12:19	01:55	Method Blank
VD10644-MB2	D264110.D	04/29/19	12:19	01:55	Method Blank
ZZZZZZ	D264110A.D	04/29/19	12:19	01:55	(unrelated sample)
JC86406-3MS	D264111.D	04/29/19	12:48	02:24	Matrix Spike
JC86406-3MSD	D264112.D	04/29/19	13:16	02:52	Matrix Spike Duplicate
ZZZZZZ	D264119.D	04/29/19	16:40	06:16	(unrelated sample)
ZZZZZZ	D264120.D	04/29/19	17:09	06:45	(unrelated sample)
JC86914-1MS	D264121.D	04/29/19	17:37	07:13	Matrix Spike
JC86914-1MSD	D264122.D	04/29/19	18:06	07:42	Matrix Spike Duplicate
ZZZZZZ	D264124.D	04/29/19	19:03	08:39	(unrelated sample)
ZZZZZZ	D264125.D	04/29/19	19:32	09:08	(unrelated sample)
JC86914-1	D264126.D	04/29/19	20:01	09:37	(used for QC only; not part of job JC86406)
ZZZZZZ	D264127.D	04/29/19	20:29	10:05	(unrelated sample)
ZZZZZZ	D264128.D	04/29/19	20:58	10:34	(unrelated sample)
ZZZZZZ	D264129.D	04/29/19	21:27	11:03	(unrelated sample)
ZZZZZZ	D264130.D	04/29/19	21:55	11:31	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VI8986-BFB	**Injection Date:**	11/27/18
Lab File ID:	I223174.D	**Injection Time:**	17:41
Instrument ID:	GCMSI		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9909	18.4		Pass
75	30.0 - 60.0% of mass 95	25472	47.3		Pass
95	Base peak, 100% relative abundance	53864	100.0		Pass
96	5.0 - 9.0% of mass 95	3552	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	52357	97.2		Pass
175	5.0 - 9.0% of mass 174	4272	7.93	(8.16) [a]	Pass
176	95.0 - 101.0% of mass 174	51597	95.8	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3571	6.63	(6.92) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI8986-IC8986	I223175.D	11/27/18	18:23	00:42	Initial cal 0.5
VI8986-IC8986	I223176.D	11/27/18	18:52	01:11	Initial cal 1
VI8986-IC8986	I223177.D	11/27/18	19:22	01:41	Initial cal 2
VI8986-IC8986	I223178.D	11/27/18	19:51	02:10	Initial cal 4
VI8986-IC8986	I223179.D	11/27/18	20:21	02:40	Initial cal 8
VI8986-IC8986	I223180.D	11/27/18	20:51	03:10	Initial cal 20
VI8986-ICC8986	I223181.D	11/27/18	21:20	03:39	Initial cal 50
VI8986-IC8986	I223182.D	11/27/18	21:50	04:09	Initial cal 100
VI8986-IC8986	I223183.D	11/27/18	22:20	04:39	Initial cal 200
VI8986-ICV8986	I223186.D	11/27/18	23:48	06:07	Initial cal verification 50
VI8986-ICV8986	I223187.D	11/28/18	00:18	06:37	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VI9093-BFB	**Injection Date:**	04/25/19
Lab File ID:	I225701.D	**Injection Time:**	07:44
Instrument ID:	GCMSI		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9129	19.6		Pass
75	30.0 - 60.0% of mass 95	23536	50.7		Pass
95	Base peak, 100% relative abundance	46459	100.0		Pass
96	5.0 - 9.0% of mass 95	3379	7.27		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	46072	99.2		Pass
175	5.0 - 9.0% of mass 174	3453	7.43	(7.49) [a]	Pass
176	95.0 - 101.0% of mass 174	44672	96.2	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	2912	6.27	(6.52) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI9093-CC8986	I225701.D	04/25/19	07:44	00:00	Continuing cal 50
VI9093-BS	I225702.D	04/25/19	08:42	00:58	Blank Spike
VI9093-MB	I225704.D	04/25/19	09:40	01:56	Method Blank
JC86863-1	I225705.D	04/25/19	10:14	02:30	(used for QC only; not part of job JC86406)
JC86863-2	I225706.D	04/25/19	10:43	02:59	(used for QC only; not part of job JC86406)
JC86863-1DUP	I225709.D	04/25/19	12:11	04:27	Duplicate
JC86863-3	I225710.D	04/25/19	13:04	05:20	(used for QC only; not part of job JC86406)
JC86863-3MS	I225711.D	04/25/19	13:47	06:03	Matrix Spike
ZZZZZZ	I225713.D	04/25/19	14:45	07:01	(unrelated sample)
ZZZZZZ	I225714.D	04/25/19	15:14	07:30	(unrelated sample)
ZZZZZZ	I225715.D	04/25/19	15:44	08:00	(unrelated sample)
ZZZZZZ	I225716.D	04/25/19	16:12	08:28	(unrelated sample)
ZZZZZZ	I225717.D	04/25/19	16:42	08:58	(unrelated sample)
ZZZZZZ	I225718.D	04/25/19	17:11	09:27	(unrelated sample)
ZZZZZZ	I225719.D	04/25/19	17:40	09:56	(unrelated sample)
ZZZZZZ	I225720.D	04/25/19	18:10	10:26	(unrelated sample)
JC86406-1	I225721.D	04/25/19	18:39	10:55	S-108(2-4)
JC86406-4	I225722.D	04/25/19	19:08	11:24	SO-DUP-0415
JC86406-14	I225723.D	04/25/19	19:37	11:53	S-109(2-4)

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-BFB
Lab File ID: Y184712.D
Instrument ID: GCMSY
Injection Date: 04/24/19
Injection Time: 14:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12333	18.5		Pass
75	30.0 - 60.0% of mass 95	32341	48.6		Pass
95	Base peak, 100% relative abundance	66517	100.0		Pass
96	5.0 - 9.0% of mass 95	4405	6.62		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	61248	92.1		Pass
175	5.0 - 9.0% of mass 174	4917	7.39	(8.03) [a]	Pass
176	95.0 - 101.0% of mass 174	60341	90.7	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4460	6.71	(7.39) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY8014-IC8014	Y184713.D	04/24/19	15:12	00:40	Initial cal 0.5
VY8014-IC8014	Y184714.D	04/24/19	15:40	01:08	Initial cal 1
VY8014-IC8014	Y184715.D	04/24/19	16:09	01:37	Initial cal 2
VY8014-IC8014	Y184716.D	04/24/19	16:38	02:06	Initial cal 4
VY8014-IC8014	Y184717.D	04/24/19	17:07	02:35	Initial cal 8
VY8014-IC8014	Y184718.D	04/24/19	17:35	03:03	Initial cal 20
VY8014-ICC8014	Y184719.D	04/24/19	18:04	03:32	Initial cal 50
VY8014-IC8014	Y184720.D	04/24/19	18:32	04:00	Initial cal 100
VY8014-IC8014	Y184721.D	04/24/19	19:01	04:29	Initial cal 200
VY8014-ICV8014	Y184724.D	04/24/19	20:27	05:55	Initial cal verification 50
VY8014-ICV8014	Y184725.D	04/24/19	20:55	06:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8016-BFB
Lab File ID: Y184755.D
Instrument ID: GCMSY
Injection Date: 04/26/19
Injection Time: 08:08

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11158	17.5		Pass
75	30.0 - 60.0% of mass 95	29301	46.1		Pass
95	Base peak, 100% relative abundance	63581	100.0		Pass
96	5.0 - 9.0% of mass 95	4276	6.73		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	63984	100.6		Pass
175	5.0 - 9.0% of mass 174	5135	8.08	(8.03) [a]	Pass
176	95.0 - 101.0% of mass 174	62531	98.3	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4118	6.48	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY8016-CC8014	Y184755.D	04/26/19	08:08	00:00	Continuing cal 50
VY8016-BS	Y184757.D	04/26/19	09:26	01:18	Blank Spike
VY8016-MB	Y184759.D	04/26/19	10:23	02:15	Method Blank
ZZZZZZ	Y184759A.D	04/26/19	10:23	02:15	(unrelated sample)
JC86717-12	Y184760.D	04/26/19	10:57	02:49	(used for QC only; not part of job JC86406)
ZZZZZZ	Y184761.D	04/26/19	11:25	03:17	(unrelated sample)
JC86406-9	Y184762.D	04/26/19	11:53	03:45	PCTP-17R(24-25)
JC86406-7	Y184763.D	04/26/19	12:22	04:14	PCTP-17R(9-11)
ZZZZZZ	Y184764.D	04/26/19	12:50	04:42	(unrelated sample)
JC86717-12MS	Y184765.D	04/26/19	13:19	05:11	Matrix Spike
JC86717-12MSD	Y184766.D	04/26/19	13:48	05:40	Matrix Spike Duplicate
JC86406-15	Y184768.D	04/26/19	14:45	06:37	S-109(8-10)
JC86406-13	Y184769.D	04/26/19	15:13	07:05	S-114(23-25)
ZZZZZZ	Y184770.D	04/26/19	15:42	07:34	(unrelated sample)
ZZZZZZ	Y184771.D	04/26/19	16:10	08:02	(unrelated sample)
ZZZZZZ	Y184772.D	04/26/19	16:39	08:31	(unrelated sample)
ZZZZZZ	Y184773.D	04/26/19	17:10	09:02	(unrelated sample)
ZZZZZZ	Y184774.D	04/26/19	17:39	09:31	(unrelated sample)
ZZZZZZ	Y184775.D	04/26/19	18:07	09:59	(unrelated sample)
ZZZZZZ	Y184776.D	04/26/19	18:36	10:28	(unrelated sample)
ZZZZZZ	Y184777.D	04/26/19	19:04	10:56	(unrelated sample)
ZZZZZZ	Y184778.D	04/26/19	19:33	11:25	(unrelated sample)

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V3V1778-CC1775	**Injection Date:**	04/24/19
Lab File ID:	3V44284.D	**Injection Time:**	12:21
Instrument ID:	GCMS3V	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	92432	7.30	196561	9.83	270516	10.80	247266	14.01	149044	16.39
Upper Limit [a]	184864	7.80	393122	10.33	541032	11.30	494532	14.51	298088	16.89
Lower Limit [b]	46216	6.80	98281	9.33	135258	10.30	123633	13.51	74522	15.89

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3V1778-BS	133471	7.29	244154	9.83	334909	10.80	304631	14.01	177318	16.39
V3V1778-MB	84146	7.27	199488	9.82	282834	10.80	273573	14.01	161332	16.39
JC86406-10	140009	7.27	247132	9.82	356130	10.80	326460	14.01	183978	16.39
JC86406-1 [c]	118544	7.27	168727	9.83	220664	10.80	137909	14.01	40148[d]	16.39
JC86406-2	126534	7.30	233573	9.83	338999	10.80	316697	14.01	194807	16.39
JC86406-6	123966	7.27	246713	9.83	346653	10.80	315478	14.01	183098	16.39
JC86406-14 [c]	140680	7.29	219264	9.82	302904	10.80	209355	14.01	74268[d]	16.39
JC86406-11	105733	7.28	216570	9.83	320398	10.80	313946	14.01	194998	16.39
JC86406-10MS	119285	7.29	242578	9.82	335191	10.80	295613	14.01	163760	16.39
JC86406-10MSD	108696	7.27	264583	9.82	358062	10.80	329189	14.01	202445	16.39
ZZZZZZ	132830	7.26	278559	9.82	399661	10.80	356953	14.01	208121	16.39
ZZZZZZ	155496	7.29	283806	9.83	378566	10.80	306125	14.01	165910	16.39

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Confirmation run.
(d) Outside control limits due to matrix interference.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10643-CC10606	**Injection Date:**	04/25/19
Lab File ID:	D264041.D	**Injection Time:**	07:36
Instrument ID:	GCMSD	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	91504	7.47	171607	9.72	266981	10.68	253643	14.09	154212	16.73
Upper Limit [a]	183008	7.97	343214	10.22	533962	11.18	507286	14.59	308424	17.23
Lower Limit [b]	45752	6.97	85804	9.22	133491	10.18	126822	13.59	77106	16.23

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VD10643-BS	89343	7.47	170787	9.72	264729	10.68	267169	14.09	159557	16.74
VD10643-MB	87623	7.46	164208	9.72	256340	10.68	257035	14.09	151156	16.74
ZZZZZZ	87623	7.46	164208	9.72	256340	10.68	257035	14.09	151156	16.74
ZZZZZZ	87991	7.46	163602	9.72	253626	10.68	253636	14.09	147362	16.74
ZZZZZZ	85961	7.48	162967	9.72	254621	10.67	254215	14.08	150987	16.74
ZZZZZZ	88326	7.47	164041	9.72	264435	10.68	263144	14.09	152403	16.74
JC86424-5	86446	7.46	158997	9.72	254209	10.68	257458	14.09	147419	16.73
ZZZZZZ	92197	7.51	170325	9.72	252314	10.68	263211	14.09	179975	16.73
JC86424-5	68149	7.46	174086	9.72	272796	10.68	263583	14.09	154976	16.73
JC86424-5	74202	7.46	173290	9.72	272468	10.68	264594	14.09	154703	16.74
JC86424-5MS	75257	7.47	171736	9.72	263010	10.68	256604	14.09	161351	16.74
JC86424-5MSD	74310	7.46	170702	9.72	265057	10.68	260754	14.09	160355	16.74
ZZZZZZ	77847	7.46	173253	9.72	267655	10.68	272615	14.09	156164	16.74
JC86406-8 [c]	88371	7.53	164942	9.72	237583	10.68	236434	14.09	144944	16.73

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Diluted due to high concentration of non-target compound.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10644-CC10606	**Injection Date:**	04/26/19
Lab File ID:	D264064.D	**Injection Time:**	07:54
Instrument ID:	GCMSD	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	91507	7.45	176410	9.72	268631	10.68	273243	14.09	162951	16.73
Upper Limit [a]	183014	7.95	352820	10.22	537262	11.18	546486	14.59	325902	17.23
Lower Limit [b]	45754	6.95	88205	9.22	134316	10.18	136622	13.59	81476	16.23

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VD10644-BS	89678	7.46	171709	9.72	262554	10.68	262449	14.09	158440	16.74
ZZZZZZ	88269	7.46	169081	9.72	261346	10.68	261567	14.09	152283	16.74
VD10644-MB	88269	7.46	169081	9.72	261346	10.68	261567	14.09	152283	16.74
ZZZZZZ	89275	7.46	167516	9.72	256491	10.68	265522	14.09	155372	16.74
JC86406-1 [c]	93014	7.46	165988	9.72	256089	10.67	254312	14.09	150656	16.74
JC86406-14 [c]	90625	7.47	155508	9.72	233489	10.68	227121	14.09	150770	16.73
JC86406-3 [d]	92615	7.46	174413	9.72	263127	10.67	268255	14.09	175292	16.74
JC86406-5 [d]	88565	7.45	183079	9.72	276892	10.68	261591	14.09	160187	16.74
JC86406-12 [d]	92171	7.45	177544	9.72	268431	10.68	270317	14.09	172161	16.74
ZZZZZZ	95312	7.48	174846	9.72	264425	10.68	273944	14.09	184129	16.73

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Confirmation run.
(d) Diluted due to high concentration of non-target compound.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10645-CC10606	**Injection Date:**	04/29/19
Lab File ID:	D264106.D	**Injection Time:**	10:24
Instrument ID:	GCMSD	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	89251	7.46	161321	9.72	251738	10.67	253983	14.08	159027	16.73
Upper Limit [a]	178502	7.96	322642	10.22	503476	11.17	507966	14.58	318054	17.23
Lower Limit [b]	44626	6.96	80661	9.22	125869	10.17	126992	13.58	79514	16.23

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VD10645-BS	93340	7.45	171573	9.72	267214	10.68	277950	14.09	174134	16.73
VD10644-BS2	93340	7.45	171573	9.72	267214	10.68	277950	14.09	174134	16.73
ZZZZZZ	89663	7.46	165997	9.72	258404	10.67	274809	14.08	165199	16.73
VD10644-MB2	89663	7.46	165997	9.72	258404	10.67	274809	14.08	165199	16.73
VD10645-MB	89663	7.46	165997	9.72	258404	10.67	274809	14.08	165199	16.73
JC86406-3MS	94958	7.46	164021	9.71	252436	10.67	264296	14.09	176252	16.73
JC86406-3MSD	92143	7.46	166303	9.72	255554	10.67	258937	14.08	171743	16.73
ZZZZZZ	83540	7.45	174671	9.72	268615	10.67	284488	14.09	166493	16.73
ZZZZZZ	85171	7.46	173775	9.72	267631	10.67	284974	14.08	167262	16.73
JC86914-1MS	79114	7.48	164266	9.72	257326	10.67	270762	14.08	166561	16.73
JC86914-1MSD	82627	7.45	166223	9.72	256883	10.67	268419	14.08	166496	16.73
ZZZZZZ	86105	7.45	166668	9.72	259269	10.67	277321	14.08	166733	16.73
ZZZZZZ	86939	7.46	170720	9.72	266941	10.67	275245	14.08	165586	16.73
JC86914-1	86828	7.47	162747	9.72	252272	10.67	268998	14.08	162576	16.73
ZZZZZZ	89525	7.47	169722	9.72	266347	10.67	279570	14.08	167219	16.73
ZZZZZZ	96539	7.53	163128	9.72	244868	10.67	252959	14.08	174725	16.73
ZZZZZZ	74311	7.47	171424	9.72	264703	10.67	278618	14.08	170762	16.73
ZZZZZZ	73262	7.46	171835	9.72	266683	10.67	285769	14.09	172217	16.73

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VI9093-CC8986	**Injection Date:**	04/25/19
Lab File ID:	I225701.D	**Injection Time:**	07:44
Instrument ID:	GCMSI	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	51063	7.35	139863	9.70	184726	10.63	158432	13.77	94995	16.11
Upper Limit [a]	102126	7.85	279726	10.20	369452	11.13	316864	14.27	189990	16.61
Lower Limit [b]	25532	6.85	69932	9.20	92363	10.13	79216	13.27	47498	15.61

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VI9093-BS	51601	7.35	137690	9.70	182562	10.63	153287	13.77	92206	16.11
VI9093-MB	44943	7.35	144269	9.70	184617	10.63	162881	13.77	93203	16.11
JC86863-1	35911	7.35	127760	9.70	167874	10.63	143917	13.77	82515	16.11
JC86863-2	48664	7.35	139253	9.70	177513	10.63	158018	13.77	89702	16.11
JC86863-1DUP	44848	7.35	150336	9.70	195051	10.63	168860	13.77	98190	16.11
JC86863-3	42568	7.35	120761	9.70	157015	10.63	117823	13.77	51145	16.11
JC86863-3MS	41870	7.35	146382	9.70	193441	10.63	158230	13.77	86653	16.11
ZZZZZZ	51230	7.35	144893	9.70	189353	10.63	165173	13.77	94123	16.11
ZZZZZZ	48948	7.35	142099	9.70	185337	10.63	161115	13.77	92871	16.11
ZZZZZZ	49008	7.35	140753	9.70	181468	10.63	158170	13.77	92658	16.11
ZZZZZZ	50535	7.35	141117	9.70	183599	10.63	159131	13.77	93415	16.11
ZZZZZZ	50353	7.35	141360	9.70	184398	10.63	160886	13.77	94032	16.11
ZZZZZZ	51742	7.35	144733	9.70	189725	10.63	162084	13.77	96674	16.11
ZZZZZZ	50122	7.35	141575	9.70	183117	10.63	159700	13.77	92327	16.11
ZZZZZZ	47701	7.35	137381	9.70	179751	10.63	156742	13.77	91598	16.11
JC86406-1	49158	7.35	120674	9.70	150209	10.63	108535	13.77	40948[c]	16.11
JC86406-4	48666	7.35	127480	9.70	162750	10.63	127902	13.77	56439	16.11
JC86406-14	47928	7.35	117874	9.70	149608	10.63	109959	13.77	44532[c]	16.11

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to matrix interference.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VY8016-CC8014	**Injection Date:**	04/26/19
Lab File ID:	Y184755.D	**Injection Time:**	08:08
Instrument ID:	GCMSY	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	55486	7.74	148326	9.97	222155	10.91	212416	13.99	133551	16.29
Upper Limit [a]	110972	8.24	296652	10.47	444310	11.41	424832	14.49	267102	16.79
Lower Limit [b]	27743	7.24	74163	9.47	111078	10.41	106208	13.49	66776	15.79

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VY8016-BS	52271	7.74	136143	9.97	206484	10.91	208695	13.99	128355	16.29
ZZZZZZ	45740	7.73	136947	9.97	209595	10.91	204844	13.99	121625	16.29
VY8016-MB	45740	7.73	136947	9.97	209595	10.91	204844	13.99	121625	16.29
JC86717-12	53493	7.73	139437	9.98	217705	10.91	215572	13.99	119059	16.29
ZZZZZZ	58418	7.73	153886	9.97	235884	10.91	230297	13.99	137771	16.29
JC86406-9	59706	7.74	136969	9.98	210801	10.91	213917	13.99	125739	16.29
JC86406-7	70311	7.73	155905	9.97	241000	10.91	241382	13.99	140295	16.29
ZZZZZZ	62020	7.75	159916	9.98	247403	10.91	250311	13.99	150157	16.29
JC86717-12MS	67311	7.74	177944	9.97	272329	10.91	275612	13.99	162348	16.29
JC86717-12MSD	67925	7.74	172680	9.97	264693	10.91	264452	13.99	157298	16.29
JC86406-15	57873	7.73	146152	9.97	227782	10.91	222682	13.99	133662	16.29
JC86406-13	59145	7.72	164455	9.97	263892	10.91	270807	13.99	157620	16.29
ZZZZZZ	71086	7.74	163463	9.97	258722	10.91	257747	13.99	161740	16.29
ZZZZZZ	72865	7.74	173391	9.98	273012	10.91	271013	13.99	166192	16.29
ZZZZZZ	60426	7.73	153143	9.97	237053	10.91	244219	13.99	148400	16.29
ZZZZZZ	76597	7.74	159555	9.97	249037	10.91	269666	13.99	161063	16.29
ZZZZZZ	62977	7.74	152478	9.97	237600	10.91	252420	13.99	147038	16.29
ZZZZZZ	66622	7.74	161482	9.98	252022	10.91	249319	13.99	152321	16.29
ZZZZZZ	72205	7.74	165485	9.97	261988	10.91	280310	13.99	163917	16.29
ZZZZZZ	66525	7.73	145403	9.98	232208	10.91	227134	13.99	139497	16.29
ZZZZZZ	71470	7.73	159755	9.97	255689	10.91	255024	13.99	161050	16.29

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC86406-1	I225721.D	108	119	112	133* [a]
JC86406-1	D264071.D	99	91	99	94
JC86406-1	3V44289.D	107	114	135* [a]	145* [a]
JC86406-2	3V44290.D	106	105	99	99
JC86406-3	D264076.D	99	90	97	94
JC86406-4	I225722.D	108	116	105	123
JC86406-5	D264077.D	96	87	101	93
JC86406-6	3V44292.D	102	104	102	102
JC86406-7	Y184763.D	115	101	87	98
JC86406-8	D264060.D	97	90	101	101
JC86406-9	Y184762.D	115	102	87	98
JC86406-10	3V44288.D	101	104	101	105
JC86406-11	3V44295.D	109	105	97	99
JC86406-12	D264078.D	97	90	97	92
JC86406-13	Y184769.D	120	100	87	97
JC86406-14	I225723.D	109	119	109	126
JC86406-14	D264075.D	98	89	98	89
JC86406-14	3V44294.D	104	108	126* [a]	132* [a]
JC86406-15	Y184768.D	106	92	90	94
JC86406-10MS	3V44297.D	95	96	104	106
JC86406-10MSD	3V44298.D	93	93	102	98
JC86406-3MS	D264111.D	100	86	95	88
JC86406-3MSD	D264112.D	99	83	96	90
JC86424-5MS	D264055.D	97	86	104	97
JC86424-5MSD	D264056.D	98	86	103	96
JC86717-12MS	Y184765.D	109	91	91	96
JC86717-12MSD	Y184766.D	110	90	90	95
JC86863-1DUP	I225709.D	105	112	95	104
JC86863-3MS	I225711.D	101	107	100	107
V3V1778-BS	3V44285.D	104	103	102	102
V3V1778-MB	3V44287.D	100	96	97	100
VD10643-BS	D264044.D	100	89	97	94
VD10643-MB	D264046.D	100	92	97	96
VD10644-BS	D264067.D	98	88	99	94
VD10644-MB	D264069.D	98	89	97	96
VI9093-BS	I225702.D	100	106	97	100
VI9093-MB	I225704.D	105	114	95	104
VY8016-BS	Y184757.D	109	95	87	96
VY8016-MB	Y184759.D	106	88	89	95
VD10644-MB2	D264110.D	102	86	94	94

Surrogate Recovery Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8260C	**Matrix:** SO

Samples and QC shown here apply to the above method

Surrogate Compounds	**Recovery Limits**

Surrogate Compounds	**Recovery Limits**
S1 = Dibromofluoromethane	75-127%
S2 = 1,2-Dichloroethane-D4	75-130%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	79-127%

(a) Outside control limits due to matrix interference.

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICC1775
Lab FileID: 3V44245.D

Response Factor Report MS3V

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Calibration Files
4 =3V44242.D 0.5 =3V44240.D 8 =3V44243.D 50 =3V44245.D
100 =3V44246.D 1 =3V44241.D 200 =3V44247.D 20 =3V44244.D
2 =3V44239.D =

Compound	4	0.5	8	50	100	1	200	20	2	Avg	%RSD
1) I tert butyl alcohol-d9	ISTD										
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol	1.578		1.700	1.579	1.688		1.642	1.636	1.637	1.637	2.90
4) 1,4-dioxane	0.115		0.132	0.124	0.133		0.120	0.118	0.105	0.121	8.23
5) I pentafluorobenzene	ISTD										
6) chlorodifluoromethane	1.514	1.489	1.419	1.313	1.413	1.384	1.327	1.356	1.589	1.423	6.46
7) dichlorodifluoromethane	1.720	1.628	1.575	1.611	1.688	1.632	1.559	1.542	1.814	1.641	5.28
8) chloromethane	1.820	2.091	1.748	1.928	1.885	1.859	1.779	1.976	2.000	1.898	5.87
9) vinyl chloride	1.504	1.536	1.421	1.451	1.399	1.470	1.307	1.411	1.626	1.458	6.24
10) 1,3-butadiene	0.750		0.712	0.649	0.716		0.685	0.681		0.699	5.00
11) bromomethane	1.137		1.124	1.032	0.929			1.086	1.242	1.092	9.68
12) chloroethane	0.711	0.685	0.705	0.672	0.632	0.686	0.582	0.690	0.763	0.681	7.48
13) trichlorofluoromethane	1.433	1.557	1.376	1.323	1.307	1.471	1.230	1.276	1.603	1.397	9.18
14) vinyl bromide	0.658		0.650	0.648	0.613		0.596	0.624	0.695	0.641	5.10
15) ethyl ether	0.264		0.285	0.268	0.277	0.241	0.284	0.269	0.316	0.275	7.85
16) 2-chloropropane	1.301		1.125	1.050	1.056		1.059	1.039		1.105	9.14
17) acrolein	0.078		0.094	0.078	0.079		0.084	0.083	0.072	0.081	8.28
18) freon 113	0.635		0.587	0.536	0.574	0.575	0.532	0.545	0.658	0.580	7.86
19) 1,1-dichloroethene	0.690		0.637	0.574	0.572	0.738	0.576	0.563	0.795	0.643	13.80
20) acetone	0.047		0.050	0.044	0.040		0.041	0.046	0.069	0.048	20.59
----- Linear regression ----- Coefficient = 0.9984											
Response Ratio = 0.00444 + 0.04058 *A											
21) acetonitrile	0.092		0.091	0.081	0.076		0.076	0.080		0.083	8.74

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICC1775
Lab FileID: 3V44245.D

22) iodomethane
1.283 1.317 1.377 1.288 1.162 1.193 1.240 1.227 1.412 1.278 6.45
23) carbon disulfide
2.560 2.761 2.513 2.336 2.298 2.492 2.303 2.318 2.876 2.495 8.42
24) methylene chloride
0.890 0.978 0.848 0.811 0.900 0.837 0.854 1.028 0.893 8.36
25) methyl acetate
0.372 0.366 0.332 0.319 0.321 0.349 0.343 6.56
26) methyl tert butyl ether
2.011 2.139 2.117 2.081 2.099 1.834 2.109 2.105 2.170 2.074 4.81
27) trans-1,2-dichloroethene
0.698 0.823 0.684 0.632 0.621 0.676 0.619 0.607 0.794 0.684 11.36
28) hexane
0.723 0.856 0.638 0.647 0.763 0.727 0.724 0.614 0.858 0.728 12.11
29) di-isopropyl ether
2.257 2.311 2.349 2.408 2.484 2.043 2.467 2.344 2.434 2.344 5.77
30) ethyl tert-butyl ether
2.121 2.113 2.270 2.336 2.407 1.942 2.464 2.266 2.313 2.248 7.25
31) 2-butanone
0.042 0.045 0.047 0.046 0.045 0.044 0.051 0.046 5.98
32) 1,1-dichloroethane
1.244 1.168 1.254 1.179 1.161 1.160 1.150 1.167 1.387 1.208 6.37
33) chloroprene
0.730 0.675 0.693 0.723 0.761 0.673 0.723 0.678 0.828 0.720 6.98
34) acrylonitrile
0.131 0.137 0.138 0.136 0.140 0.134 0.157 0.139 6.09
35) vinyl acetate
0.061 0.069 0.078 0.080 0.080 0.076 0.074 9.99
36) ethyl acetate
0.057 0.062 0.064 0.061 0.058 0.063 0.061 4.42
37) 2,2-dichloropropane
1.261 1.422 1.223 1.147 1.134 1.291 1.075 1.147 1.400 1.233 9.82
38) cis-1,2-dichloroethene
0.759 0.731 0.657 0.662 0.704 0.655 0.665 0.814 0.706 8.27
39) propionitrile
0.063 0.061 0.066 0.060 0.059 0.052 0.056 0.060 0.069 0.061 8.15
40) methyl acrylate
0.042 0.061 0.063 0.062 0.060 0.060 0.058 13.43
41) bromochloromethane
0.335 0.344 0.323 0.321 0.283 0.322 0.326 0.371 0.328 7.50
42) tetrahydrofuran
0.042 0.049 0.051 0.050 0.049 0.043 0.048 8.30
43) chloroform
1.248 1.378 1.238 1.134 1.124 1.157 1.109 1.142 1.420 1.217 9.41
44) dibromofluoromethane (s)
0.535 0.527 0.529 0.523 0.507 0.535 0.513 0.520 0.542 0.526 2.15
45) methacrylonitrile
0.156 0.151 0.160 0.164 0.160 0.155 0.161 0.158 2.65
46) 1,1,1-trichloroethane
1.265 1.381 1.220 1.176 1.197 1.163 1.161 1.140 1.384 1.232 7.55
47) cyclohexane
0.916 0.935 0.866 0.888 0.923 0.892 0.877 0.832 0.976 0.901 4.68
48) 1,1-dichloropropene
0.723 0.697 0.687 0.664 0.672 0.687 0.636 0.632 0.774 0.686 6.40
49) carbon tetrachloride
1.111 1.147 0.993 0.951 0.982 1.053 0.931 0.932 1.201 1.033 9.62
50) isobutyl alcohol
0.024 0.024 0.021 0.022 0.022 0.021 0.022 5.51
51) tert-amyl alcohol
0.026 0.028 0.028 0.027 0.027 0.026 0.032 0.028 6.59

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICC1775
Lab FileID: 3V44245.D

52) I 1,4-difluorobenzene ----------ISTD----------
53) 1,2-dichloroethane-d4 (s)
0.355 0.360 0.352 0.353 0.348 0.355 0.342 0.347 0.373 0.354 2.53
54) iso-octane
1.545 1.446 1.453 1.646 1.885 1.364 1.831 1.451 1.651 1.586 11.45
55) benzene
1.627 1.664 1.593 1.521 1.587 1.490 1.483 1.517 1.775 1.584 6.01
56) tert-amyl methyl ether
1.347 1.385 1.400 1.426 1.500 1.199 1.484 1.396 1.475 1.401 6.52
57) heptane
0.254 0.223 0.237 0.275 0.222 0.249 0.221 0.279 0.245 9.56
58) isopropyl acetate
0.064 0.066 0.066 0.069 0.068 0.064 0.066 3.29
59) 1,2-dichloroethane
0.597 0.576 0.546 0.557 0.567 0.526 0.566 0.664 0.575 7.26
60) n-butyl alcohol
0.009 0.009 0.010 0.011 0.010 0.009 0.011 0.010 6.78
61) ethyl acrylate
0.337 0.351 0.365 0.380 0.366 0.346 0.336 0.354 4.66
62) trichloroethene
0.395 0.411 0.393 0.381 0.393 0.360 0.372 0.367 0.452 0.391 7.10
63) 2-nitropropane
0.065 0.066 0.062 0.066 0.066 0.060 0.064 3.95
64) 2-chloroethyl vinyl ether
0.162 0.183 0.195 0.200 0.139 0.193 0.181 0.169 0.178 11.37
65) methyl methacrylate
0.060 0.064 0.072 0.075 0.074 0.067 0.069 8.67
66) 1,2-dichloropropane
0.453 0.475 0.454 0.429 0.448 0.404 0.421 0.435 0.469 0.443 5.20
67) methylcyclohexane
0.687 0.629 0.595 0.651 0.751 0.605 0.708 0.592 0.733 0.661 9.15
68) dibromomethane
0.276 0.251 0.272 0.256 0.257 0.230 0.248 0.258 0.295 0.260 7.21
69) bromodichloromethane
0.602 0.618 0.611 0.589 0.604 0.538 0.584 0.584 0.655 0.598 5.24
70) epichlorohydrin
0.025 0.029 0.028 0.028 0.028 0.027 0.030 0.028 5.90
71) cis-1,3-dichloropropene
0.587 0.588 0.623 0.635 0.649 0.557 0.631 0.608 0.633 0.612 4.84
72) 4-methyl-2-pentanone
0.111 0.116 0.124 0.130 0.130 0.098 0.125 0.120 0.129 0.120 8.88
73) 3-methyl-1-butanol
0.007 0.009 0.010 0.010 0.009 0.008 0.008 0.009 9.57

74) I chlorobenzene-d5 ----------ISTD----------
75) toluene-d8 (s)
1.265 1.204 1.213 1.251 1.251 1.233 1.225 1.257 1.285 1.243 2.08
76) toluene
0.980 1.042 0.913 0.927 0.965 0.873 0.881 0.923 1.068 0.952 7.12
77) ethyl methacrylate
0.374 0.379 0.386 0.429 0.446 0.313 0.424 0.405 0.393 0.394 9.88
78) trans-1,3-dichloropropene
0.558 0.510 0.555 0.574 0.595 0.464 0.560 0.570 0.605 0.555 7.80
79) 1,1,2-trichloroethane
0.322 0.273 0.315 0.303 0.307 0.274 0.284 0.309 0.359 0.305 8.79
80) tetrachloroethene
0.437 0.420 0.378 0.391 0.409 0.355 0.379 0.378 0.473 0.402 9.02
81) 2-hexanone
0.105 0.093 0.118 0.121 0.121 0.087 0.110 0.116 0.117 0.110 11.25

Initial Calibration Summary

Job Number: JC86406 **Sample:** V3V1775-ICC1775
Account: BBLNYS Arcadis **Lab FileID:** 3V44245.D
Project: National Grid, Philly Coke, Philadelphia, PA

82)	1,3-dichloropropane											
		0.584	0.596	0.572	0.560	0.562	0.498	0.509	0.571	0.620	0.563	6.89
83)	butyl acetate											
		0.218	0.197	0.230	0.228	0.231	0.180	0.210	0.221	0.264	0.220	10.70
84)	dibromochloromethane											
		0.452	0.423	0.442	0.450	0.464	0.400	0.445	0.445	0.478	0.444	5.03
85)	1,2-dibromoethane											
		0.475	0.468	0.501	0.479	0.484	0.409	0.456	0.481	0.532	0.476	6.97
86)	n-butyl ether											
		1.606	1.592	1.619	1.734	1.845	1.415	1.687	1.665	1.670	1.648	7.07
87)	chlorobenzene											
		1.214	1.248	1.222	1.152	1.150	1.089	1.062	1.178	1.272	1.176	5.99
88)	1,1,1,2-tetrachloroethane											
		0.508	0.492	0.475	0.492	0.521	0.397	0.485	0.499	0.550	0.491	8.46
89)	ethylbenzene											
		1.922	1.877	1.890	1.904	1.901	1.734	1.709	1.872	2.023	1.870	5.11
90)	m,p-xylene											
		0.705	0.685	0.701	0.711	0.717	0.587	0.646	0.683	0.714	0.683	6.17
91)	o-xylene											
		0.714	0.630	0.728	0.779	0.795	0.602	0.737	0.756	0.760	0.723	9.06
92)	styrene											
		1.107	1.068	1.199	1.257	1.242	0.958	1.137	1.252	1.086	1.145	8.85
93)	bromoform											
		0.300	0.275	0.309	0.300	0.302	0.264	0.296	0.302	0.318	0.296	5.64
94)	butyl acrylate											
		0.626		0.678	0.743	0.767	0.542	0.746	0.714	0.675	0.686	10.82
95)	isopropylbenzene											
		1.806	1.674	1.733	1.948	2.048	1.526	1.879	1.796	1.913	1.814	8.62
96)	cis-1,4-dichloro-2-butene											
		0.147		0.157	0.167	0.163		0.161	0.165	0.160	0.160	4.14
97)	I 1,4-dichlorobenzene-d ----------ISTD----------											
98)	4-bromofluorobenzene (s)											
		0.883	0.887	0.887	0.875	0.916	0.884	0.861	0.869	0.883	0.883	1.74
99)	bromobenzene											
		0.942	0.949	0.956	0.907	0.979	0.821	0.882	0.906	0.988	0.926	5.69
100)	1,1,2,2-tetrachloroethane											
		0.941	0.930	0.929	0.882	0.950	0.866	0.859	0.886	1.089	0.926	7.54
101)	trans-1,4-dichloro-2-butene											
		0.188		0.183	0.185	0.196		0.191	0.178	0.172	0.185	4.32
102)	1,2,3-trichloropropane											
		0.227		0.225	0.210	0.223		0.198	0.206	0.257	0.221	8.73
103)	n-propylbenzene											
		3.915	3.706	3.699	3.853	4.250	3.393	3.630	3.639	4.104	3.799	6.90
104)	2-chlorotoluene											
		0.859	0.740	0.816	0.830	0.915	0.732	0.814	0.808	0.880	0.821	7.26
105)	4-chlorotoluene											
		2.438	2.429	2.506	2.434	2.598	2.176	2.287	2.426	2.602	2.433	5.59
106)	1,3,5-trimethylbenzene											
		2.775	2.500	2.715	2.896	3.246	2.254	2.809	2.703	2.906	2.756	10.00
107)	tert-butylbenzene											
		1.978		1.721	2.110	2.520		2.254	1.856	2.136	2.082	12.67
108)	1,2,4-trimethylbenzene											
		2.873	2.833	2.876	3.071	3.356	2.448	2.957	2.917	2.892	2.914	8.14
109)	sec-butylbenzene											
		3.441	3.001	3.075	3.535	4.075	2.784	3.535	3.180	3.556	3.354	11.50
110)	1,3-dichlorobenzene											
		1.888	1.958	1.901	1.753	1.839	1.727	1.684	1.837	1.989	1.842	5.65
111)	p-isopropyltoluene											
		2.777	2.455	2.682	3.051	3.461	2.361	3.024	2.769	2.876	2.829	11.70

Initial Calibration Summary

Job Number: JC86406 **Sample:** V3V1775-ICC1775
Account: BBLNYS Arcadis **Lab FileID:** 3V44245.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
112)  1,4-dichlorobenzene
            1.947 2.114 1.912 1.789 1.849 1.715 1.741 1.824 2.028   1.880    7.06
113)  1,2-dichlorobenzene
            1.945 1.961 1.934 1.846 1.959 1.735 1.807 1.856 2.055   1.900    5.10
114)  n-butylbenzene
            1.583 1.414 1.521 1.716 1.888 1.324 1.686 1.589 1.666   1.599   10.49
115)  1,2-dibromo-3-chloropropane
            0.214       0.211 0.221 0.245       0.250 0.210 0.236   0.227    7.40
116)  1,3,5-trichlorobenzene
            1.836 1.881 1.753 1.848 2.047 1.556 1.974 1.807 1.993   1.855    7.94
117)  2-ethylhexyl acrylate
                        0.792 1.061 1.319       1.449 0.880         1.100   25.51
               ----- Linear regression -----  Coefficient =  0.9916
                 Response Ratio = -0.03047 + 1.42012 *A

118)  nitrobenzene
            0.053       0.046 0.051 0.052       0.059 0.048         0.052    8.51
119)  1,2,4-trichlorobenzene
            1.695 1.556 1.609 1.787 1.995 1.388 1.961 1.705 1.778   1.719   11.10
120)  hexachlorobutadiene
            0.885 0.880 0.772 0.805 0.920 0.798 0.828 0.747 0.895   0.837    7.23
121)  naphthalene
            3.035       2.948 3.588 3.952       3.842 3.330 3.169   3.409   11.55
122)  1,2,3-trichlorobenzene
            1.880 1.678 1.643 1.797 2.008 1.500 1.888 1.772 1.873   1.782    8.66
123)  hexachloroethane
            0.595       0.513 0.589 0.726 0.553 0.675 0.525 0.644   0.602   12.40
124)  benzyl chloride
            1.348 1.363 1.372 1.514 1.598 1.153 1.588 1.421 1.506   1.429    9.81
125)  2-methylnaphthalene
                        1.515 2.249 2.840       2.794 1.803         2.240   26.25
               ----- Linear regression -----  Coefficient =  0.9950
                 Response Ratio = -0.14402 + 2.84516 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M3V1775.M         Thu Apr 25 15:27:21 2019   GCMS3V
```

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44250.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v3v1775\3V44250.D Vial: 21
Acq On : 22 Apr 2019 7:46 pm Operator: roberts
Sample : ICV1775-50 Inst : MS3V
Misc : MS31723,V3V1775,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 15:23:19 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	114	-0.01	7.29
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.637	1.415	13.6	103	0.00	7.43
4		1,4-dioxane	0.121	0.119	1.7	110	0.00	11.47
5	I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	9.83
6		chlorodifluoromethane	1.423	1.337	6.0	116	0.00	3.67
7		dichlorodifluoromethane	1.641	1.407	14.3	100	-0.01	3.65
8		chloromethane	1.898	1.819	4.2	108	0.00	4.01
9		vinyl chloride	1.458	1.154	20.9	91	0.00	4.25
10		1,3-butadiene	0.699	0.728	-4.1	128	0.00	4.30
11		bromomethane	1.092	0.818	25.1	91	0.00	4.90
12		chloroethane	0.681	0.502	26.3	85	0.00	5.09
13		trichlorofluoromethane	1.397	1.108	20.7	96	0.00	5.59
14		vinyl bromide	0.641	0.542	15.4	95	-0.01	5.45
15		ethyl ether	0.275	0.248	9.8	106	0.00	6.02
16		2-chloropropane	1.105	0.946	14.4	103	0.00	6.25
17		acrolein	0.081	0.085	-4.9	124	0.00	6.27
18		freon 113	0.580	0.535	7.8	114	0.00	6.51
19		1,1-dichloroethene	0.643	0.477	25.8	95	0.00	6.48
		----------	True	Calc.	% Drift	----------		
20		acetone	200.000	181.406	9.3	98	0.00	6.49
		----------	AvgRF	CCRF	% Dev	----------		
21		acetonitrile		----------NA----------				
22		iodomethane	1.278	1.241	2.9	110	0.00	6.74
23		carbon disulfide	2.495	2.292	8.1	112	0.00	6.89
24		methylene chloride	0.893	0.730	18.3	98	0.00	7.29
25		methyl acetate	0.343	0.295	14.0	101	0.00	7.02
26		methyl tert butyl ether	2.074	1.859	10.4	102	0.00	7.73
27		trans-1,2-dichloroethene	0.684	0.541	20.9	98	0.00	7.73
28		hexane	0.728	0.684	6.0	121	0.00	8.16
29		di-isopropyl ether	2.344	2.019	13.9	96	0.00	8.42
30		ethyl tert-butyl ether	2.248	1.956	13.0	96	0.00	8.94
31		2-butanone	0.046	0.042	8.7	102	0.00	9.14
32	M	1,1-dichloroethane	1.208	1.042	13.7	101	0.00	8.39
33		chloroprene	0.720	0.667	7.4	105	0.00	8.51
34		acrylonitrile		----------NA----------				
35		vinyl acetate	0.074	0.063	14.9	93	0.00	8.35
36		ethyl acetate	0.061	0.062	-1.6	111	0.00	9.18
37		2,2-dichloropropane	1.233	0.937	24.0	93	0.00	9.23

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44250.D

38		cis-1,2-dichloroethene	0.706	0.584	17.3	102	0.00	9.20
39		propionitrile	0.061	0.058	4.9	109	0.00	9.22
40		methyl acrylate	0.058	0.055	5.2	101	0.00	9.25
41		bromochloromethane	0.328	0.300	8.5	106	0.00	9.51
42		tetrahydrofuran	0.048	0.047	2.1	105	0.00	9.54
43		chloroform	1.217	1.017	16.4	102	0.00	9.63
44	S	dibromofluoromethane (s)	0.526	0.524	0.4	114	0.00	9.83
45		methacrylonitrile	0.158	0.146	7.6	105	0.00	9.43
46		1,1,1-trichloroethane	1.232	0.994	19.3	97	0.00	9.90
47		cyclohexane	0.901	0.827	8.2	106	0.00	10.01
48		1,1-dichloropropene	0.686	0.592	13.7	102	0.00	10.08
49		carbon tetrachloride	1.033	0.845	18.2	101	0.00	10.10
50		isobutyl alcohol	0.022	0.021	4.5	115	0.00	10.11
51		tert-amyl alcohol	0.028	0.026	7.1	109	0.00	10.27
52	I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	10.80
53	S	1,2-dichloroethane-d4 (s)	0.354	0.356	-0.6	112	0.00	10.27
54		iso-octane	1.586	1.469	7.4	99	0.00	10.47
55	M	benzene	1.584	1.405	11.3	102	0.00	10.34
56		tert-amyl methyl ether	1.401	1.246	11.1	97	0.00	10.46
57		heptane	0.245	0.279	-13.9	131	0.00	10.65
58		isopropyl acetate	0.066	0.059	10.6	100	0.00	10.30
59		1,2-dichloroethane	0.575	0.491	14.6	99	0.00	10.37
60		n-butyl alcohol	0.010	0.010	0.0	109	0.00	10.90
61		ethyl acrylate	0.354	0.334	5.6	101	0.00	11.13
62		trichloroethene	0.391	0.340	13.0	99	0.00	11.11
63		2-nitropropane	0.064	0.060	6.3	106	0.00	11.90
64		2-chloroethyl vinyl ether	0.178	0.180	-1.1	102	0.00	11.95
65		methyl methacrylate	0.069	0.066	4.3	101	0.00	11.41
66		1,2-dichloropropane	0.443	0.395	10.8	102	0.00	11.41
67		methylcyclohexane	0.661	0.612	7.4	104	0.00	11.42
68		dibromomethane	0.260	0.227	12.7	99	0.00	11.52
69		bromodichloromethane	0.598	0.514	14.0	97	0.00	11.69
70		epichlorohydrin	0.028	0.026	7.1	101	0.00	12.02
71		cis-1,3-dichloropropene	0.612	0.553	9.6	97	0.00	12.16
72		4-methyl-2-pentanone	0.120	0.119	0.8	101	0.00	12.28
73		3-methyl-1-butanol	0.009	0.009	0.0	105	0.00	12.30
74	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	14.01
75	S	toluene-d8 (s)	1.243	1.279	-2.9	108	0.00	12.47
76		toluene	0.952	0.849	10.8	97	0.00	12.54
77		ethyl methacrylate	0.394	0.403	-2.3	99	0.00	12.75
78		trans-1,3-dichloropropene	0.555	0.533	4.0	98	0.00	12.74
79		1,1,2-trichloroethane	0.305	0.278	8.9	97	0.00	12.96
80		tetrachloroethene		----------NA----------				
81		2-hexanone	0.110	0.110	0.0	96	0.00	13.14
82		1,3-dichloropropane	0.563	0.510	9.4	96	0.00	13.14
83		butyl acetate	0.220	0.209	5.0	97	0.00	13.23
84		dibromochloromethane	0.444	0.419	5.6	98	0.00	13.39
85		1,2-dibromoethane	0.476	0.432	9.2	95	0.00	13.53
86		n-butyl ether	1.648	1.670	-1.3	102	0.00	14.03
87		chlorobenzene	1.176	1.044	11.2	96	0.00	14.04
88		1,1,1,2-tetrachloroethane	0.491	0.480	2.2	103	0.00	14.12
89		ethylbenzene	1.870	1.716	8.2	95	0.00	14.11
90		m,p-xylene	0.683	0.639	6.4	95	0.00	14.24
91		o-xylene	0.723	0.701	3.0	95	0.00	14.66
92		styrene	1.145	1.104	3.6	93	0.00	14.67
93		bromoform	0.296	0.283	4.4	100	0.00	14.89
94		butyl acrylate	0.686	0.662	3.5	94	0.00	14.50
95		isopropylbenzene	1.814	1.772	2.3	96	0.00	15.02

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44250.D

96		cis-1,4-dichloro-2-butene	0.160	0.140	12.5	88	0.00	15.06
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	16.39
98	S	4-bromofluorobenzene (s)	0.883	0.920	-4.2	99	0.00	15.22
99		bromobenzene	0.926	0.866	6.5	90	0.00	15.40
100		1,1,2,2-tetrachloroethane	0.926	0.890	3.9	95	0.00	15.31
101		trans-1,4-dichloro-2-bute	0.185	0.191	-3.2	97	0.00	15.34
102		1,2,3-trichloropropane	0.221	0.203	8.1	91	0.00	15.39
103		n-propylbenzene	3.799	3.803	-0.1	93	0.00	15.44
104		2-chlorotoluene	0.821	0.811	1.2	92	0.00	15.57
105		4-chlorotoluene	2.433	2.354	3.2	91	0.00	15.68
106		1,3,5-trimethylbenzene	2.756	2.914	-5.7	95	0.00	15.61
107		tert-butylbenzene	2.082	2.144	-3.0	96	0.00	15.94
108		1,2,4-trimethylbenzene	2.914	3.063	-5.1	94	0.00	15.99
109		sec-butylbenzene	3.354	3.553	-5.9	95	0.00	16.16
110		1,3-dichlorobenzene	1.842	1.683	8.6	90	0.00	16.32
111		p-isopropyltoluene	2.829	3.049	-7.8	94	0.00	16.29
112		1,4-dichlorobenzene	1.880	1.658	11.8	87	0.00	16.41
113		1,2-dichlorobenzene	1.900	1.749	7.9	89	0.00	16.78
114		n-butylbenzene	1.599	1.625	-1.6	89	0.00	16.69
115		1,2-dibromo-3-chloropropa	0.227	0.204	10.1	87	0.00	17.50
116		1,3,5-trichlorobenzene	1.855	1.767	4.7	90	0.00	17.68
		----------	True	Calc.	% Drift	----------		
117		2-ethylhexyl acrylate	10.000	9.088	9.1	101	0.00	18.28
		----------	AvgRF	CCRF	% Dev	----------		
118		nitrobenzene	0.052	0.046	11.5	85	0.00	17.68
119		1,2,4-trichlorobenzene	1.719	1.683	2.1	89	0.00	18.26
120		hexachlorobutadiene	0.837	0.742	11.4	87	0.00	18.37
121		naphthalene	3.409	3.478	-2.0	91	0.00	18.53
122		1,2,3-trichlorobenzene	1.782	1.751	1.7	92	0.00	18.74
123		hexachloroethane	0.602	0.632	-5.0	101	0.00	17.05
124		benzyl chloride	1.429	1.690	-18.3	105	0.00	16.50
		----------	True	Calc.	% Drift	----------		
125		2-methylnaphthalene	25.000	22.645	9.4	96	0.00	19.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3V44245.D M3V1775.M Thu Apr 25 15:27:38 2019 GCMS3V

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44251.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v3v1775\3V44251.D Vial: 22
Acq On : 22 Apr 2019 8:12 pm Operator: roberts
Sample : ICV1775-50 Inst : MS3V
Misc : MS31723,V3V1775,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 15:23:19 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	-0.03	7.27
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	9.83
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		vinyl bromide		----------NA----------				
15		ethyl ether		----------NA----------				
16		2-chloropropane		----------NA----------				
17		acrolein		----------NA----------				
18		freon 113		----------NA----------				
19		1,1-dichloroethene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
20		acetone		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
21		acetonitrile	0.083	0.084	-1.2	106	0.00	6.97
22		iodomethane		----------NA----------				
23		carbon disulfide		----------NA----------				
24		methylene chloride		----------NA----------				
25		methyl acetate		----------NA----------				
26		methyl tert butyl ether		----------NA----------				
27		trans-1,2-dichloroethene		----------NA----------				
28		hexane		----------NA----------				
29		di-isopropyl ether		----------NA----------				
30		ethyl tert-butyl ether		----------NA----------				
31		2-butanone		----------NA----------				
32	M	1,1-dichloroethane		----------NA----------				
33		chloroprene		----------NA----------				
34		acrylonitrile	0.139	0.134	3.6	99	0.00	7.62
35		vinyl acetate		----------NA----------				
36		ethyl acetate		----------NA----------				
37		2,2-dichloropropane		----------NA----------				

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44251.D

38		cis-1,2-dichloroethene		----------NA----------					
39		propionitrile		----------NA----------					
40		methyl acrylate		----------NA----------					
41		bromochloromethane		----------NA----------					
42		tetrahydrofuran		----------NA----------					
43		chloroform		----------NA----------					
44	S	dibromofluoromethane (s)	0.526	0.518	1.5	101	0.00	9.83	
45		methacrylonitrile		----------NA----------					
46		1,1,1-trichloroethane		----------NA----------					
47		cyclohexane		----------NA----------					
48		1,1-dichloropropene		----------NA----------					
49		carbon tetrachloride		----------NA----------					
50		isobutyl alcohol		----------NA----------					
51		tert-amyl alcohol		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	10.80	
53	S	1,2-dichloroethane-d4 (s)	0.354	0.354	0.0	101	0.00	10.27	
54		iso-octane		----------NA----------					
55	M	benzene		----------NA----------					
56		tert-amyl methyl ether		----------NA----------					
57		heptane		----------NA----------					
58		isopropyl acetate		----------NA----------					
59		1,2-dichloroethane		----------NA----------					
60		n-butyl alcohol		----------NA----------					
61		ethyl acrylate		----------NA----------					
62		trichloroethene		----------NA----------					
63		2-nitropropane		----------NA----------					
64		2-chloroethyl vinyl ether		----------NA----------					
65		methyl methacrylate		----------NA----------					
66		1,2-dichloropropane		----------NA----------					
67		methylcyclohexane		----------NA----------					
68		dibromomethane		----------NA----------					
69		bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71		cis-1,3-dichloropropene		----------NA----------					
72		4-methyl-2-pentanone		----------NA----------					
73		3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	14.01	
75	S	toluene-d8 (s)	1.243	1.266	-1.9	98	0.00	12.47	
76		toluene		----------NA----------					
77		ethyl methacrylate		----------NA----------					
78		trans-1,3-dichloropropene		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		tetrachloroethene	0.402	0.403	-0.2	100	0.00	13.10	
81		2-hexanone		----------NA----------					
82		1,3-dichloropropane		----------NA----------					
83		butyl acetate		----------NA----------					
84		dibromochloromethane		----------NA----------					
85		1,2-dibromoethane		----------NA----------					
86		n-butyl ether		----------NA----------					
87		chlorobenzene		----------NA----------					
88		1,1,1,2-tetrachloroethane		----------NA----------					
89		ethylbenzene		----------NA----------					
90		m,p-xylene		----------NA----------					
91		o-xylene		----------NA----------					
92		styrene		----------NA----------					
93		bromoform		----------NA----------					
94		butyl acrylate		----------NA----------					
95		isopropylbenzene		----------NA----------					

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1775-ICV1775
Lab FileID: 3V44251.D

96		cis-1,4-dichloro-2-butene		----------NA----------				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	16.39
98	S	4-bromofluorobenzene (s)	0.883	0.892	-1.0	96	0.00	15.22
99		bromobenzene		----------NA----------				
100		1,1,2,2-tetrachloroethane		----------NA----------				
101		trans-1,4-dichloro-2-bute		----------NA----------				
102		1,2,3-trichloropropane		----------NA----------				
103		n-propylbenzene		----------NA----------				
104		2-chlorotoluene		----------NA----------				
105		4-chlorotoluene		----------NA----------				
106		1,3,5-trimethylbenzene		----------NA----------				
107		tert-butylbenzene		----------NA----------				
108		1,2,4-trimethylbenzene		----------NA----------				
109		sec-butylbenzene		----------NA----------				
110		1,3-dichlorobenzene		----------NA----------				
111		p-isopropyltoluene		----------NA----------				
112		1,4-dichlorobenzene		----------NA----------				
113		1,2-dichlorobenzene		----------NA----------				
114		n-butylbenzene		----------NA----------				
115		1,2-dibromo-3-chloropropa		----------NA----------				
116		1,3,5-trichlorobenzene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
117		2-ethylhexyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
118		nitrobenzene		----------NA----------				
119		1,2,4-trichlorobenzene		----------NA----------				
120		hexachlorobutadiene		----------NA----------				
121		naphthalene		----------NA----------				
122		1,2,3-trichlorobenzene		----------NA----------				
123		hexachloroethane		----------NA----------				
124		benzyl chloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
125		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3V44245.D M3V1775.M Thu Apr 25 15:27:40 2019 GCMS3V

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1778-CC1775
Lab FileID: 3V44284.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kenrickb\v3v1778\3v44284.d Vial: 1
Acq On : 24 Apr 2019 12:21 pm Operator: roberts
Sample : CC1775-50 Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 15:23:19 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	81	0.00	7.30
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.637	1.707	-4.3	87	0.00	7.43
4		1,4-dioxane	0.121	0.138	-14.0	90	0.00	11.47
5	I	pentafluorobenzene	1.000	1.000	0.0	88	0.00	9.83
6		chlorodifluoromethane	1.423	1.541	-8.3	103	0.00	3.68
7		dichlorodifluoromethane	1.641	1.921	-17.1	105	0.00	3.66
8		chloromethane	1.898	1.805	4.9	83	0.00	4.02
9		vinyl chloride	1.458	1.561	-7.1	95	0.00	4.26
10		1,3-butadiene	0.699	0.812	-16.2	110	0.00	4.30
11		bromomethane	1.092	1.090	0.2	93	0.00	4.90
12		chloroethane	0.681	0.713	-4.7	93	0.01	5.10
13		trichlorofluoromethane	1.397	1.503	-7.6	100	0.00	5.60
14		vinyl bromide	0.641	0.666	-3.9	90	0.00	5.46
15		ethyl ether	0.275	0.292	-6.2	96	0.00	6.02
16		2-chloropropane	1.105	1.159	-4.9	97	0.00	6.25
17		acrolein	0.081	0.106	-30.9#	119	0.00	6.27
18		freon 113	0.580	0.651	-12.2	107	0.00	6.52
19		1,1-dichloroethene	0.643	0.644	-0.2	99	0.00	6.48
		----------	True	Calc.	% Drift	----------		
20		acetone	200.000	210.920	-5.5	88	0.00	6.50
		----------	AvgRF	CCRF	% Dev	----------		
21		acetonitrile	0.083	0.086	-3.6	93	0.00	6.97
22		iodomethane	1.278	1.389	-8.7	95	0.00	6.74
23		carbon disulfide	2.495	2.591	-3.8	98	0.00	6.89
24		methylene chloride	0.893	0.899	-0.7	93	0.00	7.29
25		methyl acetate	0.343	0.347	-1.2	92	0.00	7.02
26		methyl tert butyl ether	2.074	2.200	-6.1	93	0.00	7.72
27		trans-1,2-dichloroethene	0.684	0.686	-0.3	96	0.00	7.73
28		hexane	0.728	0.815	-12.0	111	0.00	8.16
29		di-isopropyl ether	2.344	2.609	-11.3	95	0.00	8.42
30		ethyl tert-butyl ether	2.248	2.478	-10.2	93	0.00	8.94
31		2-butanone	0.046	0.047	-2.2	89	0.00	9.14
32	M	1,1-dichloroethane	1.208	1.276	-5.6	95	0.00	8.39
33		chloroprene	0.720	0.792	-10.0	97	0.00	8.50
34		acrylonitrile	0.139	0.145	-4.3	93	0.00	7.62
35		vinyl acetate	0.074	0.079	-6.8	89	0.00	8.35
36		ethyl acetate	0.061	0.071	-16.4	99	0.00	9.18
37		2,2-dichloropropane	1.233	1.232	0.1	95	0.00	9.23

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3V1778-CC1775
Lab FileID: 3V44284.D

38		cis-1,2-dichloroethene	0.706	0.716	-1.4	96	0.00	9.19
39		propionitrile	0.061	0.063	-3.3	93	0.00	9.21
40		methyl acrylate	0.058	0.065	-12.1	91	0.00	9.25
41		bromochloromethane	0.328	0.344	-4.9	94	0.00	9.51
42		tetrahydrofuran	0.048	0.051	-6.2	88	0.00	9.54
43		chloroform	1.217	1.214	0.2	94	0.00	9.63
44	S	dibromofluoromethane (s)	0.526	0.520	1.1	88	0.00	9.83
45		methacrylonitrile	0.158	0.162	-2.5	89	0.00	9.43
46		1,1,1-trichloroethane	1.232	1.282	-4.1	96	0.00	9.90
47		cyclohexane	0.901	1.145	-27.1#	114	0.00	10.01
48		1,1-dichloropropene	0.686	0.712	-3.8	95	0.00	10.08
49		carbon tetrachloride	1.033	1.069	-3.5	99	0.00	10.11
50		isobutyl alcohol	0.022	0.022	0.0	93	0.00	10.11
51		tert-amyl alcohol	0.028	0.028	0.0	91	0.00	10.27
52	I	1,4-difluorobenzene	1.000	1.000	0.0	86	0.00	10.80
53	S	1,2-dichloroethane-d4 (s)	0.354	0.350	1.1	85	0.00	10.27
54		iso-octane	1.586	1.970	-24.2#	103	0.00	10.47
55	M	benzene	1.584	1.653	-4.4	93	0.00	10.34
56		tert-amyl methyl ether	1.401	1.554	-10.9	94	0.00	10.46
57		heptane	0.245	0.289	-18.0	105	0.00	10.65
58		isopropyl acetate	0.066	0.070	-6.1	91	0.00	10.30
59		1,2-dichloroethane	0.575	0.581	-1.0	91	0.00	10.37
60		n-butyl alcohol	0.010	0.010	0.0	88	0.00	10.90
61		ethyl acrylate	0.354	0.371	-4.8	87	0.00	11.13
62		trichloroethene	0.391	0.400	-2.3	90	0.00	11.11
63		2-nitropropane	0.064	0.062	3.1	85	0.00	11.90
64		2-chloroethyl vinyl ether	0.178	0.202	-13.5	89	0.00	11.95
65		methyl methacrylate	0.069	0.074	-7.2	89	0.00	11.41
66		1,2-dichloropropane	0.443	0.464	-4.7	93	0.00	11.41
67		methylcyclohexane	0.661	0.797	-20.6#	105	0.00	11.42
68		dibromomethane	0.260	0.271	-4.2	91	0.00	11.52
69		bromodichloromethane	0.598	0.614	-2.7	90	0.00	11.69
70		epichlorohydrin	0.028	0.029	-3.6	89	0.00	12.02
71		cis-1,3-dichloropropene	0.612	0.647	-5.7	88	0.00	12.16
72		4-methyl-2-pentanone	0.120	0.130	-8.3	86	0.00	12.28
73		3-methyl-1-butanol	0.009	0.010	-11.1	85	0.00	12.30
74	I	chlorobenzene-d5	1.000	1.000	0.0	84	0.00	14.01
75	S	toluene-d8 (s)	1.243	1.282	-3.1	86	0.00	12.47
76		toluene	0.952	0.999	-4.9	90	0.00	12.54
77		ethyl methacrylate	0.394	0.449	-14.0	87	0.00	12.75
78		trans-1,3-dichloropropene	0.555	0.597	-7.6	87	0.00	12.74
79		1,1,2-trichloroethane	0.305	0.318	-4.3	88	0.00	12.96
80		tetrachloroethene	0.402	0.416	-3.5	89	0.00	13.10
81		2-hexanone	0.110	0.123	-11.8	85	0.00	13.14
82		1,3-dichloropropane	0.563	0.598	-6.2	89	0.00	13.14
83		butyl acetate	0.220	0.233	-5.9	85	0.00	13.23
84		dibromochloromethane	0.444	0.475	-7.0	88	0.00	13.39
85		1,2-dibromoethane	0.476	0.502	-5.5	88	0.00	13.53
86		n-butyl ether	1.648	1.871	-13.5	90	0.00	14.03
87		chlorobenzene	1.176	1.225	-4.2	89	0.00	14.04
88		1,1,1,2-tetrachloroethane	0.491	0.546	-11.2	93	0.00	14.11
89		ethylbenzene	1.870	2.035	-8.8	89	0.00	14.11
90		m,p-xylene	0.683	0.757	-10.8	89	0.00	14.24
91		o-xylene	0.723	0.829	-14.7	89	0.00	14.66
92		styrene	1.145	1.333	-16.4	89	0.00	14.67
93		bromoform	0.296	0.306	-3.4	85	0.00	14.89
94		butyl acrylate	0.686	0.785	-14.4	88	0.00	14.50
95		isopropylbenzene	1.814	2.082	-14.8	89	0.00	15.02

Continuing Calibration Summary

Job Number: JC86406 **Sample:** V3V1778-CC1775
Account: BBLNYS Arcadis **Lab FileID:** 3V44284.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		cis-1,4-dichloro-2-butene	0.160	0.171	-6.9	85	0.00	15.06
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	82	0.00	16.39
98	S	4-bromofluorobenzene (s)	0.883	0.881	0.2	82	0.00	15.22
99		bromobenzene	0.926	0.987	-6.6	89	0.00	15.40
100		1,1,2,2-tetrachloroethane	0.926	0.935	-1.0	86	0.00	15.31
101		trans-1,4-dichloro-2-bute	0.185	0.195	-5.4	86	0.00	15.34
102		1,2,3-trichloropropane	0.221	0.220	0.5	86	0.00	15.39
103		n-propylbenzene	3.799	4.170	-9.8	88	0.00	15.44
104		2-chlorotoluene	0.821	0.900	-9.6	88	0.00	15.57
105		4-chlorotoluene	2.433	2.653	-9.0	89	0.00	15.68
106		1,3,5-trimethylbenzene	2.756	3.160	-14.7	89	0.00	15.61
107		tert-butylbenzene	2.082	2.335	-12.2	90	0.00	15.94
108		1,2,4-trimethylbenzene	2.914	3.329	-14.2	88	0.00	15.99
109		sec-butylbenzene	3.354	3.938	-17.4	91	0.00	16.16
110		1,3-dichlorobenzene	1.842	1.922	-4.3	89	0.00	16.32
111		p-isopropyltoluene	2.829	3.313	-17.1	89	0.00	16.29
112		1,4-dichlorobenzene	1.880	1.914	-1.8	87	0.00	16.41
113		1,2-dichlorobenzene	1.900	2.008	-5.7	89	0.00	16.78
114		n-butylbenzene	1.599	1.844	-15.3	88	0.00	16.69
115		1,2-dibromo-3-chloropropa	0.227	0.237	-4.4	87	0.00	17.50
116		1,3,5-trichlorobenzene	1.855	2.014	-8.6	89	0.00	17.68
		----------	True	Calc.	% Drift	----------		
117		2-ethylhexyl acrylate	10.000	9.328	6.7	90	0.00	18.28
		----------	AvgRF	CCRF	% Dev	----------		
118		nitrobenzene	0.052	0.053	-1.9	86	0.00	17.68
119		1,2,4-trichlorobenzene	1.719	1.932	-12.4	88	0.00	18.26
120		hexachlorobutadiene	0.837	0.883	-5.5	89	0.00	18.37
121		naphthalene	3.409	3.873	-13.6	88	0.00	18.53
122		1,2,3-trichlorobenzene	1.782	1.994	-11.9	90	0.00	18.74
123		hexachloroethane	0.602	0.656	-9.0	91	0.00	17.05
124		benzyl chloride	1.429	1.499	-4.9	81	0.00	16.50
		----------	True	Calc.	% Drift	----------		
125		2-methylnaphthalene	25.000	24.110	3.6	89	0.00	19.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3V44245.D M3V1775.M Fri Apr 26 14:01:45 2019

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICC10606
Lab FileID: D263017.D

Response Factor Report MSD

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Initial Calibration

Calibration Files
1 =d263012.D 4 =d263014.D 100 =d263018.D 50 =d263017.D
20 =d263016.D 200 =d263019.D 8 =d263015.D 0.5 =d263011.D
2 =d263013.D =

Compound	1	4	100	50	20	200	8	0.5	2	Avg	%RSD
1) I tert butyl alcohol-d9 ----------ISTD----------											
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol	1.119	1.331	1.410	1.443	1.396	1.401	1.357		1.148	1.326	9.31
4) 1,4-dioxane		0.104	0.125	0.128	0.125	0.124	0.119			0.121	7.42
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane	1.061	1.049	1.025	1.100	1.063	1.006	1.098	1.059	1.034	1.055	2.95
7) dichlorodifluoromethane	1.275	1.431	1.468	1.590	1.538	1.411	1.508		1.393	1.452	6.73
8) chloromethane	1.116	1.153	1.293	1.372	1.269	1.274	1.217	1.117	1.128	1.216	7.57
9) 1,3-butadiene		0.584	0.751	0.765	0.668	0.757	0.636		0.552	0.673	12.92
10) vinyl chloride	1.148	1.230	1.232	1.371	1.309	1.190	1.286	1.122	1.242	1.237	6.31
11) bromomethane	0.569	0.597	0.672	0.724	0.656	0.660	0.639		0.578	0.637	8.26
12) chloroethane	0.518	0.541	0.563	0.596	0.558	0.578	0.560	0.429	0.532	0.542	8.92
13) trichlorofluoromethane	0.963	1.077	1.150	1.246	1.181	1.148	1.147		1.001	1.114	8.48
14) vinyl bromide	0.481	0.541	0.597	0.647	0.594	0.605	0.582		0.498	0.568	9.97
15) ethyl ether	0.280	0.270	0.285	0.294	0.283	0.276	0.281		0.237	0.276	6.26
16) 2-chloropropane	1.308	1.172	1.134	1.185	1.147	1.118	1.174	1.315	1.149	1.189	6.09
17) acrolein			0.094	0.098	0.093	0.092	0.080			0.092	7.54
18) freon 113	0.620	0.637	0.679	0.708	0.667	0.689	0.675	0.610	0.600	0.654	5.85
19) 1,1-dichloroethene	0.632	0.609	0.616	0.638	0.605	0.628	0.607	0.641	0.573	0.617	3.42
20) acetone		0.039	0.042	0.042	0.041	0.040	0.040		0.027	0.039	13.43
21) acetonitrile	0.091	0.082	0.078	0.082	0.081	0.075	0.084		0.080	0.082	5.58
22) iodomethane	0.965	0.954	0.999	1.038	0.983	1.025	0.979	0.890	0.895	0.970	5.29
23) carbon disulfide											

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICC10606
Lab FileID: D263017.D

	2.023	1.992	2.004	2.121	2.029	2.002	2.059	1.992	1.867	2.010	3.36
24)	methylene chloride										
	0.645	0.654	0.639	0.665	0.649	0.633	0.659	0.674	0.613	0.648	2.83
25)	methyl acetate										
		0.350	0.347	0.354	0.351	0.331	0.363		0.306	0.343	5.46
26)	methyl tert butyl ether										
	1.999	1.797	1.828	1.921	1.845	1.784	1.861	2.007	1.815	1.873	4.48
27)	trans-1,2-dichloroethene										
	0.577	0.568	0.566	0.592	0.576	0.553	0.577	0.559	0.521	0.565	3.58
28)	hexane										
	0.341	0.369	0.365	0.383	0.373	0.355	0.382	0.349	0.357	0.364	3.98
29)	di-isopropyl ether										
	2.231	2.108	2.126	2.241	2.126	2.098	2.154	2.155	2.037	2.142	2.98
30)	2-butanone										
		0.042	0.050	0.050	0.048	0.047	0.047		0.036	0.046	10.95
31)	1,1-dichloroethane										
	1.044	1.036	1.001	1.059	1.022	0.965	1.021	0.975	0.936	1.006	4.04
32)	chloroprene										
	0.879	0.885	0.933	0.982	0.922	0.902	0.936	0.842	0.807	0.899	5.87
33)	acrylonitrile										
		0.130	0.165	0.171	0.165	0.159	0.158			0.158	9.28
34)	vinyl acetate										
		0.087	0.118	0.123	0.115	0.113	0.106			0.110	11.51
35)	ethyl tert-butyl ether										
	2.210	2.038	2.137	2.231	2.104	2.091	2.123	2.130	1.955	2.113	3.95
36)	ethyl acetate										
		0.052	0.068	0.069	0.068	0.064	0.067			0.065	10.26
37)	2,2-dichloropropane										
	1.135	1.032	1.042	1.119	1.059	1.027	1.091	1.178	1.032	1.080	5.03
38)	cis-1,2-dichloroethene										
	0.614	0.636	0.615	0.651	0.621	0.604	0.624	0.638	0.564	0.619	4.04
39)	propionitrile										
	0.063	0.070	0.070	0.073	0.071	0.067	0.072		0.064	0.069	5.35
40)	methyl acrylate										
		0.036	0.070	0.073	0.065	0.068	0.055			0.061	22.45

----- Linear regression ----- Coefficient = 0.9986
Response Ratio = -0.00237 + 0.07018 *A

41)	methacrylonitrile										
		0.157	0.191	0.192	0.181	0.185	0.177			0.180	7.16
42)	bromochloromethane										
	0.262	0.293	0.292	0.304	0.292	0.287	0.292	0.228	0.262	0.279	8.62
43)	tetrahydrofuran										
		0.130	0.135	0.137	0.137	0.127	0.140			0.134	3.49
44)	chloroform										
	1.081	0.995	0.975	1.023	0.979	0.956	0.997	1.156	0.990	1.017	6.23
45)	tert-butyl formate										
	0.563	0.539	0.610	0.624	0.571	0.612	0.563	0.561	0.516	0.573	6.22
46)	dibromofluoromethane (s)										
	0.467	0.471	0.470	0.479	0.475	0.465	0.475	0.471	0.471	0.472	0.93
47)	1,1,1-trichloroethane										
	1.079	1.018	1.046	1.107	1.040	1.046	1.064	0.997	0.988	1.043	3.65
48)	cyclohexane										
	1.064	1.044	1.071	1.136	1.058	1.087	1.041	0.953	0.987	1.049	5.11
49)	isobutyl alcohol										
										0.000	-1.00
50)	1,1-dichloropropene										
	0.801	0.751	0.768	0.805	0.771	0.750	0.770	0.825	0.693	0.770	4.98
51)	carbon tetrachloride										
	0.912	0.866	0.922	0.952	0.885	0.937	0.886	0.845	0.809	0.890	5.14

Initial Calibration Summary

Job Number: JC86406 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

52) tert-amyl alcohol
0.037 0.031 0.031 0.031 0.032 0.030 0.033 0.028 0.032 8.36
53) isopropyl acetate
0.104 0.128 0.126 0.120 0.126 0.114 0.120 7.70

54) I 1,4-difluorobenzene ----------ISTD----------
55) 1,2-dichloroethane-d4 (s)
0.378 0.378 0.373 0.369 0.371 0.372 0.382 0.378 0.373 0.375 1.12
56) n-butyl alcohol
0.015 0.011 0.011 0.012 0.010 0.014 0.012 14.73
57) 2,2,4-trimethylpentane
1.141 1.141 1.388 1.364 1.224 1.437 1.180 1.042 1.240 11.36
58) benzene
1.590 1.498 1.521 1.557 1.513 1.486 1.538 1.566 1.394 1.518 3.78
59) tert-amyl methyl ether
1.415 1.338 1.414 1.429 1.361 1.409 1.362 1.469 1.270 1.385 4.25
60) heptane
0.202 0.205 0.206 0.211 0.206 0.202 0.205 0.190 0.199 0.203 2.92
61) 1,2-dichloroethane
0.628 0.531 0.515 0.526 0.515 0.500 0.534 0.522 0.534 7.38
62) ethyl acrylate
0.364 0.405 0.404 0.387 0.386 0.398 0.391 3.95
63) trichloroethene
0.387 0.386 0.376 0.388 0.372 0.372 0.380 0.378 0.356 0.377 2.68
64) 2-chloroethyl vinyl ether
0.192 0.192 0.213 0.212 0.206 0.205 0.207 0.171 0.182 0.198 7.32
65) methyl methacrylate
0.068 0.092 0.092 0.086 0.091 0.084 0.085 10.56
66) methylcyclohexane
0.677 0.630 0.667 0.675 0.631 0.671 0.656 0.607 0.579 0.644 5.32
67) 1,2-dichloropropane
0.376 0.374 0.383 0.392 0.381 0.376 0.394 0.364 0.352 0.377 3.47
68) dibromomethane
0.209 0.220 0.229 0.231 0.224 0.222 0.227 0.189 0.210 0.218 6.16
69) bromodichloromethane
0.518 0.496 0.521 0.530 0.511 0.515 0.509 0.476 0.471 0.505 4.04
70) 2-nitropropane
0.076 0.079 0.080 0.076 0.078 0.082 0.079 2.82
71) epichlorohydrin
0.035 0.038 0.038 0.037 0.036 0.039 0.033 0.036 5.84
72) cis-1,3-dichloropropene
0.610 0.580 0.628 0.641 0.619 0.615 0.634 0.593 0.555 0.608 4.58
73) 4-methyl-2-pentanone
0.125 0.132 0.137 0.137 0.134 0.132 0.139 0.118 0.129 0.131 5.07
74) isoamyl alcohol
0.009 0.012 0.012 0.011 0.011 0.011 0.007 0.010 16.80

75) I chlorobenzene-d5 ----------ISTD----------
76) toluene-d8 (s)
1.194 1.222 1.244 1.223 1.228 1.236 1.221 1.203 1.200 1.219 1.38
77) toluene
0.941 0.958 0.976 0.993 0.948 0.954 0.958 0.996 0.883 0.956 3.49
78) ethyl methacrylate
0.379 0.438 0.496 0.486 0.468 0.479 0.474 0.405 0.453 9.25
79) trans-1,3-dichloropropene
0.552 0.543 0.581 0.585 0.560 0.564 0.563 0.535 0.518 0.556 3.82
80) 1,1,2-trichloroethane
0.247 0.249 0.264 0.268 0.255 0.258 0.261 0.251 0.242 0.255 3.36
81) tetrachloroethene
0.297 0.317 0.323 0.324 0.306 0.319 0.314 0.319 0.286 0.312 4.16

Initial Calibration Summary

Job Number: JC86406 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

82) 2-hexanone
0.100 0.117 0.126 0.124 0.121 0.120 0.120 0.094 0.115 10.20
83) 1,3-dichloropropane
0.573 0.565 0.563 0.569 0.554 0.545 0.563 0.504 0.503 0.549 4.90
84) butyl acetate
0.223 0.255 0.250 0.240 0.249 0.243 0.185 0.235 10.35
85) dibromochloromethane
0.354 0.346 0.393 0.388 0.360 0.389 0.355 0.326 0.322 0.359 7.38
86) 1,2-dibromoethane
0.399 0.393 0.420 0.424 0.405 0.410 0.411 0.344 0.363 0.396 6.70
87) n-butyl ether
1.788 1.811 1.709 1.774 1.751 1.624 1.809 1.760 1.661 1.743 3.75
88) chlorobenzene
1.123 1.108 1.100 1.135 1.102 1.087 1.129 1.130 1.054 1.108 2.34
89) 1,1,1,2-tetrachloroethane
0.429 0.413 0.459 0.457 0.422 0.464 0.426 0.377 0.383 0.426 7.40
90) ethylbenzene
1.938 1.894 1.900 1.954 1.888 1.859 1.920 1.927 1.778 1.895 2.76
91) m,p-xylene
0.746 0.708 0.737 0.750 0.716 0.731 0.727 0.718 0.667 0.722 3.44
92) o-xylene
1.611 1.576 1.605 1.641 1.588 1.574 1.621 1.591 1.473 1.587 3.02
93) styrene
1.208 1.220 1.281 1.299 1.259 1.253 1.264 1.190 1.099 1.230 4.91
94) butyl acrylate
0.656 0.839 0.826 0.765 0.835 0.731 0.555 0.744 14.31
95) n-amyl acetate
0.242 0.356 0.335 0.313 0.361 0.282 0.315 14.61
96) isopropylbenzene
1.888 1.848 1.868 1.920 1.838 1.845 1.882 1.860 1.716 1.852 3.08
97) bromoform
0.240 0.241 0.286 0.279 0.260 0.288 0.252 0.225 0.259 9.10
98) cis-1,4-dichloro-2-butene
0.154 0.185 0.181 0.165 0.184 0.161 0.172 7.74

99) I 1,4-dichlorobenzene-d ----------ISTD----------
100) 4-bromofluorobenzene (s)
0.975 0.954 0.867 0.877 0.907 0.832 0.962 0.995 0.969 0.926 6.18
101) 1,1,2,2-tetrachloroethane
0.847 0.812 0.711 0.752 0.753 0.657 0.799 0.863 0.760 0.773 8.48
102) trans-1,4-dichloro-2-butene
0.192 0.199 0.203 0.198 0.186 0.203 0.172 0.193 5.70
103) 1,2,3-trichloropropane
0.229 0.243 0.214 0.222 0.225 0.199 0.232 0.219 0.223 5.84
104) bromobenzene
0.968 0.894 0.834 0.870 0.845 0.800 0.912 0.901 0.863 0.876 5.63
105) n-propylbenzene
3.785 3.546 3.223 3.425 3.393 3.000 3.584 3.790 3.418 3.463 7.31
106) 2-chlorotoluene
0.825 0.787 0.740 0.777 0.761 0.718 0.780 0.813 0.783 0.776 4.30
107) 4-chlorotoluene
2.458 2.355 2.165 2.267 2.249 2.067 2.357 2.411 2.244 2.286 5.38
108) 1,3,5-trimethylbenzene
2.861 2.713 2.540 2.665 2.584 2.429 2.720 2.739 2.564 2.646 4.89
109) tert-butylbenzene
2.161 2.057 2.011 2.070 1.970 1.942 2.098 2.178 1.989 2.053 4.03
110) 1,2,4-trimethylbenzene
2.777 2.678 2.564 2.685 2.635 2.438 2.773 2.681 2.516 2.639 4.31
111) sec-butylbenzene
3.203 3.070 2.943 3.094 2.980 2.775 3.152 3.127 2.870 3.024 4.68

Initial Calibration Summary

Job Number: JC86406 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

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112)  p-isopropyltoluene
            2.430 2.571 2.546 2.676 2.564 2.443 2.656 2.404 2.362   2.517    4.45
113)  1,3-dichlorobenzene
            1.587 1.538 1.506 1.553 1.516 1.466 1.573 1.589 1.449   1.531    3.30
114)  1,4-dichlorobenzene
            1.700 1.573 1.557 1.601 1.576 1.507 1.608 1.660 1.509   1.588    4.01
115)  1,2-dichlorobenzene
            1.568 1.553 1.530 1.588 1.533 1.467 1.586 1.524 1.459   1.534    3.03
116)  benzyl chloride
            1.368 1.417 1.657 1.671 1.549 1.574 1.499 1.381 1.295   1.490    8.94
117)  n-butylbenzene
            1.038 1.104 1.254 1.308 1.234 1.215 1.235       1.016   1.176    9.19
118)  2-ethylhexyl acrylate
      *This compound does not meet initial calibration criteria*
                        0.307 0.191 0.081 0.412                     0.248   57.80
119)  hexachloroethane
            0.374 0.369 0.426 0.421 0.372 0.436 0.389 0.374 0.355   0.391    7.43
120)  1,2-dibromo-3-chloropropane
                  0.125 0.157 0.159 0.145 0.147 0.141       0.096   0.138   15.67
121)  1,3,5-trichlorobenzene
                  0.906 1.155 1.174 1.060 1.106 1.033       0.791   1.032   13.45
122)  1,2,4-trichlorobenzene
                  0.559 0.987 0.964 0.791 0.948 0.693               0.824   21.04
               ----- Linear regression -----  Coefficient =  0.9991
                 Response Ratio = -0.02796 + 0.96478 *A

123)  hexachlorobutadiene
            0.413 0.442 0.522 0.528 0.472 0.501 0.479       0.406   0.470    9.93
124)  naphthalene
                  1.103 2.241 2.133 1.689 2.116 1.382               1.777   26.10
               ----- Linear regression -----  Coefficient =  0.9984
                 Response Ratio = -0.07882 + 2.16477 *A

125)  1,2,3-trichlorobenzene
                  0.477 0.874 0.842 0.682 0.841 0.587               0.717   22.57
               ----- Linear regression -----  Coefficient =  0.9991
                 Response Ratio = -0.03131 + 0.85672 *A

126)  2-methylnaphthalene
      *This compound does not meet initial calibration criteria*

                        0.620 0.472 0.277 0.660 0.205               0.447   45.27
 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MD10606.M         Fri Mar 15 14:35:37 2019   RPT1
```

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263022.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VD10606\d263022.D Vial: 14
Acq On : 14 Mar 2019 11:49 pm Operator: juntaep
Sample : icv10606-50 Inst : MSD
Misc : ms33018,vd10606,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	104	0.00	7.47
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.402	-5.7	101	0.01	7.58
4		1,4-dioxane	0.121	0.133	-9.9	107	0.00	11.36
5	I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	9.73
6		chlorodifluoromethane	1.055	0.941	10.8	92	0.00	4.41
7		dichlorodifluoromethane	1.452	1.257	13.4	85	0.01	4.42
8		chloromethane	1.216	1.097	9.8	86	0.00	4.70
9		1,3-butadiene	0.673	0.731	-8.6	103	0.00	4.98
10		vinyl chloride	1.237	1.121	9.4	88	0.00	4.96
11		bromomethane	0.637	0.623	2.2	93	0.01	5.53
12		chloroethane	0.542	0.518	4.4	94	0.00	5.66
13		trichlorofluoromethane	1.114	1.092	2.0	95	0.01	6.15
14		vinyl bromide	0.568	0.560	1.4	93	0.00	6.02
15		ethyl ether	0.276	0.281	-1.8	103	0.00	6.47
16		2-chloropropane	1.189	1.059	10.9	96	0.00	6.68
17		acrolein	0.092	0.100	-8.7	110	0.00	6.66
18		freon 113	0.654	0.670	-2.4	102	0.00	6.93
19		1,1-dichloroethene	0.617	0.548	11.2	93	0.00	6.89
20		acetone	0.039	0.042	-7.7	106	0.00	6.85
21		acetonitrile		----------NA----------				
22		iodomethane	0.970	1.076	-10.9	112	0.00	7.14
23		carbon disulfide	2.010	2.391	-19.0	122	0.00	7.30
24		methylene chloride	0.648	0.619	4.5	100	0.00	7.54
25		methyl acetate	0.343	0.348	-1.5	106	0.00	7.29
26		methyl tert butyl ether	1.873	1.835	2.0	103	0.00	7.91
27		trans-1,2-dichloroethene	0.565	0.538	4.8	98	0.00	7.94
28		hexane	0.364	0.300	17.6	85	0.00	8.31
29		di-isopropyl ether	2.142	1.998	6.7	96	0.00	8.50
30		2-butanone	0.046	0.050	-8.7	108	0.00	9.10
31		1,1-dichloroethane	1.006	0.967	3.9	98	0.00	8.49
32		chloroprene	0.899	0.916	-1.9	101	0.00	8.60
33		acrylonitrile	0.158	0.162	-2.5	102	0.00	7.78
34		vinyl acetate	0.110	0.108	1.8	95	0.00	8.41
35		ethyl tert-butyl ether	2.113	2.044	3.3	99	0.00	8.96
36		ethyl acetate	0.065	0.073	-12.3	114	0.00	9.13
37		2,2-dichloropropane	1.080	0.983	9.0	95	0.00	9.25
38		cis-1,2-dichloroethene	0.619	0.611	1.3	101	0.00	9.19
39		propionitrile	0.069	0.072	-4.3	106	0.00	9.15

---------- True Calc. % Drift ----------

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263022.D

40		methyl acrylate	50.000	50.296	-0.6	101	0.00	9.22
			AvgRF	CCRF	% Dev			
41		methacrylonitrile	0.180	0.186	-3.3	104	0.00	9.36
42		bromochloromethane	0.279	0.291	-4.3	103	0.00	9.49
43		tetrahydrofuran	0.134	0.134	0.0	106	0.00	9.53
44		chloroform	1.017	0.948	6.8	100	0.00	9.57
45		tert-butyl formate	0.573	0.495	13.6	85	0.00	9.62
46	S	dibromofluoromethane (s)	0.472	0.468	0.8	105	0.00	9.76
47		1,1,1-trichloroethane	1.043	0.986	5.5	96	0.00	9.87
48		cyclohexane	1.049	1.013	3.4	96	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.742	3.6	99	0.00	10.04
51		carbon tetrachloride	0.890	0.863	3.0	98	0.00	10.08
52		tert-amyl alcohol	0.032	0.033	-3.1	112	0.01	10.12
53		isopropyl acetate	0.120	0.117	2.5	100	0.00	10.16
54	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.361	3.7	104	0.00	10.19
56		n-butyl alcohol	0.012	0.011	8.3	103	0.00	10.69
57		2,2,4-trimethylpentane	1.240	1.197	3.5	93	0.00	10.41
58		benzene	1.518	1.477	2.7	101	0.00	10.28
59		tert-amyl methyl ether	1.385	1.303	5.9	97	0.00	10.37
60		heptane	0.203	0.208	-2.5	105	0.00	10.56
61		1,2-dichloroethane	0.534	0.507	5.1	102	0.00	10.28
62		ethyl acrylate	0.391	0.410	-4.9	108	0.00	10.98
63		trichloroethene	0.377	0.368	2.4	101	0.00	11.02
64		2-chloroethyl vinyl ether	0.198	0.213	-7.6	106	0.00	11.82
65		methyl methacrylate	0.085	0.096	-12.9	112	0.00	11.26
66		methylcyclohexane	0.644	0.601	6.7	95	0.00	11.37
67		1,2-dichloropropane	0.377	0.379	-0.5	102	0.00	11.30
68		dibromomethane	0.218	0.231	-6.0	106	0.00	11.41
69		bromodichloromethane	0.505	0.506	-0.2	101	0.00	11.57
70		2-nitropropane	0.079	0.083	-5.1	110	0.00	11.75
71		epichlorohydrin	0.036	0.038	-5.6	107	0.00	11.90
72		cis-1,3-dichloropropene	0.608	0.620	-2.0	103	0.00	12.06
73		4-methyl-2-pentanone	0.131	0.137	-4.6	106	0.00	12.16
74		isoamyl alcohol	0.010	0.011	-10.0	104	0.00	12.15
75	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.240	-1.7	106	0.00	12.42
77		toluene	0.956	0.966	-1.0	102	0.00	12.50
78		ethyl methacrylate	0.453	0.469	-3.5	101	0.00	12.68
79		trans-1,3-dichloropropene	0.556	0.554	0.4	99	0.00	12.67
80		1,1,2-trichloroethane	0.255	0.263	-3.1	103	0.00	12.92
81		tetrachloroethene		----------NA----------				
82		2-hexanone	0.115	0.124	-7.8	105	0.00	13.10
83		1,3-dichloropropane	0.549	0.574	-4.6	106	0.00	13.12
84		butyl acetate	0.235	0.246	-4.7	103	0.00	13.20
85		dibromochloromethane	0.359	0.395	-10.0	107	0.00	13.40
86		1,2-dibromoethane	0.396	0.419	-5.8	104	0.00	13.58
87		n-butyl ether	1.743	1.763	-1.1	104	0.00	14.10
88		chlorobenzene	1.108	1.103	0.5	102	0.00	14.13
89		1,1,1,2-tetrachloroethane	0.426	0.455	-6.8	104	0.00	14.20
90		ethylbenzene	1.895	1.909	-0.7	102	0.00	14.21
91		m,p-xylene	0.722	0.731	-1.2	102	0.00	14.35
92		o-xylene	1.587	1.605	-1.1	103	0.00	14.79
93		styrene	1.230	1.300	-5.7	105	0.00	14.81
94		butyl acrylate	0.744	0.827	-11.2	105	0.00	14.59
95		n-amyl acetate	0.315	0.314	0.3	98	0.00	14.83

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263022.D

96		isopropylbenzene	1.852	1.868	-0.9	102	0.00	15.20
97		bromoform	0.259	0.294	-13.5	110	0.00	15.05
98		cis-1,4-dichloro-2-butene	0.172	0.176	-2.3	102	0.00	15.20
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	16.74
100	S	4-bromofluorobenzene (s)	0.926	0.876	5.4	106	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.773	0.731	5.4	103	0.00	15.47
102		trans-1,4-dichloro-2-bute	0.193	0.226	-17.1	118	0.00	15.51
103		1,2,3-trichloropropane	0.223	0.220	1.3	105	0.00	15.57
104		bromobenzene	0.876	0.859	1.9	105	0.00	15.62
105		n-propylbenzene	3.463	3.306	4.5	102	0.00	15.67
106		2-chlorotoluene	0.776	0.747	3.7	102	0.00	15.81
107		4-chlorotoluene	2.286	2.267	0.8	106	0.00	15.94
108		1,3,5-trimethylbenzene	2.646	2.538	4.1	101	0.00	15.85
109		tert-butylbenzene	2.053	1.982	3.5	101	0.00	16.23
110		1,2,4-trimethylbenzene	2.639	2.664	-0.9	105	0.00	16.29
111		sec-butylbenzene	3.024	2.981	1.4	102	0.00	16.48
112		p-isopropyltoluene	2.517	2.585	-2.7	102	0.00	16.63
113		1,3-dichlorobenzene	1.531	1.541	-0.7	105	0.00	16.66
114		1,4-dichlorobenzene	1.588	1.588	0.0	105	0.00	16.77
115		1,2-dichlorobenzene	1.534	1.532	0.1	102	0.00	17.18
116		benzyl chloride	1.490	1.266	15.0	80	0.00	16.86
117		n-butylbenzene	1.176	1.247	-6.0	101	0.00	17.09
118		2-ethylhexyl acrylate	0.248	0.194	21.8	108	0.00	18.98
119		hexachloroethane	0.391	0.409	-4.6	103	0.00	17.54
120		1,2-dibromo-3-chloropropa	0.138	0.148	-7.2	99	0.00	18.02
121		1,3,5-trichlorobenzene	1.032	1.130	-9.5	102	0.00	18.26
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	50.000	48.668	2.7	100	0.00	18.98
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.495	-5.3	99	0.00	19.14
		----------	True	Calc.	% Drift	----------		
124		naphthalene	50.000	49.042	1.9	102	0.00	19.32
125		1,2,3-trichlorobenzene	50.000	47.609	4.8	99	0.00	19.59
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.423	5.4	95	0.00	20.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Fri Mar 15 14:35:50 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263023.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VD10606\d263023.D Vial: 15
Acq On : 15 Mar 2019 12:18 am Operator: juntaep
Sample : icv10606-50 Inst : MSD
Misc : ms33018,vd10606,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.47
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	9.73
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		1,3-butadiene		----------NA----------				
10		vinyl chloride		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		vinyl bromide		----------NA----------				
15		ethyl ether		----------NA----------				
16		2-chloropropane		----------NA----------				
17		acrolein		----------NA----------				
18		freon 113		----------NA----------				
19		1,1-dichloroethene		----------NA----------				
20		acetone	0.039	0.038	2.6	99	0.00	6.84
21		acetonitrile	0.082	0.074	9.8	98	0.00	7.21
22		iodomethane		----------NA----------				
23		carbon disulfide		----------NA----------				
24		methylene chloride		----------NA----------				
25		methyl acetate		----------NA----------				
26		methyl tert butyl ether		----------NA----------				
27		trans-1,2-dichloroethene		----------NA----------				
28		hexane		----------NA----------				
29		di-isopropyl ether		----------NA----------				
30		2-butanone		----------NA----------				
31		1,1-dichloroethane		----------NA----------				
32		chloroprene		----------NA----------				
33		acrylonitrile		----------NA----------				
34		vinyl acetate		----------NA----------				
35		ethyl tert-butyl ether		----------NA----------				
36		ethyl acetate		----------NA----------				
37		2,2-dichloropropane		----------NA----------				
38		cis-1,2-dichloroethene		----------NA----------				
39		propionitrile		----------NA----------				

---------- True Calc. % Drift ----------

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263023.D

			AvgRF	CCRF	% Dev			
40		methyl acrylate		----------NA----------				
41		methacrylonitrile		----------NA----------				
42		bromochloromethane		----------NA----------				
43		tetrahydrofuran		----------NA----------				
44		chloroform		----------NA----------				
45		tert-butyl formate		----------NA----------				
46	S	dibromofluoromethane (s)	0.472	0.460	2.5	105	0.00	9.76
47		1,1,1-trichloroethane		----------NA----------				
48		cyclohexane		----------NA----------				
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene		----------NA----------				
51		carbon tetrachloride		----------NA----------				
52		tert-amyl alcohol		----------NA----------				
53		isopropyl acetate		----------NA----------				
54	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.369	1.6	106	0.00	10.19
56		n-butyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane		----------NA----------				
58		benzene		----------NA----------				
59		tert-amyl methyl ether		----------NA----------				
60		heptane		----------NA----------				
61		1,2-dichloroethane		----------NA----------				
62		ethyl acrylate		----------NA----------				
63		trichloroethene		----------NA----------				
64		2-chloroethyl vinyl ether		----------NA----------				
65		methyl methacrylate		----------NA----------				
66		methylcyclohexane		----------NA----------				
67		1,2-dichloropropane		----------NA----------				
68		dibromomethane		----------NA----------				
69		bromodichloromethane		----------NA----------				
70		2-nitropropane		----------NA----------				
71		epichlorohydrin		----------NA----------				
72		cis-1,3-dichloropropene		----------NA----------				
73		4-methyl-2-pentanone		----------NA----------				
74		isoamyl alcohol		----------NA----------				
75	I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.203	1.3	107	0.00	12.42
77		toluene		----------NA----------				
78		ethyl methacrylate		----------NA----------				
79		trans-1,3-dichloropropene		----------NA----------				
80		1,1,2-trichloroethane		----------NA----------				
81		tetrachloroethene	0.312	0.278	10.9	93	0.00	13.13
82		2-hexanone		----------NA----------				
83		1,3-dichloropropane		----------NA----------				
84		butyl acetate		----------NA----------				
85		dibromochloromethane		----------NA----------				
86		1,2-dibromoethane		----------NA----------				
87		n-butyl ether		----------NA----------				
88		chlorobenzene		----------NA----------				
89		1,1,1,2-tetrachloroethane		----------NA----------				
90		ethylbenzene		----------NA----------				
91		m,p-xylene		----------NA----------				
92		o-xylene		----------NA----------				
93		styrene		----------NA----------				
94		butyl acrylate		----------NA----------				
95		n-amyl acetate		----------NA----------				

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-ICV10606
Lab FileID: D263023.D

96		isopropylbenzene			----------NA----------			
97		bromoform			----------NA----------			
98		cis-1,4-dichloro-2-butene			----------NA----------			
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	16.74
100	S	4-bromofluorobenzene (s)	0.926	1.005	-8.5	108	0.00	15.42
101		1,1,2,2-tetrachloroethane			----------NA----------			
102		trans-1,4-dichloro-2-bute			----------NA----------			
103		1,2,3-trichloropropane			----------NA----------			
104		bromobenzene			----------NA----------			
105		n-propylbenzene			----------NA----------			
106		2-chlorotoluene			----------NA----------			
107		4-chlorotoluene			----------NA----------			
108		1,3,5-trimethylbenzene			----------NA----------			
109		tert-butylbenzene			----------NA----------			
110		1,2,4-trimethylbenzene			----------NA----------			
111		sec-butylbenzene			----------NA----------			
112		p-isopropyltoluene			----------NA----------			
113		1,3-dichlorobenzene			----------NA----------			
114		1,4-dichlorobenzene			----------NA----------			
115		1,2-dichlorobenzene			----------NA----------			
116		benzyl chloride			----------NA----------			
117		n-butylbenzene			----------NA----------			
118		2-ethylhexyl acrylate			----------NA----------			
119		hexachloroethane			----------NA----------			
120		1,2-dibromo-3-chloropropa			----------NA----------			
121		1,3,5-trichlorobenzene			----------NA----------			
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene			----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene			----------NA----------			
		----------	True	Calc.	% Drift	----------		
124		naphthalene			----------NA----------			
125		1,2,3-trichlorobenzene			----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene			----------NA----------			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Fri Mar 15 14:35:52 2019 RPT1

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10643-CC10606
Lab FileID: D264041.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...-19\vd10643\d264041.d Vial: 3
Acq On : 25 Apr 2019 7:36 am Operator: thienn
Sample : CC10606-50 Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.47
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.266	4.5	89	0.00	7.57
4		1,4-dioxane	0.121	0.129	-6.6	102	0.00	11.35
5	I	pentafluorobenzene	1.000	1.000	0.0	91	0.00	9.72
6		chlorodifluoromethane	1.055	0.966	8.4	80	0.00	4.42
7		dichlorodifluoromethane	1.452	1.051	27.6#	60	0.00	4.41
8		chloromethane	1.216	1.056	13.2	70	0.00	4.69
9		1,3-butadiene	0.673	0.685	-1.8	81	0.00	4.98
10		vinyl chloride	1.237	1.148	7.2	76	0.00	4.95
11		bromomethane	0.637	0.675	-6.0	85	0.00	5.52
12		chloroethane	0.542	0.532	1.8	81	0.00	5.66
13		trichlorofluoromethane	1.114	1.022	8.3	75	0.00	6.15
14		vinyl bromide	0.568	0.513	9.7	72	0.00	6.02
15		ethyl ether	0.276	0.306	-10.9	95	0.00	6.47
16		2-chloropropane	1.189	1.102	7.3	85	0.00	6.67
17		acrolein	0.092	0.124	-34.8#	115	0.00	6.65
18		freon 113	0.654	0.638	2.4	82	0.00	6.93
19		1,1-dichloroethene	0.617	0.612	0.8	87	-0.01	6.88
20		acetone	0.039	0.049	-25.6#	104	0.00	6.84
21		acetonitrile	0.082	0.089	-8.5	99	0.00	7.21
22		iodomethane	0.970	0.946	2.5	83	-0.01	7.13
23		carbon disulfide	2.010	2.130	-6.0	91	0.00	7.29
24		methylene chloride	0.648	0.664	-2.5	91	0.00	7.53
25		methyl acetate	0.343	0.364	-6.1	94	0.00	7.29
26		methyl tert butyl ether	1.873	1.829	2.3	87	0.00	7.91
27		trans-1,2-dichloroethene	0.565	0.575	-1.8	88	0.00	7.94
28		hexane	0.364	0.405	-11.3	96	0.00	8.31
29		di-isopropyl ether	2.142	2.123	0.9	86	0.00	8.49
30		2-butanone	0.046	0.052	-13.0	94	0.00	9.09
31		1,1-dichloroethane	1.006	0.991	1.5	85	0.00	8.48
32		chloroprene	0.899	0.828	7.9	77	0.00	8.60
33		acrylonitrile	0.158	0.185	-17.1	98	0.00	7.77
34		vinyl acetate	0.110	0.111	-0.9	82	0.00	8.41
35		ethyl tert-butyl ether	2.113	2.069	2.1	84	0.00	8.95
36		ethyl acetate	0.065	0.075	-15.4	99	0.00	9.13
37		2,2-dichloropropane	1.080	1.012	6.3	82	0.00	9.24
38		cis-1,2-dichloroethene	0.619	0.620	-0.2	87	0.00	9.19
39		propionitrile	0.069	0.077	-11.6	96	-0.01	9.14

---------- True Calc. % Drift ----------

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10643-CC10606
Lab FileID: D264041.D

40		methyl acrylate	50.000	48.527	2.9	82	0.00	9.22
			AvgRF	CCRF	% Dev			
41		methacrylonitrile	0.180	0.189	-5.0	89	0.00	9.36
42		bromochloromethane	0.279	0.282	-1.1	84	0.00	9.48
43		tetrahydrofuran	0.134	0.136	-1.5	91	0.00	9.52
44		chloroform	1.017	0.927	8.8	82	0.00	9.56
45		tert-butyl formate	0.573	0.546	4.7	80	0.00	9.61
46	S	dibromofluoromethane (s)	0.472	0.467	1.1	89	0.00	9.75
47		1,1,1-trichloroethane	1.043	0.967	7.3	79	0.00	9.86
48		cyclohexane	1.049	1.191	-13.5	95	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.719	6.6	81	0.00	10.03
51		carbon tetrachloride	0.890	0.814	8.5	78	0.00	10.08
52		tert-amyl alcohol	0.032	0.032	0.0	94	0.00	10.11
53		isopropyl acetate	0.120	0.118	1.7	85	0.00	10.15
54	I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.331	11.7	84	0.00	10.18
56		n-butyl alcohol	0.012	0.012	0.0	98	0.00	10.69
57		2,2,4-trimethylpentane	1.240	1.307	-5.4	90	0.00	10.41
58		benzene	1.518	1.456	4.1	88	0.00	10.28
59		tert-amyl methyl ether	1.385	1.256	9.3	83	0.00	10.36
60		heptane	0.203	0.213	-4.9	95	0.00	10.56
61		1,2-dichloroethane	0.534	0.423	20.8#	76	0.00	10.27
62		ethyl acrylate	0.391	0.349	10.7	81	0.00	10.98
63		trichloroethene	0.377	0.345	8.5	84	0.00	11.02
64		2-chloroethyl vinyl ether	0.198	0.196	1.0	87	0.00	11.81
65		methyl methacrylate	0.085	0.080	5.9	82	0.00	11.26
66		methylcyclohexane	0.644	0.653	-1.4	91	0.00	11.36
67		1,2-dichloropropane	0.377	0.369	2.1	88	0.00	11.30
68		dibromomethane	0.218	0.203	6.9	83	0.00	11.40
69		bromodichloromethane	0.505	0.465	7.9	82	0.00	11.57
70		2-nitropropane	0.079	0.068	13.9	79	0.00	11.74
71		epichlorohydrin	0.036	0.037	-2.8	91	0.00	11.89
72		cis-1,3-dichloropropene	0.608	0.576	5.3	84	0.00	12.06
73		4-methyl-2-pentanone	0.131	0.131	0.0	89	0.00	12.15
74		isoamyl alcohol	0.010	0.011	-10.0	92	0.00	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	89	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.238	-1.6	90	0.00	12.41
77		toluene	0.956	0.922	3.6	83	0.00	12.49
78		ethyl methacrylate	0.453	0.433	4.4	80	0.00	12.68
79		trans-1,3-dichloropropene	0.556	0.520	6.5	79	0.00	12.67
80		1,1,2-trichloroethane	0.255	0.252	1.2	84	0.00	12.91
81		tetrachloroethene	0.312	0.299	4.2	82	0.00	13.12
82		2-hexanone	0.115	0.119	-3.5	85	0.00	13.09
83		1,3-dichloropropane	0.549	0.514	6.4	80	0.00	13.11
84		butyl acetate	0.235	0.238	-1.3	85	0.00	13.20
85		dibromochloromethane	0.359	0.346	3.6	80	0.00	13.39
86		1,2-dibromoethane	0.396	0.414	-4.5	87	0.00	13.57
87		n-butyl ether	1.743	1.661	4.7	83	0.00	14.10
88		chlorobenzene	1.108	0.991	10.6	78	0.00	14.12
89		1,1,1,2-tetrachloroethane	0.426	0.408	4.2	80	0.00	14.19
90		ethylbenzene	1.895	1.772	6.5	81	0.00	14.20
91		m,p-xylene	0.722	0.686	5.0	82	0.00	14.34
92		o-xylene	1.587	1.517	4.4	82	0.00	14.79
93		styrene	1.230	1.155	6.1	79	0.00	14.80
94		butyl acrylate	0.744	0.746	-0.3	81	0.00	14.59
95		n-amyl acetate	0.315	0.309	1.9	82	0.00	14.83

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VD10643-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264041.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.872	-1.1	87	0.00	15.19
97		bromoform	0.259	0.244	5.8	78	0.00	15.05
98		cis-1,4-dichloro-2-butene	0.172	0.154	10.5	76	0.00	15.20
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	86	0.00	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.848	8.4	83	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.773	0.749	3.1	86	0.00	15.47
102		trans-1,4-dichloro-2-bute	0.193	0.187	3.1	79	0.00	15.51
103		1,2,3-trichloropropane	0.223	0.209	6.3	81	0.00	15.57
104		bromobenzene	0.876	0.788	10.0	78	0.00	15.62
105		n-propylbenzene	3.463	3.456	0.2	87	0.00	15.66
106		2-chlorotoluene	0.776	0.735	5.3	81	0.00	15.81
107		4-chlorotoluene	2.286	2.166	5.2	82	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	2.682	-1.4	86	0.00	15.84
109		tert-butylbenzene	2.053	2.107	-2.6	88	0.00	16.23
110		1,2,4-trimethylbenzene	2.639	2.697	-2.2	86	0.00	16.28
111		sec-butylbenzene	3.024	3.158	-4.4	88	0.00	16.47
112		p-isopropyltoluene	2.517	2.686	-6.7	86	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.507	1.6	83	0.00	16.66
114		1,4-dichlorobenzene	1.588	1.546	2.6	83	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.554	-1.3	84	0.00	17.17
116		benzyl chloride	1.490	1.761	-18.2	91	0.00	16.85
117		n-butylbenzene	1.176	1.351	-14.9	89	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.268	-8.1	120	0.00	18.98
119		hexachloroethane	0.391	0.443	-13.3	90	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.146	-5.8	79	0.00	18.01
121		1,3,5-trichlorobenzene	1.032	1.205	-16.8	88	0.00	18.26
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	50.000	51.326	-2.7	86	0.00	18.98
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.482	-2.6	78	0.00	19.13
		----------	True	Calc.	% Drift	----------		
124		naphthalene	50.000	50.541	-1.1	85	0.00	19.32
125		1,2,3-trichlorobenzene	50.000	47.920	4.2	81	0.00	19.58
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.370	17.2	67	0.00	20.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Thu Apr 25 22:06:20 2019

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10644-CC10606
Lab FileID: D264064.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ke... 29\vd10644\d264064.d Vial: 3
Acq On : 26 Apr 2019 7:54 am Operator: juntaep
Sample : cc10606-50 Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	-0.02	7.45
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.187	10.5	83	0.02	7.58
4		1,4-dioxane	0.121	0.112	7.4	88	0.00	11.35
5	I	pentafluorobenzene	1.000	1.000	0.0	93	0.00	9.72
6		chlorodifluoromethane	1.055	0.860	18.5	73	0.00	4.41
7		dichlorodifluoromethane	1.452	1.142	21.3#	67	0.00	4.41
8		chloromethane	1.216	1.064	12.5	73	0.00	4.70
9		1,3-butadiene	0.673	0.606	10.0	74	0.00	4.98
10		vinyl chloride	1.237	1.130	8.6	77	0.00	4.95
11		bromomethane	0.637	0.672	-5.5	87	0.00	5.52
12		chloroethane	0.542	0.523	3.5	82	0.00	5.67
13		trichlorofluoromethane	1.114	0.995	10.7	75	0.00	6.15
14		vinyl bromide	0.568	0.493	13.2	71	0.00	6.02
15		ethyl ether	0.276	0.293	-6.2	93	0.00	6.47
16		2-chloropropane	1.189	1.043	12.3	82	0.00	6.68
17		acrolein	0.092	0.100	-8.7	95	0.00	6.65
18		freon 113	0.654	0.587	10.2	77	0.00	6.93
19		1,1-dichloroethene	0.617	0.577	6.5	84	0.00	6.89
20		acetone	0.039	0.044	-12.8	97	-0.01	6.83
21		acetonitrile	0.082	0.082	0.0	94	-0.01	7.20
22		iodomethane	0.970	0.905	6.7	81	0.00	7.13
23		carbon disulfide	2.010	1.979	1.5	87	0.00	7.30
24		methylene chloride	0.648	0.631	2.6	89	0.00	7.54
25		methyl acetate	0.343	0.342	0.3	91	0.00	7.29
26		methyl tert butyl ether	1.873	1.734	7.4	84	0.00	7.91
27		trans-1,2-dichloroethene	0.565	0.550	2.7	87	0.00	7.94
28		hexane	0.364	0.373	-2.5	91	0.00	8.30
29		di-isopropyl ether	2.142	2.008	6.3	84	0.00	8.49
30		2-butanone	0.046	0.048	-4.3	90	0.00	9.09
31		1,1-dichloroethane	1.006	0.932	7.4	82	0.00	8.48
32		chloroprene	0.899	0.779	13.3	74	0.00	8.60
33		acrylonitrile	0.158	0.170	-7.6	93	0.00	7.77
34		vinyl acetate	0.110	0.105	4.5	80	0.00	8.41
35		ethyl tert-butyl ether	2.113	1.975	6.5	83	0.00	8.95
36		ethyl acetate	0.065	0.069	-6.2	93	-0.01	9.13
37		2,2-dichloropropane	1.080	0.945	12.5	79	0.00	9.25
38		cis-1,2-dichloroethene	0.619	0.588	5.0	84	0.00	9.19
39		propionitrile	0.069	0.071	-2.9	91	-0.01	9.14

---------- True Calc. % Drift ----------

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VD10644-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264064.D
Project: National Grid, Philly Coke, Philadelphia, PA

40		methyl acrylate	50.000	45.556	8.9	79	-0.01	9.21
			AvgRF	CCRF	% Dev			
41		methacrylonitrile	0.180	0.176	2.2	86	0.00	9.36
42		bromochloromethane	0.279	0.268	3.9	82	0.00	9.48
43		tetrahydrofuran	0.134	0.127	5.2	87	0.00	9.52
44		chloroform	1.017	0.875	14.0	80	0.00	9.56
45		tert-butyl formate	0.573	0.518	9.6	78	0.00	9.62
46	S	dibromofluoromethane (s)	0.472	0.463	1.9	90	0.00	9.75
47		1,1,1-trichloroethane	1.043	0.906	13.1	77	0.00	9.86
48		cyclohexane	1.049	1.091	-4.0	90	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.668	13.2	78	0.00	10.03
51		carbon tetrachloride	0.890	0.756	15.1	74	0.00	10.08
52		tert-amyl alcohol	0.032	0.029	9.4	87	0.00	10.11
53		isopropyl acetate	0.120	0.106	11.7	79	0.00	10.16
54	I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.328	12.5	84	-0.01	10.18
56		n-butyl alcohol	0.012	0.010	16.7	88	0.00	10.69
57		2,2,4-trimethylpentane	1.240	1.249	-0.7	87	0.00	10.41
58		benzene	1.518	1.379	9.2	84	0.00	10.28
59		tert-amyl methyl ether	1.385	1.215	12.3	80	0.00	10.37
60		heptane	0.203	0.202	0.5	90	0.00	10.56
61		1,2-dichloroethane	0.534	0.401	24.9#	72	0.00	10.27
62		ethyl acrylate	0.391	0.340	13.0	80	0.00	10.98
63		trichloroethene	0.377	0.323	14.3	79	0.00	11.02
64		2-chloroethyl vinyl ether	0.198	0.193	2.5	86	0.00	11.81
65		methyl methacrylate	0.085	0.079	7.1	82	0.00	11.25
66		methylcyclohexane	0.644	0.621	3.6	87	0.00	11.36
67		1,2-dichloropropane	0.377	0.350	7.2	84	0.00	11.30
68		dibromomethane	0.218	0.191	12.4	78	0.00	11.41
69		bromodichloromethane	0.505	0.430	14.9	77	0.00	11.56
70		2-nitropropane	0.079	0.066	16.5	78	0.00	11.74
71		epichlorohydrin	0.036	0.035	2.8	87	-0.01	11.89
72		cis-1,3-dichloropropene	0.608	0.552	9.2	81	0.00	12.06
73		4-methyl-2-pentanone	0.131	0.125	4.6	86	0.00	12.15
74		isoamyl alcohol	0.010	0.010	0.0	84	0.00	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.173	3.8	92	0.00	12.42
77		toluene	0.956	0.831	13.1	80	0.00	12.49
78		ethyl methacrylate	0.453	0.405	10.6	80	-0.01	12.67
79		trans-1,3-dichloropropene	0.556	0.481	13.5	79	0.00	12.67
80		1,1,2-trichloroethane	0.255	0.229	10.2	82	-0.01	12.91
81		tetrachloroethene	0.312	0.268	14.1	80	0.00	13.12
82		2-hexanone	0.115	0.111	3.5	86	0.00	13.09
83		1,3-dichloropropane	0.549	0.471	14.2	80	0.00	13.11
84		butyl acetate	0.235	0.228	3.0	88	0.00	13.20
85		dibromochloromethane	0.359	0.320	10.9	79	0.00	13.39
86		1,2-dibromoethane	0.396	0.386	2.5	88	0.00	13.57
87		n-butyl ether	1.743	1.543	11.5	84	0.00	14.10
88		chlorobenzene	1.108	0.929	16.2	79	0.00	14.13
89		1,1,1,2-tetrachloroethane	0.426	0.365	14.3	77	0.00	14.19
90		ethylbenzene	1.895	1.648	13.0	81	0.00	14.20
91		m,p-xylene	0.722	0.638	11.6	82	0.00	14.34
92		o-xylene	1.587	1.399	11.8	82	0.00	14.79
93		styrene	1.230	1.084	11.9	80	0.00	14.80
94		butyl acrylate	0.744	0.702	5.6	82	0.00	14.59
95		n-amyl acetate	0.315	0.292	7.3	84	0.00	14.83

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VD10644-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264064.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.723	7.0	86	0.00	15.19
97		bromoform	0.259	0.233	10.0	80	0.00	15.05
98		cis-1,4-dichloro-2-butene	0.172	0.144	16.3	76	0.00	15.19
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	-0.01	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.882	4.8	91	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.773	0.700	9.4	85	0.00	15.47
102		trans-1,4-dichloro-2-bute	0.193	0.177	8.3	79	0.00	15.51
103		1,2,3-trichloropropane	0.223	0.199	10.8	82	0.00	15.57
104		bromobenzene	0.876	0.756	13.7	79	0.00	15.62
105		n-propylbenzene	3.463	3.290	5.0	87	0.00	15.66
106		2-chlorotoluene	0.776	0.703	9.4	82	0.00	15.81
107		4-chlorotoluene	2.286	2.101	8.1	84	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	2.516	4.9	86	0.00	15.84
109		tert-butylbenzene	2.053	1.919	6.5	84	0.00	16.23
110		1,2,4-trimethylbenzene	2.639	2.561	3.0	87	0.00	16.28
111		sec-butylbenzene	3.024	2.939	2.8	86	0.00	16.47
112		p-isopropyltoluene	2.517	2.519	-0.1	86	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.435	6.3	84	0.00	16.66
114		1,4-dichlorobenzene	1.588	1.472	7.3	84	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.449	5.5	83	0.00	17.17
116		benzyl chloride	1.490	1.645	-10.4	89	0.00	16.85
117		n-butylbenzene	1.176	1.259	-7.1	87	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.287	-15.7	136	0.00	18.98
119		hexachloroethane	0.391	0.396	-1.3	86	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.129	6.5	74	0.00	18.01
121		1,3,5-trichlorobenzene	1.032	1.113	-7.8	86	0.00	18.25
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	50.000	47.759	4.5	84	0.00	18.98
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.451	4.0	78	0.00	19.13
		----------	True	Calc.	% Drift	----------		
124		naphthalene	50.000	46.363	7.3	82	0.00	19.32
125		1,2,3-trichlorobenzene	50.000	44.645	10.7	79	0.00	19.59
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.380	15.0	73	0.00	20.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Mon Apr 29 01:45:32 2019

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10645-CC10606
Lab FileID: D264106.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...5-1\vd10645\d264106.d Vial: 9
Acq On : 29 Apr 2019 10:24 am Operator: thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
Last Update : Fri Mar 15 14:33:32 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	99	-0.02	7.46
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.193	10.0	82	0.00	7.57
4		1,4-dioxane	0.121	0.121	0.0	93	-0.01	11.34
5	I	pentafluorobenzene	1.000	1.000	0.0	85	-0.01	9.72
6		chlorodifluoromethane	1.055	0.938	11.1	73	0.00	4.41
7		dichlorodifluoromethane	1.452	1.256	13.5	68	0.00	4.41
8		chloromethane	1.216	1.029	15.4	64	-0.01	4.69
9		1,3-butadiene	0.673	0.639	5.1	71	-0.01	4.97
10		vinyl chloride	1.237	1.135	8.2	71	-0.01	4.95
11		bromomethane	0.637	0.660	-3.6	78	0.00	5.52
12		chloroethane	0.542	0.508	6.3	73	0.00	5.66
13		trichlorofluoromethane	1.114	1.032	7.4	71	0.00	6.14
14		vinyl bromide	0.568	0.506	10.9	67	-0.02	6.00
15		ethyl ether	0.276	0.317	-14.9	92	-0.01	6.46
16		2-chloropropane	1.189	1.110	6.6	80	-0.01	6.67
17		acrolein	0.092	0.136	-47.8#	118	-0.01	6.65
18		freon 113	0.654	0.684	-4.6	83	0.00	6.92
19		1,1-dichloroethene	0.617	0.642	-4.1	86	-0.01	6.88
20		acetone	0.039	0.049	-25.6#	98	-0.01	6.83
21		acetonitrile	0.082	0.087	-6.1	91	-0.02	7.19
22		iodomethane	0.970	1.029	-6.1	85	-0.02	7.12
23		carbon disulfide	2.010	2.196	-9.3	88	-0.01	7.29
24		methylene chloride	0.648	0.711	-9.7	91	-0.01	7.52
25		methyl acetate	0.343	0.357	-4.1	86	-0.01	7.28
26		methyl tert butyl ether	1.873	1.903	-1.6	85	-0.01	7.90
27		trans-1,2-dichloroethene	0.565	0.600	-6.2	87	-0.01	7.93
28		hexane	0.364	0.393	-8.0	88	-0.01	8.30
29		di-isopropyl ether	2.142	2.126	0.7	81	-0.01	8.49
30		2-butanone	0.046	0.050	-8.7	86	-0.01	9.09
31		1,1-dichloroethane	1.006	1.017	-1.1	82	-0.01	8.48
32		chloroprene	0.899	0.830	7.7	72	-0.01	8.59
33		acrylonitrile	0.158	0.182	-15.2	91	-0.01	7.76
34		vinyl acetate	0.110	0.112	-1.8	78	0.00	8.40
35		ethyl tert-butyl ether	2.113	2.136	-1.1	82	-0.01	8.94
36		ethyl acetate	0.065	0.071	-9.2	87	-0.02	9.12
37		2,2-dichloropropane	1.080	1.083	-0.3	83	0.00	9.24
38		cis-1,2-dichloroethene	0.619	0.647	-4.5	85	-0.01	9.18
39		propionitrile	0.069	0.074	-7.2	87	-0.02	9.13
		----------	True	Calc.	% Drift		----------	

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VD10645-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264106.D
Project: National Grid, Philly Coke, Philadelphia, PA

40		methyl acrylate	50.000	47.548	4.9	76	-0.01	9.21
			AvgRF	CCRF	% Dev			
41		methacrylonitrile	0.180	0.188	-4.4	84	-0.01	9.35
42		bromochloromethane	0.279	0.298	-6.8	84	-0.01	9.48
43		tetrahydrofuran	0.134	0.127	5.2	80	-0.01	9.51
44		chloroform	1.017	0.957	5.9	80	-0.01	9.55
45		tert-butyl formate	0.573	0.569	0.7	78	-0.01	9.61
46	S	dibromofluoromethane (s)	0.472	0.485	-2.8	86	-0.02	9.74
47		1,1,1-trichloroethane	1.043	1.016	2.6	78	-0.01	9.86
48		cyclohexane	1.049	1.089	-3.8	82	-0.01	10.00
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.730	5.2	78	-0.01	10.02
51		carbon tetrachloride	0.890	0.861	3.3	77	-0.01	10.07
52		tert-amyl alcohol	0.032	0.032	0.0	86	-0.01	10.10
53		isopropyl acetate	0.120	0.117	2.5	79	-0.01	10.15
54	I	1,4-difluorobenzene	1.000	1.000	0.0	89	-0.01	10.67
55	S	1,2-dichloroethane-d4 (s)	0.375	0.316	15.7	76	-0.02	10.17
56		n-butyl alcohol	0.012	0.011	8.3	86	-0.01	10.68
57		2,2,4-trimethylpentane	1.240	1.378	-11.1	89	0.00	10.41
58		benzene	1.518	1.463	3.6	83	-0.01	10.27
59		tert-amyl methyl ether	1.385	1.302	6.0	81	-0.01	10.36
60		heptane	0.203	0.212	-4.4	89	0.00	10.56
61		1,2-dichloroethane	0.534	0.421	21.2#	71	-0.01	10.27
62		ethyl acrylate	0.391	0.340	13.0	75	-0.01	10.97
63		trichloroethene	0.377	0.346	8.2	79	-0.01	11.01
64		2-chloroethyl vinyl ether	0.198	0.197	0.5	82	-0.01	11.81
65		methyl methacrylate	0.085	0.080	5.9	77	0.00	11.25
66		methylcyclohexane	0.644	0.680	-5.6	89	0.00	11.36
67		1,2-dichloropropane	0.377	0.365	3.2	82	-0.01	11.29
68		dibromomethane	0.218	0.204	6.4	78	-0.01	11.40
69		bromodichloromethane	0.505	0.465	7.9	78	-0.01	11.56
70		2-nitropropane	0.079	0.067	15.2	74	-0.01	11.73
71		epichlorohydrin	0.036	0.034	5.6	80	-0.01	11.89
72		cis-1,3-dichloropropene	0.608	0.570	6.3	79	-0.01	12.05
73		4-methyl-2-pentanone	0.131	0.124	5.3	80	-0.01	12.15
74		isoamyl alcohol	0.010	0.011	-10.0	81	-0.01	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	89	-0.01	14.08
76	S	toluene-d8 (s)	1.219	1.167	4.3	85	-0.01	12.41
77		toluene	0.956	0.881	7.8	79	-0.01	12.49
78		ethyl methacrylate	0.453	0.406	10.4	75	-0.01	12.67
79		trans-1,3-dichloropropene	0.556	0.499	10.3	76	-0.01	12.66
80		1,1,2-trichloroethane	0.255	0.241	5.5	80	-0.01	12.91
81		tetrachloroethene	0.312	0.290	7.1	80	0.00	13.12
82		2-hexanone	0.115	0.109	5.2	79	-0.01	13.08
83		1,3-dichloropropane	0.549	0.490	10.7	77	0.00	13.11
84		butyl acetate	0.235	0.217	7.7	78	-0.01	13.19
85		dibromochloromethane	0.359	0.337	6.1	78	-0.01	13.39
86		1,2-dibromoethane	0.396	0.391	1.3	82	-0.01	13.57
87		n-butyl ether	1.743	1.555	10.8	78	0.00	14.10
88		chlorobenzene	1.108	0.969	12.5	76	-0.01	14.12
89		1,1,1,2-tetrachloroethane	0.426	0.400	6.1	78	-0.01	14.19
90		ethylbenzene	1.895	1.719	9.3	79	-0.01	14.20
91		m,p-xylene	0.722	0.667	7.6	79	-0.01	14.33
92		o-xylene	1.587	1.462	7.9	80	0.00	14.79
93		styrene	1.230	1.129	8.2	78	-0.01	14.79
94		butyl acrylate	0.744	0.685	7.9	74	0.00	14.59
95		n-amyl acetate	0.315	0.288	8.6	77	-0.01	14.82

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VD10645-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264106.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.822	1.6	85	-0.01	15.19
97		bromoform	0.259	0.244	5.8	78	-0.01	15.04
98		cis-1,4-dichloro-2-butene	0.172	0.148	14.0	73	0.00	15.19
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	89	-0.01	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.838	9.5	85	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.773	0.689	10.9	81	-0.01	15.46
102		trans-1,4-dichloro-2-bute	0.193	0.170	11.9	74	0.00	15.51
103		1,2,3-trichloropropane	0.223	0.199	10.8	80	-0.01	15.56
104		bromobenzene	0.876	0.761	13.1	77	0.00	15.62
105		n-propylbenzene	3.463	3.265	5.7	85	-0.01	15.66
106		2-chlorotoluene	0.776	0.705	9.1	80	-0.01	15.80
107		4-chlorotoluene	2.286	2.045	10.5	80	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	2.529	4.4	84	0.00	15.84
109		tert-butylbenzene	2.053	1.996	2.8	85	0.00	16.22
110		1,2,4-trimethylbenzene	2.639	2.547	3.5	84	0.00	16.28
111		sec-butylbenzene	3.024	2.998	0.9	86	0.00	16.47
112		p-isopropyltoluene	2.517	2.569	-2.1	85	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.437	6.1	82	-0.01	16.65
114		1,4-dichlorobenzene	1.588	1.484	6.5	82	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.493	2.7	83	0.00	17.17
116		benzyl chloride	1.490	1.655	-11.1	88	-0.01	16.84
117		n-butylbenzene	1.176	1.278	-8.7	87	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.321	-29.4#	149	0.00	18.98
119		hexachloroethane	0.391	0.427	-9.2	90	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.136	1.4	76	-0.01	18.01
121		1,3,5-trichlorobenzene	1.032	1.179	-14.2	89	0.00	18.25
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	50.000	50.951	-1.9	88	-0.01	18.97
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.490	-4.3	82	-0.01	19.12
		----------	True	Calc.	% Drift	----------		
124		naphthalene	50.000	49.023	2.0	85	-0.01	19.31
125		1,2,3-trichlorobenzene	50.000	47.241	5.5	82	-0.01	19.58
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.394	11.9	74	-0.01	20.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Tue Apr 30 14:35:39 2019

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICC8986
Lab FileID: I223181.D

Response Factor Report GCMSI

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
Last Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

Calibration Files
0.5 =I223175.D 1 =I223176.D 2 =I223177.D 8 =I223179.D
4 =I223178.D 20 =I223180.D 50 =I223181.D 100 =I223182.D
200 =I223183.D = = =

Compound	0.5	1	2	8	4	20	50	100	200	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------										
2) tertiary butyl alcohol	0.930	1.080	0.924	1.036	1.052	1.129	1.093			1.035	7.68
3) 1,4-dioxane	0.127	0.105	0.121	0.116	0.118	0.109				0.116	6.89
4) I pentafluorobenzene	----------ISTD----------										
5) dichlorodifluoromethane	0.407	0.389	0.432	0.465	0.450	0.451	0.465	0.435		0.437	6.24
6) chlorodifluoromethane	0.367	0.391	0.421	0.411	0.420	0.424	0.440	0.425		0.412	5.60
7) chloromethane	0.429	0.425	0.402	0.371	0.418	0.373	0.377	0.416	0.429	0.404	6.06
8) vinyl chloride	0.294	0.326	0.296	0.337	0.359	0.349	0.352	0.377	0.376	0.341	8.99
9) 1,3-butadiene	0.214	0.214	0.240	0.221	0.242	0.245	0.264	0.262		0.238	8.39
10) bromomethane	0.221	0.229	0.209	0.233	0.233	0.224	0.222	0.240	0.232	0.227	4.05
11) chloroethane	0.170	0.191	0.209	0.204	0.218	0.208	0.226	0.222		0.206	8.89
12) vinyl bromide	0.214	0.232	0.259	0.282	0.275	0.274	0.288	0.283		0.263	10.16
13) trichlorofluoromethane	0.431	0.518	0.481	0.526	0.525	0.534	0.548	0.573	0.554	0.521	8.15
14) ethyl ether	0.102	0.152	0.131	0.155	0.156	0.168	0.169			0.148	16.02
15) 2-chloropropane	0.105	0.126	0.122	0.132	0.128	0.120	0.109			0.120	8.10
16) acrolein	0.036		0.044	0.048	0.055	0.058				0.048	18.24
17) freon 113	0.209	0.230	0.280	0.253	0.267	0.269	0.273	0.263		0.255	9.46
18) 1,1-dichloroethene	0.401	0.453	0.492	0.446	0.480	0.473	0.492	0.485		0.465	6.65
19) acetone	0.071	0.088	0.074	0.087	0.087	0.094	0.089			0.084	9.74
20) iodomethane----The compound does not meet initial criteria.	0.229	0.182	0.308	0.365	0.375	0.330				0.298	25.82
----- Linear regression ----- Coefficient = 0.9944											
Response Ratio = 0.00375 + 0.33860 *A											
21) carbon disulfide	1.073	1.026	1.023	0.973	0.962	0.988	0.972			1.002	3.99

Initial Calibration Summary

Job Number: JC86406 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

22) acetonitrile
0.036 0.044 0.037 0.044 0.043 0.046 0.044 0.042 9.18
23) methyl acetate
0.040 0.021 0.042 0.047 0.052 0.052 0.042 27.02
----- Linear regression ----- Coefficient = 0.9990
Response Ratio = -0.00254 + 0.05196 *A

24) methylene chloride
0.365 0.360 0.343 0.331 0.331 0.329 0.349 0.348 0.345 3.98
25) acrylonitrile
0.089 0.096 0.099 0.105 0.107 0.099 7.29
26) methyl tert butyl ether
0.728 0.765 0.820 0.774 0.842 0.846 0.884 0.875 0.817 6.84
27) trans-1,2-dichloroethene
0.379 0.432 0.460 0.446 0.459 0.455 0.466 0.452 0.444 6.35
28) hexane
0.513 0.555 0.513 0.543 0.513 0.546 0.534 0.550 0.548 0.535 3.28
29) 1,1-dichloroethane
0.521 0.550 0.602 0.566 0.578 0.560 0.587 0.568 0.566 4.29
30) vinyl acetate
0.046 0.051 0.054 0.059 0.060 0.054 10.74
31) di-isopropyl ether
0.874 0.926 1.043 0.972 1.028 1.034 1.085 1.070 1.004 7.33
32) chloroprene
0.387 0.419 0.514 0.469 0.510 0.506 0.521 0.498 0.478 10.38
33) ethyl tert-butyl ether
0.866 0.876 0.987 0.920 0.991 1.005 1.063 1.044 0.969 7.65
34) 2-butanone
0.021 0.031 0.026 0.033 0.035 0.038 0.037 0.032 19.75
35) 2,2-dichloropropane
0.429 0.476 0.492 0.525 0.505 0.510 0.495 0.505 0.483 0.491 5.64
36) ethyl acetate
0.034 0.025 0.042 0.044 0.050 0.049 0.041 23.88
----- Linear regression ----- Coefficient = 0.9988
Response Ratio = -0.00230 + 0.04933 *A

37) cis-1,2-dichloroethene
0.343 0.355 0.385 0.363 0.369 0.366 0.372 0.366 0.365 3.41
38) propionitrile
0.037 0.049 0.042 0.048 0.048 0.051 0.050 0.046 11.09
39) methyl acrylate
0.035 0.024 0.041 0.046 0.051 0.050 0.041 25.42
----- Linear regression ----- Coefficient = 0.9991
Response Ratio = -0.00251 + 0.05085 *A

40) methacrylonitrile
0.112 0.091 0.115 0.122 0.131 0.130 0.117 12.59
41) bromochloromethane
0.123 0.155 0.174 0.166 0.173 0.169 0.180 0.173 0.164 11.11
42) tetrahydrofuran
0.037 0.027 0.036 0.036 0.041 0.040 0.036 13.64
43) chloroform
0.556 0.543 0.613 0.588 0.603 0.595 0.608 0.584 0.586 4.26
44) carbon tetrachloride
0.433 0.454 0.509 0.486 0.502 0.493 0.488 0.465 0.479 5.45
45) 1,1-dichloropropene
0.398 0.428 0.455 0.429 0.447 0.457 0.464 0.451 0.441 4.91
46) isobutyl alcohol
0.000 -1.00
47) dibromofluoromethane (s)

Initial Calibration Summary

Job Number: JC86406 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
      0.390 0.394 0.393 0.395 0.393 0.396 0.393 0.392 0.389        0.393    0.56
48)  1,1,1-trichloroethane
            0.488 0.467 0.568 0.525 0.541 0.530 0.549 0.516        0.523    6.26
49)  cyclohexane
            0.424 0.430 0.463 0.490 0.474 0.460 0.476 0.468        0.461    4.91
50)  tert-amyl alcohol
                        0.012 0.006 0.012 0.013 0.014 0.013        0.012   23.67
            ----- Linear regression -----  Coefficient =  0.9991
              Response Ratio = -0.00177 + 0.01357 *A


51) I   1,4-difluorobenzene   ----------------ISTD---------------------
52)  1,2-dichloroethane-d4 (s)
      0.312 0.320 0.317 0.319 0.318 0.316 0.312 0.301 0.293        0.312    2.94
53)  isopropyl acetate
                        0.045 0.030 0.045 0.049 0.051 0.051        0.045   17.50
54)  1,2-dichloroethane
      0.278 0.363 0.337 0.342 0.342 0.329 0.326 0.329 0.310        0.328    7.24
55)  benzene
      0.793 0.933 0.958 1.053 0.987 1.017 1.002 1.043 1.006        0.977    8.06
56)  2,2,4-trimethylpentane
      0.789 1.032 0.969 1.094 1.039 1.049 1.009 1.009 1.011        1.000    8.63
57)  tert-amyl methyl ether
            0.123 0.153 0.180 0.163 0.177 0.176 0.184 0.178        0.167   12.29
58)  heptane
            0.177 0.205 0.229 0.207 0.221 0.209 0.212 0.211        0.209    7.27
59)  n-butyl alcohol
                  0.007 0.008 0.007 0.009 0.009 0.009 0.009        0.008   11.40
60)  trichloroethene
            0.231 0.258 0.280 0.261 0.268 0.264 0.275 0.256        0.262    5.67
61)  ethyl acrylate
                  0.249 0.280 0.237 0.277 0.287 0.308 0.298        0.277    9.24
62)  methylcyclohexane
            0.444 0.410 0.453 0.438 0.455 0.445 0.454 0.446        0.443    3.32
63)  1,2-dichloropropane
            0.238 0.245 0.259 0.245 0.251 0.250 0.262 0.251        0.250    3.00
64)  methyl methacrylate
                        0.055 0.048 0.058 0.062 0.066 0.064        0.059   11.63
65)  dibromomethane
            0.122 0.143 0.154 0.142 0.150 0.149 0.156 0.149        0.146    7.41
66)  bromodichloromethane
            0.317 0.332 0.368 0.338 0.354 0.351 0.367 0.345        0.346    4.99
67)  2-nitropropane
                        0.057 0.060 0.059 0.061 0.063 0.059        0.060    3.83
68)  2-chloroethyl vinyl ether
            0.123 0.135 0.152 0.142 0.151 0.152 0.161 0.154        0.146    8.40
69)  epichlorohydrin
                  0.023 0.025 0.024 0.024 0.024 0.026 0.025        0.024    4.87
70)  cis-1,3-dichloropropene
      0.301 0.375 0.369 0.416 0.399 0.414 0.405 0.432 0.409        0.391    9.97
71)  4-methyl-2-pentanone
            0.066 0.068 0.083 0.073 0.081 0.080 0.088 0.084        0.078   10.04
72)  3-methyl-1-butanol
                  0.006 0.007 0.006 0.007 0.007 0.008 0.008        0.007   11.88

73) I   chlorobenzene-d5      ----------------ISTD---------------------
74)  toluene-d8 (s)
      1.298 1.292 1.290 1.276 1.288 1.296 1.284 1.261 1.253        1.282    1.23
75)  toluene
      0.555 0.658 0.686 0.753 0.724 0.722 0.706 0.728 0.698        0.692    8.39
```

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICC8986
Lab FileID: I223181.D

76) trans-1,3-dichloropropene
0.330 0.445 0.385 0.451 0.408 0.438 0.434 0.438 0.418 0.416 9.22
77) ethyl methacrylate
0.284 0.279 0.335 0.299 0.334 0.323 0.332 0.325 0.314 7.42
78) 1,1,2-trichloroethane
0.167 0.183 0.214 0.207 0.209 0.212 0.221 0.211 0.203 8.90
79) 1,3-dichloropropane
0.294 0.342 0.355 0.405 0.370 0.397 0.386 0.395 0.383 0.370 9.44
80) tetrachloroethene
0.268 0.350 0.349 0.375 0.359 0.364 0.359 0.361 0.341 0.347 9.00
81) 2-hexanone
0.073 0.086 0.097 0.084 0.094 0.095 0.101 0.096 0.091 10.11
82) butyl acetate
0.124 0.163 0.149 0.166 0.164 0.172 0.167 0.158 10.53
83) n-butyl ether
0.988 1.088 1.099 1.222 1.156 1.169 1.148 1.213 1.203 1.143 6.53
84) dibromochloromethane
0.284 0.300 0.329 0.306 0.329 0.328 0.340 0.323 0.317 5.95
85) 1,2-dibromoethane
0.235 0.241 0.291 0.270 0.287 0.292 0.306 0.289 0.276 9.31
86) chlorobenzene
0.576 0.718 0.725 0.797 0.745 0.771 0.755 0.781 0.767 0.737 8.90
87) 1,1,1,2-tetrachloroethane
0.252 0.283 0.311 0.288 0.297 0.301 0.308 0.302 0.293 6.47
88) ethylbenzene
1.044 1.264 1.282 1.387 1.324 1.332 1.307 1.345 1.320 1.289 7.63
89) m,p-xylene
0.408 0.503 0.508 0.544 0.511 0.527 0.515 0.529 0.519 0.507 7.71
90) o-xylene
0.474 0.491 0.527 0.493 0.507 0.510 0.521 0.515 0.505 3.50
91) styrene
0.724 0.816 0.895 0.819 0.865 0.868 0.898 0.897 0.848 7.07
92) butyl acrylate
0.402 0.443 0.483 0.461 0.505 0.503 0.531 0.541 0.484 9.66
93) cis-1,4-dichloro-2-butene
0.107 0.108 0.131 0.120 0.131 0.130 0.136 0.133 0.124 9.19
94) bromoform
0.182 0.212 0.224 0.212 0.230 0.237 0.243 0.243 0.223 9.25
95) isopropylbenzene
0.977 1.219 1.236 1.361 1.265 1.342 1.320 1.358 1.356 1.271 9.68

96) I 1,4-dichlorobenzene-d ----------ISTD----------
97) 4-bromofluorobenzene (s)
0.771 0.787 0.778 0.773 0.767 0.757 0.754 0.727 0.748 0.762 2.37
98) 1,1,2,2-tetrachloroethane
0.454 0.493 0.555 0.501 0.523 0.528 0.540 0.543 0.517 6.36
99) trans-1,4-dichloro-2-butene
0.147 0.121 0.132 0.135 0.139 0.134 0.135 6.19
100) 1,2,3-trichloropropane
0.124 0.114 0.148 0.124 0.139 0.137 0.142 0.137 0.133 8.31
101) bromobenzene
0.513 0.610 0.614 0.679 0.638 0.630 0.621 0.631 0.621 0.617 7.16
102) n-propylbenzene
2.090 2.610 2.510 2.813 2.602 2.633 2.588 2.631 2.586 2.563 7.60
103) 2-chlorotoluene
0.416 0.539 0.542 0.594 0.574 0.542 0.539 0.552 0.547 0.538 9.17
104) 4-chlorotoluene
1.273 1.602 1.489 1.653 1.558 1.583 1.513 1.568 1.550 1.532 7.08
105) 1,3,5-trimethylbenzene
1.477 1.869 1.992 2.123 2.006 2.010 1.936 1.986 1.957 1.928 9.45

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICC8986
Lab FileID: I223181.D

```
106)  tert-butylbenzene
             0.343 0.288 0.392 0.351 0.372 0.366 0.373 0.373        0.357    8.91
107)  1,2,4-trimethylbenzene
       1.638 1.951 2.093 2.099 2.011 2.013 1.978 2.035 1.964        1.976    6.92
108)  sec-butylbenzene
             2.478 2.397 2.578 2.411 2.514 2.459 2.534 2.512        2.485    2.48
109)  p-isopropyltoluene
       1.810 2.103 2.212 2.284 2.103 2.239 2.196 2.284 2.183        2.157    6.77
110)  benzyl chloride
       1.070 1.179 1.204 1.270 1.201 1.244 1.208 1.286 1.230        1.210    5.20
111)  1,3-dichlorobenzene
       0.925 1.218 1.196 1.229 1.196 1.219 1.181 1.233 1.203        1.178    8.18
112)  1,4-dichlorobenzene
       0.970 1.219 1.234 1.263 1.233 1.237 1.187 1.259 1.225        1.203    7.50
113)  1,2-dichlorobenzene
       0.888 1.141 1.118 1.236 1.169 1.204 1.174 1.237 1.209        1.153    9.29
114)  n-butylbenzene
       0.858 1.105 1.172 1.207 1.118 1.165 1.155 1.184 1.134        1.122    9.27
115)  hexachloroethane
             0.382 0.394 0.448 0.411 0.438 0.450 0.460 0.458        0.430    7.04
116)  1,2-dibromo-3-chloropropane
                   0.137 0.169 0.148 0.157 0.168 0.177 0.167        0.160    8.68
117)  nitrobenzene
                         0.051 0.045 0.054 0.057 0.064 0.059        0.055   12.02
118)  1,3,5-trichlorobenzene
       1.003 1.217 1.181 1.257 1.153 1.225 1.175 1.206 1.121        1.171    6.39
119)  1,2,4-trichlorobenzene
       0.865 1.128 1.035 1.114 1.046 1.129 1.063 1.091 1.010        1.053    7.83
120)  2-ethylhexyl acrylate
                   0.842 0.891 0.867 0.904 0.878 0.859 0.770        0.859    5.16
121)  hexachlorobutadiene
             0.743 0.648 0.734 0.704 0.694 0.694 0.691 0.639        0.693    5.25
122)  naphthalene
       1.682 1.895 2.082 2.151 2.032 2.087 2.115 2.252 2.033        2.037    8.06
123)  1,2,3-trichlorobenzene
             0.958 1.041 1.112 1.036 1.071 1.044 1.060 0.969        1.036    4.92
124)  2-methylnaphthalene
                         0.746 0.753 0.723 0.711 0.764 0.661        0.726    5.17
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MI8986.M          Wed Nov 28 14:14:26 2018
```

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223186.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VI8986\I223186.D Vial: 13
Acq On : 27 Nov 2018 11:48 pm Operator: thienn
Sample : ICV8986-50 Inst : GCMSI
Misc : MS30885,VI8986,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
Last Update : Wed Nov 28 13:32:54 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	107	0.00	7.37
2		tertiary butyl alcohol	1.035	1.090	-5.3	111	-0.01	7.49
3		1,4-dioxane	0.116	0.119	-2.6	109	0.00	11.30
4	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	9.72
5		dichlorodifluoromethane	0.437	0.482	-10.3	113	0.00	3.89
6		chlorodifluoromethane	0.412	0.431	-4.6	108	0.00	3.92
7		chloromethane	0.404	0.416	-3.0	117	0.00	4.28
8		vinyl chloride	0.341	0.354	-3.8	107	0.00	4.53
9		1,3-butadiene	0.238	0.284	-19.3	123	0.00	4.62
10		bromomethane	0.227	0.247	-8.8	118	0.01	5.19
11		chloroethane	0.206	0.198	3.9	101	0.00	5.40
12		vinyl bromide	0.263	0.289	-9.9	112	0.00	5.75
13		trichlorofluoromethane	0.521	0.527	-1.2	102	0.00	5.87
14		ethyl ether	0.148	0.157	-6.1	107	0.00	6.31
15		2-chloropropane	0.120	0.121	-0.8	101	0.00	6.52
16		acrolein	0.048	0.049	-2.1	108	0.00	6.52
17		freon 113	0.255	0.276	-8.2	109	0.00	6.73
18		1,1-dichloroethene	0.465	0.432	7.1	97	0.00	6.73
19		acetone	0.084	0.088	-4.8	108	0.00	6.71
		----------	True	Calc.	% Drift	----------		
20		iodomethane	50.000	54.759	-9.5	109	0.00	6.98
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide	1.002	1.024	-2.2	113	0.00	7.13
22		acetonitrile	0.042	0.041	2.4	100	0.00	7.11
		----------	True	Calc.	% Drift	----------		
23		methyl acetate	50.000	46.407	7.2	104	0.00	7.21
		----------	AvgRF	CCRF	% Dev	----------		
24		methylene chloride	0.345	0.329	4.6	106	0.00	7.44
25		acrylonitrile	0.099	0.100	-1.0	108	0.00	7.72
26		methyl tert butyl ether	0.817	0.862	-5.5	108	0.00	7.82
27		trans-1,2-dichloroethene	0.444	0.439	1.1	102	0.00	7.86
28		hexane	0.535	0.434	18.9	86	0.00	8.24
29		1,1-dichloroethane	0.566	0.562	0.7	107	0.00	8.44
30		vinyl acetate	0.054	0.052	3.7	102	0.00	8.38
31		di-isopropyl ether	1.004	1.003	0.1	103	0.00	8.45
32		chloroprene	0.478	0.506	-5.9	106	0.00	8.55
33		ethyl tert-butyl ether	0.969	0.976	-0.7	103	0.00	8.91

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223186.D

34		2-butanone		0.032	0.036	-12.5	109	0.00	9.08
35		2,2-dichloropropane		0.491	0.489	0.4	105	0.00	9.19
			True		Calc.	% Drift			
36		ethyl acetate		50.000	48.197	3.6	110	0.00	9.12
			AvgRF		CCRF	% Dev			
37		cis-1,2-dichloroethene		0.365	0.370	-1.4	107	0.00	9.16
38		propionitrile		0.046	0.050	-8.7	111	0.00	9.14
			True		Calc.	% Drift			
39		methyl acrylate		50.000	49.175	1.7	110	0.00	9.20
			AvgRF		CCRF	% Dev			
40		methacrylonitrile		0.117	0.128	-9.4	111	0.00	9.35
41		bromochloromethane		0.164	0.172	-4.9	108	0.00	9.46
42		tetrahydrofuran		0.036	0.038	-5.6	113	0.00	9.49
43		chloroform		0.586	0.594	-1.4	106	0.00	9.55
44		carbon tetrachloride		0.479	0.469	2.1	101	0.00	10.03
45		1,1-dichloropropene		0.441	0.449	-1.8	104	0.00	9.99
46		isobutyl alcohol			----------NA----------				
47	S	dibromofluoromethane (s)		0.393	0.399	-1.5	108	0.00	9.74
48		1,1,1-trichloroethane		0.523	0.515	1.5	103	0.00	9.82
49		cyclohexane		0.461	0.484	-5.0	112	0.00	9.94
			True		Calc.	% Drift			
50		tert-amyl alcohol		250.000	246.823	1.3	107	0.00	10.10
			AvgRF		CCRF	% Dev			
51	I	1,4-difluorobenzene		1.000	1.000	0.0	108	0.00	10.65
52	S	1,2-dichloroethane-d4 (s)		0.312	0.304	2.6	105	0.00	10.16
53		isopropyl acetate		0.045	0.046	-2.2	102	0.00	10.15
54		1,2-dichloroethane		0.328	0.315	4.0	104	0.00	10.25
55		benzene		0.977	0.993	-1.6	107	0.00	10.23
56		2,2,4-trimethylpentane		1.000	0.980	2.0	105	0.00	10.36
57		tert-amyl methyl ether		0.167	0.164	1.8	101	0.00	10.33
58		heptane		0.209	0.233	-11.5	120	0.00	10.52
59		n-butyl alcohol		0.008	0.009	-12.5	112	0.00	10.68
60		trichloroethene		0.262	0.260	0.8	106	0.00	10.97
61		ethyl acrylate		0.277	0.295	-6.5	111	0.00	10.95
62		methylcyclohexane		0.443	0.426	3.8	103	0.00	11.28
63		1,2-dichloropropane		0.250	0.243	2.8	105	0.00	11.25
64		methyl methacrylate		0.059	0.062	-5.1	108	0.00	11.22
65		dibromomethane		0.146	0.152	-4.1	109	0.00	11.35
66		bromodichloromethane		0.346	0.342	1.2	105	0.00	11.51
67		2-nitropropane		0.060	0.064	-6.7	112	0.00	11.68
68		2-chloroethyl vinyl ether		0.146	0.157	-7.5	112	0.00	11.75
69		epichlorohydrin		0.024	0.025	-4.2	109	0.00	11.82
70		cis-1,3-dichloropropene		0.391	0.407	-4.1	108	0.00	11.97
71		4-methyl-2-pentanone		0.078	0.082	-5.1	111	0.00	12.06
72		3-methyl-1-butanol		0.007	0.007	0.0	113	0.00	12.05
73	I	chlorobenzene-d5		1.000	1.000	0.0	107	0.00	13.79
74	S	toluene-d8 (s)		1.282	1.291	-0.7	107	0.00	12.28
75		toluene		0.692	0.718	-3.8	109	0.00	12.36
76		trans-1,3-dichloropropene		0.416	0.410	1.4	101	0.00	12.53
77		ethyl methacrylate		0.314	0.310	1.3	103	0.00	12.53
78		1,1,2-trichloroethane		0.203	0.211	-3.9	106	0.00	12.75
79		1,3-dichloropropane		0.370	0.394	-6.5	109	0.00	12.93

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Sample: VI8986-ICV8986
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80		tetrachloroethene	0.347	0.397	-14.4	118	0.00	12.92
81		2-hexanone	0.091	0.097	-6.6	108	0.00	12.91
82		butyl acetate	0.158	0.165	-4.4	107	0.00	13.00
83		n-butyl ether	1.143	1.141	0.2	106	0.00	13.79
84		dibromochloromethane	0.317	0.335	-5.7	109	0.00	13.17
85		1,2-dibromoethane	0.276	0.297	-7.6	109	0.00	13.33
86		chlorobenzene	0.737	0.763	-3.5	108	0.00	13.82
87		1,1,1,2-tetrachloroethane	0.293	0.305	-4.1	108	0.00	13.88
88		ethylbenzene	1.289	1.321	-2.5	108	0.00	13.88
89		m,p-xylene	0.507	0.521	-2.8	108	0.00	14.01
90		o-xylene	0.505	0.512	-1.4	107	0.00	14.40
91		styrene	0.848	0.878	-3.5	108	0.00	14.41
92		butyl acrylate	0.484	0.522	-7.9	111	0.00	14.23
93		cis-1,4-dichloro-2-butene	0.124	0.122	1.6	100	0.00	14.77
94		bromoform	0.223	0.244	-9.4	110	0.00	14.63
95		isopropylbenzene	1.271	1.330	-4.6	108	0.00	14.75
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.13
97	S	4-bromofluorobenzene (s)	0.762	0.768	-0.8	106	0.00	14.95
98		1,1,2,2-tetrachloroethane	0.517	0.529	-2.3	105	0.00	15.02
99		trans-1,4-dichloro-2-bute	0.135	0.159	-17.8	123	0.00	15.05
100		1,2,3-trichloropropane	0.133	0.141	-6.0	108	0.00	15.10
101		bromobenzene	0.617	0.633	-2.6	107	0.00	15.13
102		n-propylbenzene	2.563	2.623	-2.3	106	0.00	15.17
103		2-chlorotoluene	0.538	0.550	-2.2	107	0.00	15.30
104		4-chlorotoluene	1.532	1.592	-3.9	110	0.00	15.41
105		1,3,5-trimethylbenzene	1.928	1.958	-1.6	106	0.00	15.33
106		tert-butylbenzene	0.357	0.377	-5.6	107	0.00	15.67
107		1,2,4-trimethylbenzene	1.976	2.047	-3.6	108	0.00	15.72
108		sec-butylbenzene	2.485	2.555	-2.8	108	0.00	15.89
109		p-isopropyltoluene	2.157	2.255	-4.5	107	0.00	16.03
110		benzyl chloride	1.210	1.013	16.3	88	0.00	16.24
111		1,3-dichlorobenzene	1.178	1.207	-2.5	107	0.00	16.06
112		1,4-dichlorobenzene	1.203	1.224	-1.7	108	0.00	16.16
113		1,2-dichlorobenzene	1.153	1.197	-3.8	106	0.00	16.54
114		n-butylbenzene	1.122	1.162	-3.6	105	0.00	16.45
115		hexachloroethane	0.430	0.472	-9.8	109	0.00	16.86
116		1,2-dibromo-3-chloropropa	0.160	0.167	-4.4	104	0.00	17.33
117		nitrobenzene	0.055	0.059	-7.3	107	0.00	17.52
118		1,3,5-trichlorobenzene	1.171	1.212	-3.5	108	0.00	17.54
119		1,2,4-trichlorobenzene	1.053	1.053	0.0	103	0.00	18.20
120		2-ethylhexyl acrylate	0.859	0.939	-9.3	112	0.00	18.22
121		hexachlorobutadiene	0.693	0.694	-0.1	104	0.00	18.33
122		naphthalene	2.037	2.153	-5.7	106	0.00	18.49
123		1,2,3-trichlorobenzene	1.036	1.034	0.2	103	0.00	18.71
124		2-methylnaphthalene	0.726	0.700	3.6	103	0.00	19.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0

I223181.D MI8986.M Wed Nov 28 14:09:03 2018

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223187.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VI8986\I223187.D Vial: 14
Acq On : 28 Nov 2018 12:18 am Operator: thienn
Sample : ICV8986-50 Inst : GCMSI
Misc : MS30885,VI8986,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
Last Update : Wed Nov 28 13:32:54 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.37
2		tertiary butyl alcohol		----------NA----------				
3		1,4-dioxane		----------NA----------				
4	I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	9.72
5		dichlorodifluoromethane		----------NA----------				
6		chlorodifluoromethane		----------NA----------				
7		chloromethane		----------NA----------				
8		vinyl chloride		----------NA----------				
9		1,3-butadiene		----------NA----------				
10		bromomethane		----------NA----------				
11		chloroethane		----------NA----------				
12		vinyl bromide		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		2-chloropropane		----------NA----------				
16		acrolein		----------NA----------				
17		freon 113		----------NA----------				
18		1,1-dichloroethene		----------NA----------				
19		acetone	0.084	0.079	6.0	99	0.00	6.71
		---------- True Calc. % Drift ----------						
20		iodomethane		----------NA----------				
		---------- AvgRF CCRF % Dev ----------						
21		carbon disulfide		----------NA----------				
22		acetonitrile	0.042	0.044	-4.8	109	0.00	7.12
		---------- True Calc. % Drift ----------						
23		methyl acetate		----------NA----------				
		---------- AvgRF CCRF % Dev ----------						
24		methylene chloride		----------NA----------				
25		acrylonitrile		----------NA----------				
26		methyl tert butyl ether		----------NA----------				
27		trans-1,2-dichloroethene		----------NA----------				
28		hexane		----------NA----------				
29		1,1-dichloroethane		----------NA----------				
30		vinyl acetate		----------NA----------				
31		di-isopropyl ether		----------NA----------				
32		chloroprene		----------NA----------				
33		ethyl tert-butyl ether		----------NA----------				

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223187.D

34		2-butanone		----------NA----------					
35		2,2-dichloropropane		----------NA----------					
		----------	True	Calc.	% Drift	----------			
36		ethyl acetate		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
37		cis-1,2-dichloroethene		----------NA----------					
38		propionitrile		----------NA----------					
		----------	True	Calc.	% Drift	----------			
39		methyl acrylate		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
40		methacrylonitrile		----------NA----------					
41		bromochloromethane		----------NA----------					
42		tetrahydrofuran		----------NA----------					
43		chloroform		----------NA----------					
44		carbon tetrachloride		----------NA----------					
45		1,1-dichloropropene		----------NA----------					
46		isobutyl alcohol		----------NA----------					
47	S	dibromofluoromethane (s)	0.393	0.394	-0.3	109	0.00	9.74	
48		1,1,1-trichloroethane		----------NA----------					
49		cyclohexane		----------NA----------					
		----------	True	Calc.	% Drift	----------			
50		tert-amyl alcohol		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
51	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.65	
52	S	1,2-dichloroethane-d4 (s)	0.312	0.308	1.3	104	0.00	10.16	
53		isopropyl acetate		----------NA----------					
54		1,2-dichloroethane		----------NA----------					
55		benzene		----------NA----------					
56		2,2,4-trimethylpentane		----------NA----------					
57		tert-amyl methyl ether		----------NA----------					
58		heptane		----------NA----------					
59		n-butyl alcohol		----------NA----------					
60		trichloroethene		----------NA----------					
61		ethyl acrylate		----------NA----------					
62		methylcyclohexane		----------NA----------					
63		1,2-dichloropropane		----------NA----------					
64		methyl methacrylate		----------NA----------					
65		dibromomethane		----------NA----------					
66		bromodichloromethane		----------NA----------					
67		2-nitropropane		----------NA----------					
68		2-chloroethyl vinyl ether		----------NA----------					
69		epichlorohydrin		----------NA----------					
70		cis-1,3-dichloropropene		----------NA----------					
71		4-methyl-2-pentanone		----------NA----------					
72		3-methyl-1-butanol		----------NA----------					
73	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.79	
74	S	toluene-d8 (s)	1.282	1.292	-0.8	108	0.00	12.28	
75		toluene		----------NA----------					
76		trans-1,3-dichloropropene		----------NA----------					
77		ethyl methacrylate		----------NA----------					
78		1,1,2-trichloroethane		----------NA----------					
79		1,3-dichloropropane		----------NA----------					

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223187.D

80		tetrachloroethene	0.347	0.311	10.4	93	0.00	12.92
81		2-hexanone		----------NA----------				
82		butyl acetate		----------NA----------				
83		n-butyl ether		----------NA----------				
84		dibromochloromethane		----------NA----------				
85		1,2-dibromoethane		----------NA----------				
86		chlorobenzene		----------NA----------				
87		1,1,1,2-tetrachloroethane		----------NA----------				
88		ethylbenzene		----------NA----------				
89		m,p-xylene		----------NA----------				
90		o-xylene		----------NA----------				
91		styrene		----------NA----------				
92		butyl acrylate		----------NA----------				
93		cis-1,4-dichloro-2-butene		----------NA----------				
94		bromoform		----------NA----------				
95		isopropylbenzene		----------NA----------				
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	16.13
97	S	4-bromofluorobenzene (s)	0.762	0.792	-3.9	103	0.00	14.95
98		1,1,2,2-tetrachloroethane		----------NA----------				
99		trans-1,4-dichloro-2-bute		----------NA----------				
100		1,2,3-trichloropropane		----------NA----------				
101		bromobenzene		----------NA----------				
102		n-propylbenzene		----------NA----------				
103		2-chlorotoluene		----------NA----------				
104		4-chlorotoluene		----------NA----------				
105		1,3,5-trimethylbenzene		----------NA----------				
106		tert-butylbenzene		----------NA----------				
107		1,2,4-trimethylbenzene		----------NA----------				
108		sec-butylbenzene		----------NA----------				
109		p-isopropyltoluene		----------NA----------				
110		benzyl chloride		----------NA----------				
111		1,3-dichlorobenzene		----------NA----------				
112		1,4-dichlorobenzene		----------NA----------				
113		1,2-dichlorobenzene		----------NA----------				
114		n-butylbenzene		----------NA----------				
115		hexachloroethane		----------NA----------				
116		1,2-dibromo-3-chloropropa		----------NA----------				
117		nitrobenzene		----------NA----------				
118		1,3,5-trichlorobenzene		----------NA----------				
119		1,2,4-trichlorobenzene		----------NA----------				
120		2-ethylhexyl acrylate		----------NA----------				
121		hexachlorobutadiene		----------NA----------				
122		naphthalene		----------NA----------				
123		1,2,3-trichlorobenzene		----------NA----------				
124		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

I223181.D MI8986.M Wed Nov 28 14:09:05 2018

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9093-CC8986
Lab FileID: I225701.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...4-26\vi9093\i225701.d Vial: 3
Acq On : 25 Apr 2019 7:44 am Operator: juntaep
Sample : cc8986-50 Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	78	-0.03	7.35
2		tertiary butyl alcohol	1.035	1.058	-2.2	79	-0.04	7.47
3		1,4-dioxane	0.116	0.119	-2.6	80	-0.02	11.28
4	I	pentafluorobenzene	1.000	1.000	0.0	76	-0.02	9.70
5		dichlorodifluoromethane	0.437	0.481	-10.1	81	0.00	3.89
6		chlorodifluoromethane	0.412	0.433	-5.1	78	0.00	3.92
7		chloromethane	0.404	0.378	6.4	76	-0.01	4.28
8		vinyl chloride	0.341	0.373	-9.4	81	-0.01	4.52
9		1,3-butadiene	0.238	0.252	-5.9	78	-0.01	4.61
10		bromomethane	0.227	0.252	-11.0	86	0.00	5.18
11		chloroethane	0.206	0.215	-4.4	79	-0.02	5.38
12		vinyl bromide	0.263	0.218	17.1	61	-0.02	5.73
13		trichlorofluoromethane	0.521	0.594	-14.0	82	-0.01	5.86
14		ethyl ether	0.148	0.141	4.7	69	-0.02	6.30
15		2-chloropropane	0.120	0.121	-0.8	72	-0.02	6.50
16		acrolein	0.048	0.039	18.8	62	-0.02	6.50
17		freon 113	0.255	0.281	-10.2	80	-0.02	6.71
18		1,1-dichloroethene	0.465	0.463	0.4	74	-0.02	6.71
19		acetone	0.084	0.091	-8.3	80	-0.03	6.69
		----------	True	Calc.	% Drift	----------		
20		iodomethane	50.000	42.914	14.2	61	-0.02	6.96
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide	1.002	0.895	10.7	71	-0.02	7.11
22		acetonitrile	0.042	0.040	4.8	71	-0.03	7.09
		----------	True	Calc.	% Drift	----------		
23		methyl acetate	50.000	42.491	15.0	68	-0.02	7.19
		----------	AvgRF	CCRF	% Dev	----------		
24		methylene chloride	0.345	0.308	10.7	71	-0.02	7.42
25		acrylonitrile	0.099	0.090	9.1	69	-0.03	7.69
26		methyl tert butyl ether	0.817	0.805	1.5	72	-0.02	7.80
27		trans-1,2-dichloroethene	0.444	0.429	3.4	72	-0.02	7.84
28		hexane	0.535	0.438	18.1	62	-0.02	8.23
29		1,1-dichloroethane	0.566	0.541	4.4	74	-0.03	8.41
30		vinyl acetate	0.054	0.049	9.3	69	-0.02	8.36
31		di-isopropyl ether	1.004	0.865	13.8	64	-0.02	8.43
32		chloroprene	0.478	0.493	-3.1	74	-0.02	8.52
33		ethyl tert-butyl ether	0.969	0.891	8.0	67	-0.02	8.89

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VI9093-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I225701.D
Project: National Grid, Philly Coke, Philadelphia, PA

34		2-butanone	0.032	0.033	-3.1	72	-0.03	9.05
35		2,2-dichloropropane	0.491	0.534	-8.8	82	-0.03	9.16
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	50.000	48.578	2.8	79	-0.03	9.09
		----------	AvgRF	CCRF	% Dev	----------		
37		cis-1,2-dichloroethene	0.365	0.343	6.0	71	-0.03	9.13
38		propionitrile	0.046	0.047	-2.2	75	-0.03	9.11
		----------	True	Calc.	% Drift	----------		
39		methyl acrylate	50.000	45.067	9.9	72	-0.02	9.18
		----------	AvgRF	CCRF	% Dev	----------		
40		methacrylonitrile	0.117	0.112	4.3	70	-0.03	9.32
41		bromochloromethane	0.164	0.163	0.6	74	-0.03	9.43
42		tetrahydrofuran	0.036	0.037	-2.8	77	-0.02	9.47
43		chloroform	0.586	0.587	-0.2	75	-0.03	9.52
44		carbon tetrachloride	0.479	0.520	-8.6	80	-0.02	10.00
45		1,1-dichloropropene	0.441	0.435	1.4	72	-0.02	9.97
46		isobutyl alcohol		----------NA----------				
47	S	dibromofluoromethane (s)	0.393	0.405	-3.1	78	-0.03	9.71
48		1,1,1-trichloroethane	0.523	0.567	-8.4	81	-0.03	9.79
49		cyclohexane	0.461	0.454	1.5	75	-0.02	9.92
		----------	True	Calc.	% Drift	----------		
50		tert-amyl alcohol	250.000	266.293	-6.5	83	-0.03	10.08
		----------	AvgRF	CCRF	% Dev	----------		
51	I	1,4-difluorobenzene	1.000	1.000	0.0	77	-0.02	10.63
52	S	1,2-dichloroethane-d4 (s)	0.312	0.340	-9.0	83	-0.03	10.14
53		isopropyl acetate	0.045	0.044	2.2	68	-0.02	10.12
54		1,2-dichloroethane	0.328	0.348	-6.1	82	-0.03	10.22
55		benzene	0.977	0.923	5.5	71	-0.03	10.21
56		2,2,4-trimethylpentane	1.000	0.835	16.5	63	-0.02	10.33
57		tert-amyl methyl ether	0.167	0.158	5.4	69	-0.02	10.31
58		heptane	0.209	0.168	19.6	62	-0.02	10.50
59		n-butyl alcohol	0.008	0.008	0.0	75	-0.03	10.66
60		trichloroethene	0.262	0.256	2.3	74	-0.02	10.95
61		ethyl acrylate	0.277	0.251	9.4	67	-0.02	10.93
62		methylcyclohexane	0.443	0.392	11.5	67	-0.02	11.26
63		1,2-dichloropropane	0.250	0.215	14.0	66	-0.03	11.22
64		methyl methacrylate	0.059	0.054	8.5	67	-0.03	11.19
65		dibromomethane	0.146	0.143	2.1	73	-0.02	11.33
66		bromodichloromethane	0.346	0.344	0.6	75	-0.03	11.48
67		2-nitropropane	0.060	0.071	-18.3	89	-0.03	11.66
68		2-chloroethyl vinyl ether	0.146	0.138	5.5	70	-0.02	11.73
69		epichlorohydrin	0.024	0.025	-4.2	80	-0.03	11.79
70		cis-1,3-dichloropropene	0.391	0.369	5.6	70	-0.02	11.95
71		4-methyl-2-pentanone	0.078	0.078	0.0	74	-0.03	12.03
72		3-methyl-1-butanol	0.007	0.007	0.0	76	-0.03	12.03
73	I	chlorobenzene-d5	1.000	1.000	0.0	80	-0.02	13.77
74	S	toluene-d8 (s)	1.282	1.230	4.1	76	-0.02	12.26
75		toluene	0.692	0.643	7.1	72	-0.02	12.34
76		trans-1,3-dichloropropene	0.416	0.403	3.1	74	-0.02	12.50
77		ethyl methacrylate	0.314	0.276	12.1	68	-0.02	12.51
78		1,1,2-trichloroethane	0.203	0.181	10.8	68	-0.03	12.72
79		1,3-dichloropropane	0.370	0.344	7.0	71	-0.03	12.90

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9093-CC8986
Lab FileID: I225701.D

80		tetrachloroethene	0.347	0.339	2.3	75	-0.02	12.90
81		2-hexanone	0.091	0.085	6.6	71	-0.02	12.89
82		butyl acetate	0.158	0.137	13.3	66	-0.02	12.98
83		n-butyl ether	1.143	0.837	26.8#	58	-0.02	13.77
84		dibromochloromethane	0.317	0.308	2.8	74	-0.03	13.15
85		1,2-dibromoethane	0.276	0.317	-14.9	86	-0.02	13.31
86		chlorobenzene	0.737	0.704	4.5	74	-0.02	13.80
87		1,1,1,2-tetrachloroethane	0.293	0.281	4.1	74	-0.02	13.86
88		ethylbenzene	1.289	1.198	7.1	73	-0.02	13.86
89		m,p-xylene	0.507	0.470	7.3	73	-0.02	13.98
90		o-xylene	0.505	0.441	12.7	69	-0.02	14.38
91		styrene	0.848	0.770	9.2	71	-0.02	14.39
92		butyl acrylate	0.484	0.427	11.8	68	-0.02	14.21
93		cis-1,4-dichloro-2-butene	0.124	0.139	-12.1	86	-0.02	14.75
94		bromoform	0.223	0.225	-0.9	75	-0.02	14.61
95		isopropylbenzene	1.271	1.178	7.3	71	-0.02	14.73
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	78	-0.02	16.11
97	S	4-bromofluorobenzene (s)	0.762	0.764	-0.3	79	-0.03	14.93
98		1,1,2,2-tetrachloroethane	0.517	0.472	8.7	70	-0.03	14.99
99		trans-1,4-dichloro-2-bute	0.135	0.140	-3.7	81	-0.02	15.03
100		1,2,3-trichloropropane	0.133	0.135	-1.5	77	-0.03	15.08
101		bromobenzene	0.617	0.580	6.0	73	-0.02	15.11
102		n-propylbenzene	2.563	2.333	9.0	70	-0.02	15.15
103		2-chlorotoluene	0.538	0.499	7.2	72	-0.02	15.28
104		4-chlorotoluene	1.532	1.450	5.4	75	-0.03	15.39
105		1,3,5-trimethylbenzene	1.928	1.750	9.2	70	-0.02	15.31
106		tert-butylbenzene	0.357	0.313	12.3	67	-0.02	15.65
107		1,2,4-trimethylbenzene	1.976	1.799	9.0	71	-0.02	15.70
108		sec-butylbenzene	2.485	2.211	11.0	70	-0.02	15.87
109		p-isopropyltoluene	2.157	1.990	7.7	71	-0.02	16.01
110		benzyl chloride	1.210	1.208	0.2	78	-0.03	16.22
111		1,3-dichlorobenzene	1.178	1.129	4.2	74	-0.03	16.04
112		1,4-dichlorobenzene	1.203	1.147	4.7	75	-0.02	16.13
113		1,2-dichlorobenzene	1.153	1.093	5.2	72	-0.02	16.52
114		n-butylbenzene	1.122	1.040	7.3	70	-0.02	16.43
115		hexachloroethane	0.430	0.420	2.3	73	-0.02	16.84
116		1,2-dibromo-3-chloropropa	0.160	0.156	2.5	73	-0.03	17.30
117		nitrobenzene	0.055	0.059	-7.3	79	-0.03	17.49
118		1,3,5-trichlorobenzene	1.171	1.124	4.0	74	-0.02	17.52
119		1,2,4-trichlorobenzene	1.053	0.999	5.1	73	-0.02	18.18
120		2-ethylhexyl acrylate	0.859	0.735	14.4	65	-0.02	18.20
121		hexachlorobutadiene	0.693	0.655	5.5	73	-0.02	18.31
122		naphthalene	2.037	2.037	0.0	75	-0.03	18.46
123		1,2,3-trichlorobenzene	1.036	0.937	9.6	70	-0.03	18.68
124		2-methylnaphthalene	0.726	0.982	-35.3#	107	-0.02	19.57

(#) = Out of Range SPCC's out = 0 CCC's out = 0

I223181.D MI8986.M Fri Apr 26 09:32:31 2019

Initial Calibration Summary

Job Number: JC86406 **Sample:** VY8014-ICC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184719.D
Project: National Grid, Philly Coke, Philadelphia, PA

Response Factor Report MSY

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Initial Calibration

Calibration Files
4 =Y184716.D 8 =Y184717.D 0.5 =Y184713.D 50 =Y184719.D
100 =Y184720.D 1 =Y184714.D 200 =Y184721.D 20 =Y184718.D
2 =Y184715.D =

Compound	4	8	0.5	50	100	1	200	20	2	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------										
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol	1.642	1.613		1.613	1.561		1.620	1.603	1.256	1.558	8.70
4) 1,4-dioxane	0.173	0.149		0.164	0.147		0.152	0.152	0.145	0.154	6.46
5) I pentafluorobenzene	----------ISTD----------										
6) chlorodifluoromethane	0.830	0.779		0.761	0.797	0.738	0.780	0.842	0.781	0.788	4.33
7) dichlorodifluoromethane	0.973	0.960		0.978	1.007	0.955	0.992	1.155	0.900	0.990	7.46
8) chloromethane	1.056	1.017		0.946	0.996	1.226	0.994	1.108	0.996	1.042	8.48
9) vinyl chloride	0.853	0.862	0.772	0.816	0.883	0.946	0.877	0.940	0.766	0.857	7.51
10) 1,3-butadiene	0.544	0.518		0.509	0.538		0.545	0.545	0.517	0.531	2.94
11) bromomethane	0.743	0.700		0.663	0.681	0.889	0.666	0.762	0.705	0.726	10.28
12) chloroethane	0.458	0.470		0.448	0.461	0.462	0.461	0.499	0.449	0.464	3.43
13) vinyl bromide	0.429	0.398		0.407	0.412	0.352	0.422	0.447	0.350	0.402	8.65
14) trichlorofluoromethane	1.026	0.953		0.925	0.948	1.129	0.943	1.050	0.927	0.988	7.43
15) ethyl ether	0.238	0.241		0.260	0.249	0.212	0.270	0.255	0.212	0.242	8.72
16) 2-chloropropane	0.220	0.212		0.216	0.221	0.219	0.215	0.211	0.198	0.214	3.47
17) acrolein		0.060		0.067	0.069		0.072	0.069		0.067	7.05
18) freon 113	0.486	0.451		0.478	0.485	0.395	0.463	0.484	0.463	0.463	6.60
19) 1,1-dichloroethene	0.762	0.753	0.706	0.811	0.809	0.709	0.781	0.790	0.789	0.768	5.08
20) acetone	0.137	0.120		0.114	0.117	0.133	0.115	0.118	0.126	0.122	6.94
21) acetonitrile	0.061	0.064		0.057	0.058		0.058	0.063		0.060	5.23
22) iodomethane	0.981	0.943	0.936	0.983	0.994	0.884	0.978	1.050	0.976	0.969	4.72
23) carbon disulfide											

Initial Calibration Summary

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		1.650	1.673	1.723	1.625	1.637	1.669	1.580	1.750	1.817	1.681	4.28
24)	methylene chloride											
		0.663	0.661		0.627	0.638		0.622	0.674	0.787	0.667	8.41
25)	methyl acetate											
		0.278	0.300		0.272	0.272		0.276	0.302		0.283	4.91
26)	methyl tert butyl ether											
		1.493	1.578	1.590	1.514	1.571	1.449	1.612	1.615	1.446	1.541	4.33
27)	trans-1,2-dichloroethene											
		0.770	0.730	0.834	0.749	0.739	0.749	0.717	0.787	0.775	0.761	4.65
28)	hexane											
		0.706	0.660	0.625	0.680	0.679	0.673	0.670	0.702	0.651	0.672	3.71
29)	di-isopropyl ether											
		1.887	1.914	1.952	1.953	1.996	1.708	1.986	2.025	1.843	1.918	5.06
30)	ethyl tert-butyl ether											
		1.706	1.749	1.590	1.787	1.863	1.648	1.942	1.840	1.577	1.745	7.21
31)	2-butanone											
		0.044	0.040		0.039	0.040		0.042	0.043	0.033	0.040	9.10
32)	1,1-dichloroethane											
		0.965	0.950	0.921	0.948	0.944	0.965	0.914	0.989	0.995	0.955	2.86
33)	chloroprene											
		0.703	0.657	0.697	0.689	0.694	0.659	0.682	0.710	0.665	0.684	2.86
34)	acrylonitrile											
		0.140	0.167		0.150	0.148		0.152	0.162		0.153	6.52
35)	vinyl acetate											
		0.069	0.073		0.075	0.077		0.082	0.081		0.076	6.21
36)	ethyl acetate											
		0.048	0.058		0.054	0.051		0.055	0.059		0.054	7.75
37)	2,2-dichloropropane											
		0.840	0.822	0.801	0.801	0.819	0.854	0.814	0.853	0.818	0.825	2.44
38)	cis-1,2-dichloroethene											
		0.627	0.639	0.616	0.604	0.604	0.659	0.613	0.654	0.634	0.628	3.27
39)	propionitrile											
		0.057	0.058	0.056	0.052	0.052	0.050	0.056	0.057	0.049	0.054	6.63
40)	bromochloromethane											
		0.389	0.397	0.368	0.390	0.393	0.395	0.399	0.414	0.396	0.393	3.04
41)	tetrahydrofuran											
		0.045	0.045		0.046	0.049		0.054	0.050		0.048	7.21
42)	chloroform											
		1.028	0.995		0.955	0.963	1.191	0.959	1.013	1.014	1.015	7.55
43)	tert-butyl formate											
		0.380	0.372		0.379	0.403		0.427	0.400	0.320	0.383	8.77
44)	isobutyl alcohol											
											0.000	-1.00
45)	dibromofluoromethane (s)											
		0.460	0.454	0.455	0.450	0.454	0.442	0.460	0.453	0.454	0.454	1.16
46)	methacrylonitrile											
		0.137	0.150		0.142	0.141		0.151	0.150		0.145	4.19
47)	1,1,1-trichloroethane											
		0.865	0.850	0.902	0.847	0.870	0.917	0.866	0.892	0.864	0.875	2.73
48)	cyclohexane											
		0.908	0.855	0.840	0.851	0.863	0.872	0.861	0.991	0.786	0.870	6.38
49)	1,1-dichloropropene											
		0.623	0.606	0.658	0.617	0.611	0.573	0.606	0.639	0.635	0.619	3.93
50)	tert-amyl alcohol											
		0.016	0.019		0.017	0.017		0.019	0.018		0.018	5.84
51)	carbon tetrachloride											
		0.754	0.743	0.746	0.737	0.759	0.792	0.751	0.791	0.779	0.761	2.75
52)	I 1,4-difluorobenzene	----------					ISTD				----------	
53)	1,2-dichloroethane-d4 (s)											

Initial Calibration Summary

Job Number: JC86406 **Sample:** VY8014-ICC8014
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Project: National Grid, Philly Coke, Philadelphia, PA

		0.290	0.291	0.282	0.272	0.274	0.276	0.269	0.283	0.277	0.279	2.75
54)	2,2,4-trimethylpentane											
		1.365	1.364	1.092	1.456	1.491	1.305	1.528	1.475	1.264	1.371	10.01
55)	tert-amyl methyl ether											
		1.111	1.107	1.203	1.131	1.145	0.974	1.222	1.170	1.039	1.122	6.96
56)	n-butyl alcohol											
		0.006	0.006		0.006	0.006	0.006	0.007	0.007	0.005	0.006	7.95
57)	benzene											
		1.469	1.441	1.566	1.391	1.368	1.466	1.373	1.457	1.462	1.444	4.25
58)	heptane											
		0.236	0.244		0.247	0.240	0.247	0.241	0.267	0.249	0.246	3.77
59)	isopropyl acetate											
		0.055	0.060		0.059	0.057		0.060	0.060		0.059	3.52
60)	1,2-dichloroethane											
		0.488	0.475		0.447	0.433	0.489	0.439	0.478	0.461	0.464	4.79
61)	trichloroethene											
		0.388	0.382	0.391	0.369	0.367	0.357	0.367	0.389	0.368	0.375	3.26
62)	ethyl acrylate											
		0.307	0.310		0.299	0.297		0.320	0.338	0.289	0.309	5.32
63)	2-nitropropane											
		0.102	0.105		0.096	0.095		0.101	0.104		0.100	4.13
64)	2-chloroethyl vinyl ether											
		0.161	0.179	0.181	0.168	0.167	0.151	0.179	0.190	0.164	0.171	7.06
65)	methyl methacrylate											
		0.062	0.067		0.065	0.066		0.073	0.074		0.068	6.46
66)	1,2-dichloropropane											
		0.390	0.372	0.386	0.368	0.363	0.321	0.369	0.383	0.357	0.368	5.61
67)	methylcyclohexane											
		0.590	0.568		0.600	0.603	0.589	0.612	0.617	0.590	0.596	2.58
68)	dibromomethane											
		0.222	0.224	0.222	0.210	0.209	0.196	0.216	0.226	0.205	0.215	4.73
69)	bromodichloromethane											
		0.523	0.504	0.534	0.508	0.508	0.498	0.522	0.526	0.505	0.514	2.38
70)	epichlorohydrin											
		0.026	0.027		0.025	0.024		0.026	0.027		0.026	5.48
71)	cis-1,3-dichloropropene											
		0.572	0.571	0.505	0.570	0.565	0.527	0.587	0.596	0.543	0.559	5.21
72)	4-methyl-2-pentanone											
		0.099	0.107	0.107	0.099	0.097	0.096	0.104	0.110	0.089	0.101	6.67
73)	3-methyl-1-butanol											
		0.007	0.007		0.008	0.008		0.009	0.008	0.006	0.008	11.52
74)	I chlorobenzene-d5	----------				ISTD						
75)	toluene-d8 (s)											
		1.256	1.252	1.238	1.310	1.292	1.261	1.296	1.222	1.262	1.265	2.28
76)	toluene											
		0.958	0.924	1.069	0.966	0.951	0.958	0.941	0.935	0.964	0.963	4.38
77)	trans-1,3-dichloropropene											
		0.541	0.557	0.582	0.576	0.560	0.542	0.569	0.561	0.511	0.556	3.90
78)	ethyl methacrylate											
		0.387	0.389	0.400	0.399	0.397	0.354	0.414	0.399	0.364	0.389	4.87
79)	1,1,2-trichloroethane											
		0.270	0.277	0.312	0.270	0.267	0.266	0.270	0.271	0.269	0.275	5.25
80)	2-hexanone											
		0.106	0.111	0.104	0.104	0.102	0.092	0.106	0.108	0.092	0.103	6.28
81)	tetrachloroethene											
		0.430	0.430	0.451	0.437	0.433	0.443	0.424	0.422	0.460	0.437	2.88
82)	1,3-dichloropropane											
		0.523	0.524	0.568	0.510	0.494	0.473	0.505	0.521	0.489	0.512	5.28
83)	butyl acetate											

Initial Calibration Summary

Job Number: JC86406 **Sample:** VY8014-ICC8014
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Project: National Grid, Philly Coke, Philadelphia, PA

		0.188	0.208		0.202	0.200		0.203	0.208	0.183	0.199	4.81
84)	dibromochloromethane											
		0.408	0.423	0.372	0.436	0.436	0.357	0.450	0.429	0.398	0.412	7.60
85)	1,2-dibromoethane											
		0.427	0.444	0.455	0.429	0.434	0.396	0.446	0.449	0.416	0.433	4.26
86)	n-butyl ether											
		1.514	1.514	1.772	1.637	1.636	1.519	1.611	1.583	1.520	1.590	5.41
87)	chlorobenzene											
		1.156	1.121	1.373	1.123	1.104	1.155	1.088	1.146	1.157	1.158	7.27
88)	1,1,1,2-tetrachloroethane											
		0.461	0.444	0.494	0.470	0.474	0.428	0.475	0.457	0.408	0.457	5.74
89)	ethylbenzene											
		1.815	1.765	1.939	1.814	1.770	1.797	1.748	1.792	1.841	1.809	3.12
90)	m,p-xylene											
		0.686	0.678	0.770	0.701	0.691	0.736	0.699	0.700	0.680	0.705	4.24
91)	o-xylene											
		1.464	1.478	1.597	1.564	1.553	1.416	1.560	1.533	1.477	1.516	3.92
92)	styrene											
		1.172	1.194	1.229	1.249	1.208	1.180	1.230	1.238	1.093	1.199	3.99
93)	bromoform											
		0.264	0.281	0.288	0.284	0.283	0.275	0.300	0.283	0.263	0.280	4.12
94)	butyl acrylate											
		0.624	0.668	0.686	0.665	0.679	0.623	0.709	0.660	0.589	0.656	5.68
95)	isopropylbenzene											
		1.738	1.734	1.970	1.867	1.856	1.846	1.893	1.789	1.706	1.822	4.76
96)	cis-1,4-dichloro-2-butene											
		0.135	0.154		0.150	0.149		0.159	0.144	0.130	0.146	7.04
97)	I 1,4-dichlorobenzene-d ----------ISTD----------											
98)	4-bromofluorobenzene (s)											
		0.832	0.824	0.835	0.845	0.809	0.822	0.821	0.845	0.828	0.829	1.39
99)	bromobenzene											
		1.018	1.012	1.148	0.970	0.920	1.024	0.921	1.021	0.949	0.998	7.04
100)	1,1,2,2-tetrachloroethane											
		0.784	0.798	0.855	0.731	0.709	0.746	0.736	0.808	0.721	0.765	6.33
101)	trans-1,4-dichloro-2-butene											
		0.170	0.183		0.171	0.169		0.176	0.181	0.142	0.170	7.89
102)	1,2,3-trichloropropane											
		0.191	0.209		0.191	0.181		0.184	0.196	0.208	0.194	5.61
103)	n-propylbenzene											
		3.760	3.772	4.438	3.776	3.642	3.905	3.610	3.938	3.887	3.859	6.33
104)	2-chlorotoluene											
		0.850	0.863	1.050	0.868	0.836	0.856	0.830	0.903	0.851	0.879	7.70
105)	4-chlorotoluene											
		2.360	2.375	2.835	2.404	2.329	2.513	2.335	2.526	2.370	2.450	6.59
106)	1,3,5-trimethylbenzene											
		2.763	2.807	3.113	2.852	2.794	2.762	2.805	2.920	2.747	2.840	4.05
107)	tert-butylbenzene											
		0.488	0.466		0.536	0.531	0.460	0.527	0.502	0.506	0.502	5.76
108)	1,2,4-trimethylbenzene											
		2.829	2.889	3.293	2.962	2.896	2.739	2.883	2.995	2.836	2.925	5.37
109)	sec-butylbenzene											
		3.413	3.382	3.678	3.585	3.589	3.591	3.553	3.584	3.512	3.543	2.64
110)	1,3-dichlorobenzene											
		1.830	1.810	2.083	1.806	1.783	1.769	1.758	1.892	1.885	1.846	5.44
111)	p-isopropyltoluene											
		3.014	3.049	3.254	3.179	3.128	3.140	3.114	3.211	2.995	3.120	2.83
112)	1,4-dichlorobenzene											
		1.905	1.862	2.244	1.805	1.780	1.902	1.789	1.873	1.950	1.901	7.40
113)	1,2-dichlorobenzene											

Initial Calibration Summary

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```
            1.841 1.831 2.240 1.817 1.782 2.010 1.775 1.886 1.835   1.891    7.85
114)  n-butylbenzene
            1.590 1.543 1.724 1.651 1.657 1.601 1.639 1.659 1.578   1.627    3.33
115)  1,2-dibromo-3-chloropropane
            0.168 0.174       0.173 0.184       0.191 0.187 0.169   0.178    5.28
116)  1,3,5-trichlorobenzene
            1.762 1.713 2.061 1.802 1.802 1.659 1.733 1.846 1.702   1.787    6.61
117)  1,2,4-trichlorobenzene
            1.429 1.473 1.713 1.539 1.560 1.391 1.512 1.603 1.349   1.508    7.46
118)  hexachlorobutadiene
            0.927 0.887 1.069 0.901 0.886 0.926 0.842 0.951 0.942   0.926    6.83
119)  naphthalene
            2.168 2.283       2.520 2.599 2.011 2.605 2.580 1.941   2.338   11.75
120)  1,2,3-trichlorobenzene
            1.231 1.322 1.295 1.370 1.402 1.138 1.350 1.458 1.189   1.306    7.95
121)  hexachloroethane
            0.486 0.514 0.644 0.584 0.591 0.485 0.601 0.533 0.560   0.555    9.87
122)  benzyl chloride
            1.341 1.375 1.591 1.360 1.396 1.276 1.450 1.406 1.312   1.390    6.59
123)  2-ethylhexyl acrylate
                  0.610       0.821 0.955       1.054 0.691         0.826   22.11
             ----- Linear regression -----  Coefficient =  0.9942
               Response Ratio = -0.01976 + 1.03359 *A

124)  2-methylnaphthalene
                  0.973       1.135 1.302       1.371 1.089         1.174   13.75
125)  bis(chloromethyl)ether
                                                                    0.000   -1.00
126)  ethylenimine
                                                                    0.000   -1.00
 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MYS8014.M         Thu Apr 25 12:25:25 2019   RPT1
```

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\VY8014\Y184724.D Vial: 14
Acq On : 24 Apr 2019 8:27 pm Operator: ROBERTS
Sample : ICV8014-50 Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.558	1.696	-8.9	106	0.01	7.85
4		1,4-dioxane	0.154	0.162	-5.2	100	0.00	11.54
5	I	pentafluorobenzene	1.000	1.000	0.0	92	0.00	9.97
6		chlorodifluoromethane	0.782	0.892	-14.1	107	0.00	4.38
7		dichlorodifluoromethane	0.990	0.981	0.9	92	0.00	4.36
8		chloromethane	1.042	1.127	-8.2	109	0.00	4.74
9		vinyl chloride	0.857	0.874	-2.0	98	0.00	4.99
10		1,3-butadiene	0.531	0.671	-26.4	121	0.01	5.04
11		bromomethane	0.726	0.690	5.0	95	0.00	5.63
12		chloroethane	0.464	0.439	5.4	90	0.00	5.81
13		vinyl bromide	0.402	0.464	-15.4	105	0.00	6.15
14		trichlorofluoromethane	0.988	0.983	0.5	97	0.00	6.27
15		ethyl ether	0.242	0.277	-14.5	98	0.00	6.63
16		2-chloropropane	0.214	0.241	-12.6	102	0.00	6.86
17		acrolein	0.067	0.077	-14.9	105	-0.02	6.86
18		freon 113	0.463	0.554	-19.7	106	0.00	7.10
19		1,1-dichloroethene	0.768	0.796	-3.6	90	0.00	7.07
20		acetone	0.122	0.123	-0.8	99	0.00	7.08
21		acetonitrile		----------NA----------				
22		iodomethane	0.969	1.203	-24.1	112	0.00	7.33
23		carbon disulfide	1.681	1.922	-14.3	108	0.01	7.48
24		methylene chloride	0.667	0.693	-3.9	101	0.00	7.78
25		methyl acetate	0.279	0.283	-1.4	95	0.00	7.52
26		methyl tert butyl ether	1.541	1.670	-8.4	101	0.00	8.15
27		trans-1,2-dichloroethene	0.761	0.787	-3.4	96	0.00	8.16
28		hexane	0.672	0.776	-15.5	105	0.00	8.51
29		di-isopropyl ether	1.918	1.958	-2.1	92	0.00	8.72
30		ethyl tert-butyl ether	1.745	1.852	-6.1	95	0.00	9.18
31		2-butanone	0.040	0.043	-7.5	102	0.00	9.38
32		1,1-dichloroethane	0.955	1.009	-5.7	97	0.00	8.73
33		chloroprene	0.684	0.740	-8.2	98	0.00	8.83
34		acrylonitrile		----------NA----------				
35		vinyl acetate	0.076	0.074	2.6	91	0.00	8.67
36		ethyl acetate	0.054	0.052	3.7	88	0.01	9.39
37		2,2-dichloropropane	0.825	0.835	-1.2	95	0.00	9.49
38		cis-1,2-dichloroethene	0.628	0.636	-1.3	97	0.00	9.45
39		propionitrile	0.054	0.057	-5.6	100	0.00	9.46
40		bromochloromethane	0.393	0.424	-7.9	100	0.00	9.74
41		tetrahydrofuran	0.048	0.055	-14.6	110	0.00	9.77

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

42		chloroform	1.015	1.015	0.0	97	0.00	9.83
43		tert-butyl formate	0.383	0.371	3.1	90	0.00	9.86
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.454	0.464	-2.2	94	0.00	10.02
46		methacrylonitrile	0.145	0.152	-4.8	98	0.00	9.66
47		1,1,1-trichloroethane	0.875	0.893	-2.1	97	0.00	10.10
48		cyclohexane	0.870	0.856	1.6	92	0.00	10.20
49		1,1-dichloropropene	0.619	0.661	-6.8	98	0.00	10.26
50		tert-amyl alcohol	0.018	0.019	-5.6	103	0.00	10.38
51		carbon tetrachloride	0.761	0.805	-5.8	100	0.00	10.28
52	I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	10.91
53	S	1,2-dichloroethane-d4 (s)	0.279	0.278	0.4	94	0.00	10.43
54		2,2,4-trimethylpentane	1.371	1.508	-10.0	96	0.00	10.60
55		tert-amyl methyl ether	1.122	1.162	-3.6	95	0.00	10.59
56		n-butyl alcohol	0.006	0.007	-16.7	103	0.00	10.95
57		benzene	1.444	1.474	-2.1	98	0.00	10.50
58		heptane	0.243	0.311	-28.0	117	0.00	10.75
59		isopropyl acetate	0.059	0.059	0.0	92	0.00	10.40
60		1,2-dichloroethane	0.464	0.456	1.7	94	0.00	10.53
61		trichloroethene	0.375	0.401	-6.9	101	0.00	11.22
62		ethyl acrylate	0.309	0.327	-5.8	101	0.00	11.19
63		2-nitropropane	0.100	0.109	-9.0	105	0.00	11.96
64		2-chloroethyl vinyl ether	0.171	0.192	-12.3	106	0.00	11.98
65		methyl methacrylate	0.068	0.073	-7.4	104	0.00	11.45
66		1,2-dichloropropane	0.368	0.385	-4.6	97	0.00	11.50
67		methylcyclohexane	0.596	0.641	-7.6	99	0.00	11.51
68		dibromomethane	0.215	0.227	-5.6	100	0.00	11.61
69		bromodichloromethane	0.514	0.530	-3.1	96	0.00	11.75
70		epichlorohydrin	0.026	0.027	-3.8	102	0.00	12.07
71		cis-1,3-dichloropropene	0.559	0.612	-9.5	99	0.00	12.20
72		4-methyl-2-pentanone	0.101	0.110	-8.9	103	0.00	12.30
73		3-methyl-1-butanol	0.008	0.009	-12.5	107	0.00	12.30
74	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	13.99
75	S	toluene-d8 (s)	1.265	1.237	2.2	95	0.00	12.51
76		toluene	0.963	0.947	1.7	99	0.00	12.58
77		trans-1,3-dichloropropene	0.556	0.583	-4.9	102	0.00	12.76
78		ethyl methacrylate	0.389	0.415	-6.7	104	0.00	12.74
79		1,1,2-trichloroethane	0.275	0.274	0.4	102	0.00	12.98
80		2-hexanone	0.103	0.112	-8.7	107	0.00	13.13
81		tetrachloroethene		----------NA----------				
82		1,3-dichloropropane	0.512	0.518	-1.2	102	0.00	13.15
83		butyl acetate	0.199	0.215	-8.0	107	0.00	13.20
84		dibromochloromethane	0.412	0.464	-12.6	107	0.00	13.40
85		1,2-dibromoethane	0.433	0.446	-3.0	104	0.00	13.55
86		n-butyl ether	1.590	1.747	-9.9	107	0.00	13.97
87		chlorobenzene	1.158	1.163	-0.4	104	0.00	14.02
88		1,1,1,2-tetrachloroethane	0.457	0.481	-5.3	103	0.00	14.08
89		ethylbenzene	1.809	1.827	-1.0	101	0.00	14.07
90		m,p-xylene	0.705	0.710	-0.7	102	0.00	14.20
91		o-xylene	1.516	1.570	-3.6	101	0.00	14.59
92		styrene	1.199	1.265	-5.5	102	0.00	14.60
93		bromoform	0.280	0.309	-10.4	109	0.00	14.83
94		butyl acrylate	0.656	0.698	-6.4	106	0.00	14.41
95		isopropylbenzene	1.822	1.891	-3.8	102	0.00	14.93
96		cis-1,4-dichloro-2-butene	0.146	0.154	-5.5	103	0.00	14.97
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.29
98	S	4-bromofluorobenzene (s)	0.829	0.787	5.1	97	0.00	15.13

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

99	bromobenzene	0.998	0.948	5.0	102	0.00	15.31
100	1,1,2,2-tetrachloroethane	0.765	0.739	3.4	105	0.00	15.21
101	trans-1,4-dichloro-2-bute	0.170	0.194	-14.1	118	0.00	15.24
102	1,2,3-trichloropropane	0.194	0.192	1.0	105	0.00	15.29
103	n-propylbenzene	3.859	3.758	2.6	104	0.00	15.35
104	2-chlorotoluene	0.879	0.835	5.0	100	0.00	15.48
105	4-chlorotoluene	2.450	2.397	2.2	104	0.00	15.59
106	1,3,5-trimethylbenzene	2.840	2.761	2.8	101	0.00	15.50
107	tert-butylbenzene	0.502	0.517	-3.0	101	0.00	15.84
108	1,2,4-trimethylbenzene	2.925	2.983	-2.0	105	0.00	15.88
109	sec-butylbenzene	3.543	3.572	-0.8	104	0.00	16.05
110	1,3-dichlorobenzene	1.846	1.857	-0.6	107	0.00	16.22
111	p-isopropyltoluene	3.120	3.207	-2.8	105	0.00	16.18
112	1,4-dichlorobenzene	1.901	1.868	1.7	108	0.00	16.31
113	1,2-dichlorobenzene	1.891	1.851	2.1	106	0.00	16.68
114	n-butylbenzene	1.627	1.658	-1.9	105	0.00	16.59
115	1,2-dibromo-3-chloropropa	0.178	0.183	-2.8	111	0.00	17.45
116	1,3,5-trichlorobenzene	1.787	1.871	-4.7	108	0.00	17.64
117	1,2,4-trichlorobenzene	1.508	1.590	-5.4	108	0.00	18.29
118	hexachlorobutadiene	0.926	0.902	2.6	104	0.00	18.41
119	naphthalene	2.338	2.710	-15.9	112	0.00	18.59
120	1,2,3-trichlorobenzene	1.306	1.443	-10.5	110	0.00	18.83
121	hexachloroethane	0.555	0.582	-4.9	104	0.00	16.98
122	benzyl chloride	1.390	1.768	-27.2	136	0.00	16.41
		True	Calc.	% Drift			
123	2-ethylhexyl acrylate	10.000	9.866	1.3	117	0.00	18.30
		AvgRF	CCRF	% Dev			
124	2-methylnaphthalene	1.174	1.293	-10.1	119	0.00	19.84
125	bis(chloromethyl)ether		NA				
126	ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Thu Apr 25 12:25:26 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184725.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\VY8014\Y184725.D Vial: 15
Acq On : 24 Apr 2019 8:55 pm Operator: ROBERTS
Sample : ICV8014-50 Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	9.97
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		vinyl bromide		----------NA----------				
14		trichlorofluoromethane		----------NA----------				
15		ethyl ether		----------NA----------				
16		2-chloropropane		----------NA----------				
17		acrolein		----------NA----------				
18		freon 113		----------NA----------				
19		1,1-dichloroethene		----------NA----------				
20		acetone		----------NA----------				
21		acetonitrile	0.060	0.054	10.0	98	0.00	7.50
22		iodomethane		----------NA----------				
23		carbon disulfide		----------NA----------				
24		methylene chloride		----------NA----------				
25		methyl acetate		----------NA----------				
26		methyl tert butyl ether		----------NA----------				
27		trans-1,2-dichloroethene		----------NA----------				
28		hexane		----------NA----------				
29		di-isopropyl ether		----------NA----------				
30		ethyl tert-butyl ether		----------NA----------				
31		2-butanone		----------NA----------				
32		1,1-dichloroethane		----------NA----------				
33		chloroprene		----------NA----------				
34		acrylonitrile	0.153	0.127	17.0	87	0.00	8.07
35		vinyl acetate		----------NA----------				
36		ethyl acetate		----------NA----------				
37		2,2-dichloropropane		----------NA----------				
38		cis-1,2-dichloroethene		----------NA----------				
39		propionitrile		----------NA----------				
40		bromochloromethane		----------NA----------				
41		tetrahydrofuran		----------NA----------				

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184725.D

42		chloroform		----------NA----------					
43		tert-butyl formate		----------NA----------					
44		isobutyl alcohol		----------NA----------					
45	S	dibromofluoromethane (s)	0.454	0.458	-0.9	104	0.00	10.01	
46		methacrylonitrile		----------NA----------					
47		1,1,1-trichloroethane		----------NA----------					
48		cyclohexane		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		tert-amyl alcohol		----------NA----------					
51		carbon tetrachloride		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	10.91	
53	S	1,2-dichloroethane-d4 (s)	0.279	0.283	-1.4	106	0.00	10.43	
54		2,2,4-trimethylpentane		----------NA----------					
55		tert-amyl methyl ether		----------NA----------					
56		n-butyl alcohol		----------NA----------					
57		benzene		----------NA----------					
58		heptane		----------NA----------					
59		isopropyl acetate		----------NA----------					
60		1,2-dichloroethane		----------NA----------					
61		trichloroethene		----------NA----------					
62		ethyl acrylate		----------NA----------					
63		2-nitropropane		----------NA----------					
64		2-chloroethyl vinyl ether		----------NA----------					
65		methyl methacrylate		----------NA----------					
66		1,2-dichloropropane		----------NA----------					
67		methylcyclohexane		----------NA----------					
68		dibromomethane		----------NA----------					
69		bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71		cis-1,3-dichloropropene		----------NA----------					
72		4-methyl-2-pentanone		----------NA----------					
73		3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	112	0.00	13.99	
75	S	toluene-d8 (s)	1.265	1.242	1.8	106	0.00	12.51	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		2-hexanone		----------NA----------					
81		tetrachloroethene	0.437	0.402	8.0	103	0.00	13.12	
82		1,3-dichloropropane		----------NA----------					
83		butyl acetate		----------NA----------					
84		dibromochloromethane		----------NA----------					
85		1,2-dibromoethane		----------NA----------					
86		n-butyl ether		----------NA----------					
87		chlorobenzene		----------NA----------					
88		1,1,1,2-tetrachloroethane		----------NA----------					
89		ethylbenzene		----------NA----------					
90		m,p-xylene		----------NA----------					
91		o-xylene		----------NA----------					
92		styrene		----------NA----------					
93		bromoform		----------NA----------					
94		butyl acrylate		----------NA----------					
95		isopropylbenzene		----------NA----------					
96		cis-1,4-dichloro-2-butene		----------NA----------					
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	16.29	
98	S	4-bromofluorobenzene (s)	0.829	0.826	0.4	107	0.00	15.13	

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184725.D

99	bromobenzene	----------NA----------	
100	1,1,2,2-tetrachloroethane	----------NA----------	
101	trans-1,4-dichloro-2-bute	----------NA----------	
102	1,2,3-trichloropropane	----------NA----------	
103	n-propylbenzene	----------NA----------	
104	2-chlorotoluene	----------NA----------	
105	4-chlorotoluene	----------NA----------	
106	1,3,5-trimethylbenzene	----------NA----------	
107	tert-butylbenzene	----------NA----------	
108	1,2,4-trimethylbenzene	----------NA----------	
109	sec-butylbenzene	----------NA----------	
110	1,3-dichlorobenzene	----------NA----------	
111	p-isopropyltoluene	----------NA----------	
112	1,4-dichlorobenzene	----------NA----------	
113	1,2-dichlorobenzene	----------NA----------	
114	n-butylbenzene	----------NA----------	
115	1,2-dibromo-3-chloropropa	----------NA----------	
116	1,3,5-trichlorobenzene	----------NA----------	
117	1,2,4-trichlorobenzene	----------NA----------	
118	hexachlorobutadiene	----------NA----------	
119	naphthalene	----------NA----------	
120	1,2,3-trichlorobenzene	----------NA----------	
121	hexachloroethane	----------NA----------	
122	benzyl chloride	----------NA----------	
	---------- True	Calc.	% Drift ----------
123	2-ethylhexyl acrylate	----------NA----------	
	---------- AvgRF	CCRF	% Dev ----------
124	2-methylnaphthalene	----------NA----------	
125	bis(chloromethyl)ether	----------NA----------	
126	ethylenimine	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Thu Apr 25 12:25:26 2019 RPT1

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8016-CC8014
Lab FileID: Y184755.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...9-19\vy8016\y184755.d Vial: 3
Acq On : 26 Apr 2019 8:08 am Operator: EddieH
Sample : cc8014-50 Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	105	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.558	1.362	12.6	89	0.00	7.84
4		1,4-dioxane	0.154	0.130	15.6	84	0.00	11.55
5	I	pentafluorobenzene	1.000	1.000	0.0	82	0.00	9.97
6		chlorodifluoromethane	0.788	0.856	-8.6	92	-0.01	4.37
7		dichlorodifluoromethane	0.990	1.021	-3.1	86	-0.01	4.34
8		chloromethane	1.042	0.956	8.3	83	0.00	4.74
9		vinyl chloride	0.857	0.934	-9.0	94	-0.01	4.98
10		1,3-butadiene	0.531	0.594	-11.9	96	0.00	5.03
11		bromomethane	0.726	0.705	2.9	87	-0.01	5.62
12		chloroethane	0.464	0.483	-4.1	88	-0.01	5.80
13		vinyl bromide	0.402	0.442	-10.0	89	-0.01	6.15
14		trichlorofluoromethane	0.988	1.098	-11.1	97	0.00	6.27
15		ethyl ether	0.242	0.252	-4.1	79	0.00	6.63
16		2-chloropropane	0.214	0.235	-9.8	89	0.00	6.86
17		acrolein	0.067	0.080	-19.4	97	-0.01	6.87
18		freon 113	0.463	0.581	-25.5#	100	0.00	7.09
19		1,1-dichloroethene	0.768	0.893	-16.3	90	0.00	7.07
20		acetone	0.122	0.118	3.3	84	-0.02	7.06
21		acetonitrile	0.060	0.059	1.7	85	0.00	7.51
22		iodomethane	0.969	1.023	-5.6	85	0.00	7.33
23		carbon disulfide	1.681	1.795	-6.8	91	0.00	7.47
24		methylene chloride	0.667	0.647	3.0	85	0.00	7.78
25		methyl acetate	0.283	0.276	2.5	83	0.00	7.52
26		methyl tert butyl ether	1.541	1.529	0.8	83	0.00	8.14
27		trans-1,2-dichloroethene	0.761	0.780	-2.5	85	0.00	8.16
28		hexane	0.672	0.765	-13.8	92	0.00	8.51
29		di-isopropyl ether	1.918	1.848	3.6	78	0.00	8.72
30		ethyl tert-butyl ether	1.745	1.735	0.6	80	0.00	9.18
31		2-butanone	0.040	0.042	-5.0	89	0.00	9.38
32		1,1-dichloroethane	0.955	0.958	-0.3	83	0.00	8.73
33		chloroprene	0.684	0.731	-6.9	87	0.00	8.83
34		acrylonitrile	0.153	0.149	2.6	81	0.00	8.06
35		vinyl acetate	0.076	0.075	1.3	82	0.00	8.67
36		ethyl acetate	0.054	0.051	5.6	78	0.00	9.38
37		2,2-dichloropropane	0.825	0.936	-13.5	96	-0.01	9.48
38		cis-1,2-dichloroethene	0.628	0.622	1.0	84	0.00	9.45
39		propionitrile	0.054	0.054	0.0	85	0.00	9.46
40		bromochloromethane	0.393	0.400	-1.8	84	0.00	9.74
41		tetrahydrofuran	0.048	0.053	-10.4	95	0.00	9.77

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VY8016-CC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184755.D
Project: National Grid, Philly Coke, Philadelphia, PA

42		chloroform	1.015	0.980	3.4	84	0.00	9.82
43		tert-butyl formate	0.383	0.385	-0.5	83	0.00	9.87
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.454	0.492	-8.4	90	0.00	10.02
46		methacrylonitrile	0.145	0.150	-3.4	87	0.00	9.66
47		1,1,1-trichloroethane	0.875	0.974	-11.3	94	0.00	10.09
48		cyclohexane	0.870	0.880	-1.1	85	0.00	10.20
49		1,1-dichloropropene	0.619	0.693	-12.0	92	0.00	10.26
50		tert-amyl alcohol	0.018	0.018	0.0	87	0.00	10.38
51		carbon tetrachloride	0.761	0.886	-16.4	99	0.00	10.29
52	I	1,4-difluorobenzene	1.000	1.000	0.0	86	0.00	10.91
53	S	1,2-dichloroethane-d4 (s)	0.279	0.268	3.9	85	0.00	10.44
54		2,2,4-trimethylpentane	1.371	1.518	-10.7	90	0.00	10.60
55		tert-amyl methyl ether	1.122	1.078	3.9	82	0.00	10.58
56		n-butyl alcohol	0.006	0.006	0.0	85	0.00	10.95
57		benzene	1.444	1.371	5.1	85	0.00	10.50
58		heptane	0.246	0.258	-4.9	90	0.00	10.75
59		isopropyl acetate	0.059	0.058	1.7	85	0.00	10.40
60		1,2-dichloroethane	0.464	0.420	9.5	81	0.00	10.53
61		trichloroethene	0.375	0.393	-4.8	92	0.00	11.21
62		ethyl acrylate	0.309	0.283	8.4	82	0.00	11.19
63		2-nitropropane	0.100	0.092	8.0	83	0.00	11.96
64		2-chloroethyl vinyl ether	0.171	0.160	6.4	82	0.00	11.98
65		methyl methacrylate	0.068	0.064	5.9	85	0.00	11.45
66		1,2-dichloropropane	0.368	0.341	7.3	80	0.00	11.50
67		methylcyclohexane	0.596	0.645	-8.2	93	0.00	11.51
68		dibromomethane	0.215	0.201	6.5	82	0.00	11.61
69		bromodichloromethane	0.514	0.480	6.6	81	0.00	11.75
70		epichlorohydrin	0.026	0.024	7.7	84	0.00	12.07
71		cis-1,3-dichloropropene	0.559	0.527	5.7	80	0.00	12.20
72		4-methyl-2-pentanone	0.101	0.096	5.0	84	0.00	12.30
73		3-methyl-1-butanol	0.008	0.008	0.0	88	0.00	12.29
74	I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	13.99
75	S	toluene-d8 (s)	1.265	1.174	7.2	88	0.00	12.51
76		toluene	0.963	0.823	14.5	84	0.00	12.58
77		trans-1,3-dichloropropene	0.556	0.474	14.7	81	0.00	12.76
78		ethyl methacrylate	0.389	0.335	13.9	82	0.00	12.74
79		1,1,2-trichloroethane	0.275	0.230	16.4	83	0.00	12.98
80		2-hexanone	0.103	0.091	11.7	85	0.00	13.13
81		tetrachloroethene	0.437	0.426	2.5	95	0.00	13.12
82		1,3-dichloropropane	0.512	0.421	17.8	81	0.00	13.15
83		butyl acetate	0.199	0.172	13.6	84	0.00	13.20
84		dibromochloromethane	0.412	0.376	8.7	85	0.00	13.39
85		1,2-dibromoethane	0.433	0.374	13.6	85	0.00	13.55
86		n-butyl ether	1.590	1.403	11.8	84	0.00	13.97
87		chlorobenzene	1.158	0.964	16.8	84	0.00	14.02
88		1,1,1,2-tetrachloroethane	0.457	0.422	7.7	88	0.00	14.08
89		ethylbenzene	1.809	1.625	10.2	88	0.00	14.07
90		m,p-xylene	0.705	0.629	10.8	88	0.00	14.20
91		o-xylene	1.516	1.351	10.9	85	0.00	14.59
92		styrene	1.199	1.064	11.3	84	0.00	14.60
93		bromoform	0.280	0.254	9.3	88	0.00	14.83
94		butyl acrylate	0.656	0.575	12.3	85	0.00	14.41
95		isopropylbenzene	1.822	1.717	5.8	90	0.00	14.93
96		cis-1,4-dichloro-2-butene	0.146	0.138	5.5	90	0.00	14.97
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	16.29
98	S	4-bromofluorobenzene (s)	0.829	0.767	7.5	97	0.00	15.14

Continuing Calibration Summary

Job Number: JC86406 **Sample:** VY8016-CC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184755.D
Project: National Grid, Philly Coke, Philadelphia, PA

99	bromobenzene	0.998	0.761	23.7#	83	0.00	15.32
100	1,1,2,2-tetrachloroethane	0.765	0.592	22.6#	86	0.00	15.21
101	trans-1,4-dichloro-2-bute	0.170	0.148	12.9	92	0.00	15.24
102	1,2,3-trichloropropane	0.194	0.156	19.6	87	0.00	15.29
103	n-propylbenzene	3.859	3.219	16.6	91	0.00	15.35
104	2-chlorotoluene	0.879	0.720	18.1	88	0.00	15.48
105	4-chlorotoluene	2.450	1.943	20.7#	86	0.00	15.59
106	1,3,5-trimethylbenzene	2.840	2.395	15.7	89	0.00	15.50
107	tert-butylbenzene	0.502	0.460	8.4	91	0.00	15.84
108	1,2,4-trimethylbenzene	2.925	2.453	16.1	88	0.00	15.88
109	sec-butylbenzene	3.543	3.114	12.1	92	0.00	16.05
110	1,3-dichlorobenzene	1.846	1.539	16.6	91	0.00	16.22
111	p-isopropyltoluene	3.120	2.754	11.7	92	0.00	16.18
112	1,4-dichlorobenzene	1.901	1.549	18.5	91	0.00	16.31
113	1,2-dichlorobenzene	1.891	1.543	18.4	90	0.00	16.69
114	n-butylbenzene	1.627	1.515	6.9	98	0.00	16.59
115	1,2-dibromo-3-chloropropa	0.178	0.163	8.4	101	0.00	17.45
116	1,3,5-trichlorobenzene	1.787	1.653	7.5	98	0.00	17.64
117	1,2,4-trichlorobenzene	1.508	1.409	6.6	97	0.00	18.29
118	hexachlorobutadiene	0.926	0.832	10.2	98	0.00	18.41
119	naphthalene	2.338	2.306	1.4	97	0.00	18.59
120	1,2,3-trichlorobenzene	1.306	1.251	4.2	97	0.00	18.83
121	hexachloroethane	0.555	0.518	6.7	94	0.00	16.98
122	benzyl chloride	1.390	1.323	4.8	103	0.00	16.41
		True	Calc.	% Drift			
123	2-ethylhexyl acrylate	10.000	7.872	21.3#	93	0.00	18.30
		AvgRF	CCRF	% Dev			
124	2-methylnaphthalene	1.174	1.079	8.1	101	0.00	19.84
125	bis(chloromethyl)ether		NA				
126	ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Mon Apr 29 04:11:40 2019

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225721.d
Acq On : 25 Apr 2019 6:39 pm
Operator : thienn
Sample : jc86406-1 Inst : GCMSI
Misc : MS34034,VI9093,3.6,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:44:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

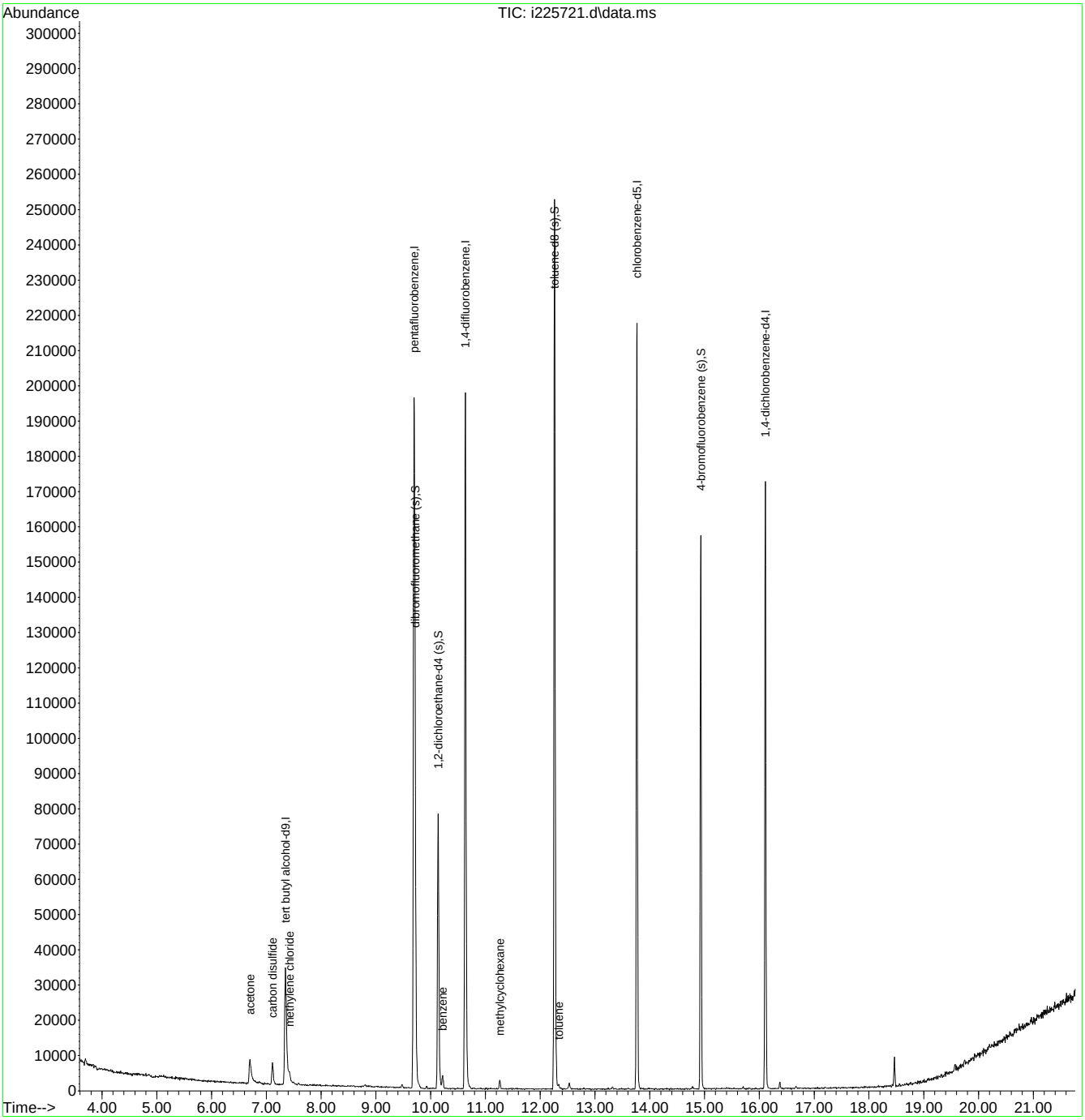
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.348	65	49158	500.00	ug/L		-0.03
4) pentafluorobenzene	9.696	168	120674	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	150209	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.765	117	108535	50.00	ug/L		-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	40948	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.717	113	51081	53.87	ug/L		-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 107.74%				
52) 1,2-dichloroethane-d4 (s)	10.136	65	55563	59.26	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 118.52%				
74) toluene-d8 (s)	12.259	98	155677	55.95	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.90%				
97) 4-bromofluorobenzene (s)	14.932	95	41584	66.59	ug/L		-0.02
Spiked Amount 50.000	Range 79 - 127		Recovery = 133.18%#				
Target Compounds							Qvalue
19) acetone	6.699	43	16157	79.46	ug/L		96
21) carbon disulfide	7.112	76	9572	3.96	ug/L		98
24) methylene chloride	7.421	84	949	1.14	ug/L	#	73
55) benzene	10.219	78	3052	1.04	ug/L		89
62) methylcyclohexane	11.260	83	1058	0.79	ug/L	#	86
75) toluene	12.337	92	400	0.27	ug/L	#	70

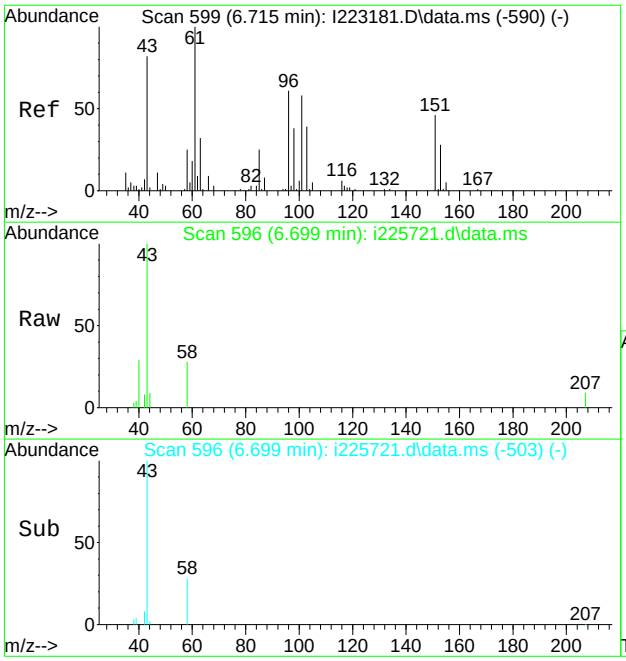
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225721.d
Acq On : 25 Apr 2019 6:39 pm
Operator : thienn
Sample : jc86406-1 Inst : GCMSI
Misc : MS34034,VI9093,3.6,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:44:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

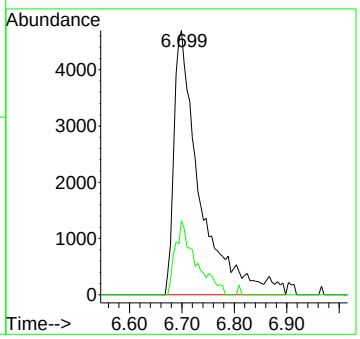


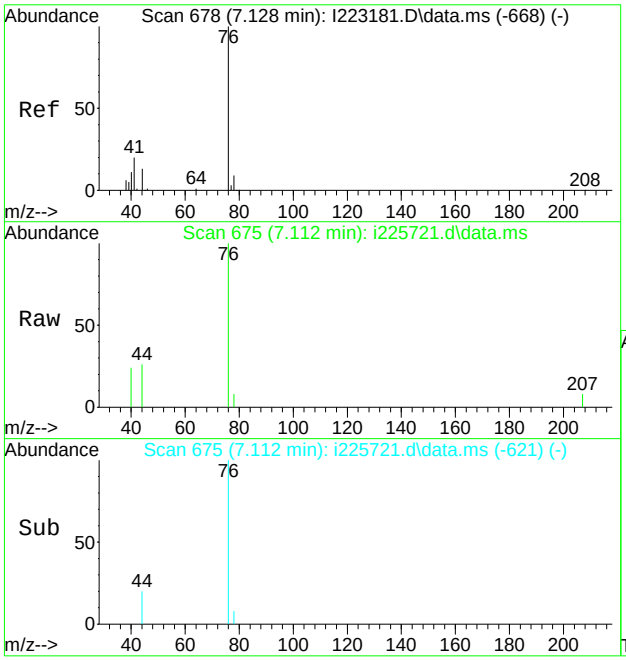


#19
acetone
Concen: 79.46 ug/L
RT: 6.699 min Scan# 596
Delta R.T. -0.016 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 43 Resp: 16157

Ion	Ratio	Lower	Upper
43	100		
58	28.0	0.2	60.2

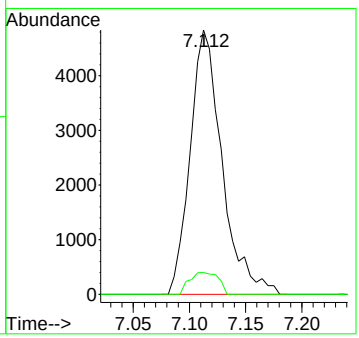


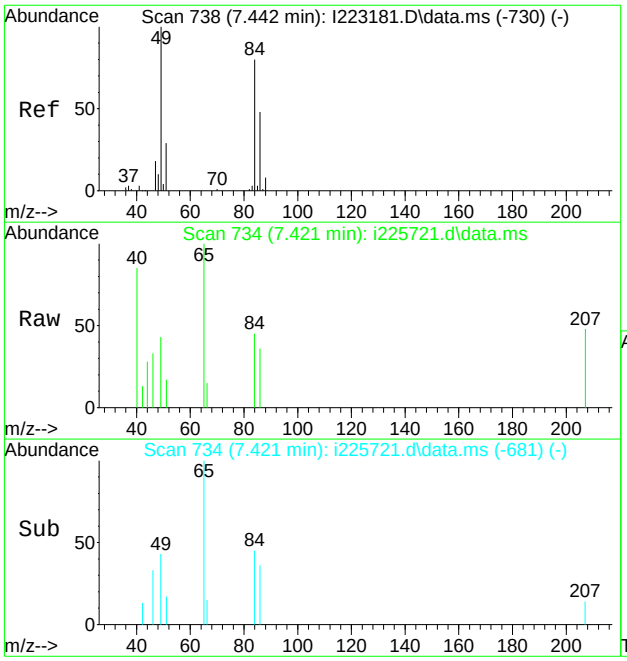


#21
carbon disulfide
Concen: 3.96 ug/L
RT: 7.112 min Scan# 675
Delta R.T. -0.016 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 76 Resp: 9572

Ion	Ratio	Lower	Upper
76	100		
78	8.3	0.0	29.0

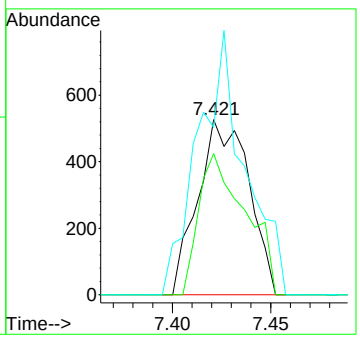


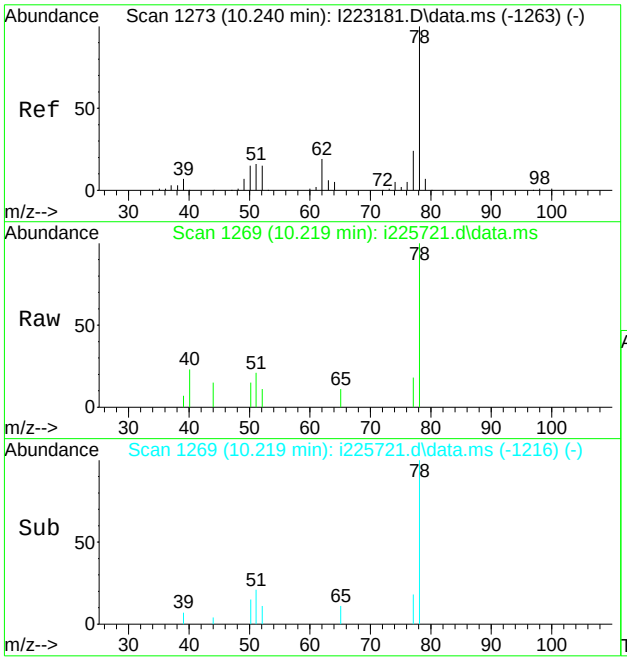


#24
methylene chloride
Concen: 1.14 ug/L
RT: 7.421 min Scan# 734
Delta R.T. -0.021 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 84 Resp: 949

Ion	Ratio	Lower	Upper
84	100		
86	80.6	30.4	90.4
49	95.4	95.7	155.7#

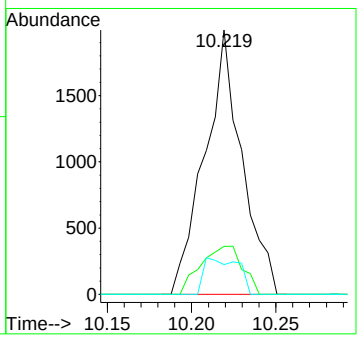


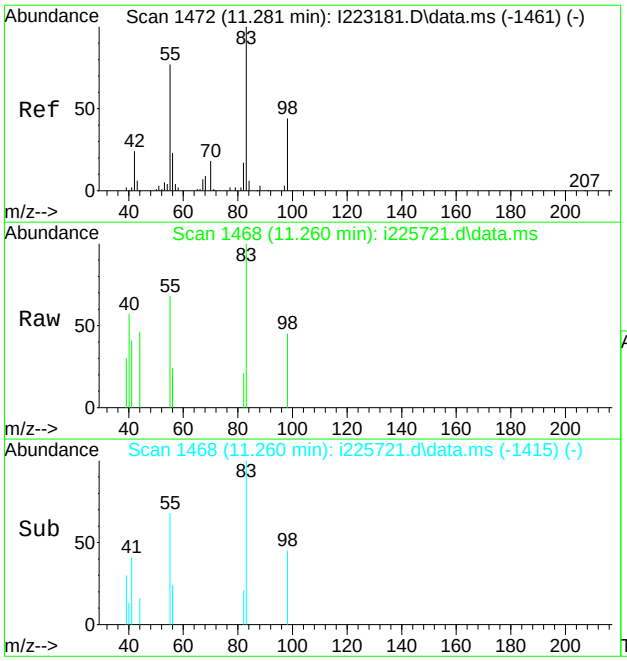


#55
benzene
Concen: 1.04 ug/L
RT: 10.219 min Scan# 1269
Delta R.T. -0.021 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 78 Resp: 3052

Ion	Ratio	Lower	Upper
78	100		
77	18.2	0.0	54.0
52	11.3	0.0	45.4

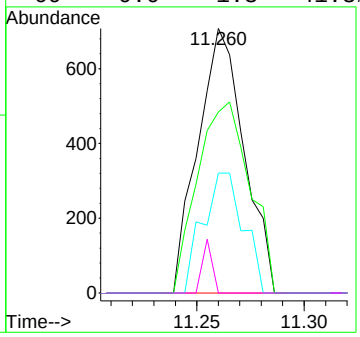


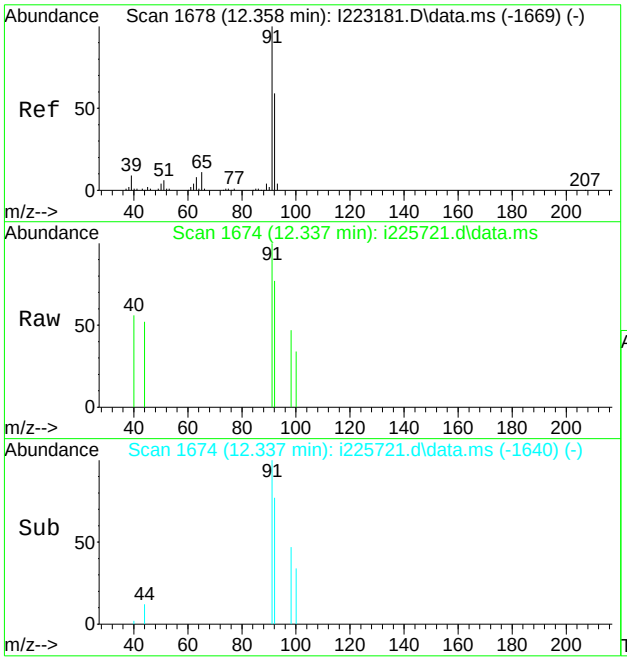


#62
methylcyclohexane
Concen: 0.79 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 83 Resp: 1058

Ion	Ratio	Lower	Upper
83	100		
55	68.4	59.8	99.8
98	45.3	24.4	64.4
69	0.0	1.3	41.3#

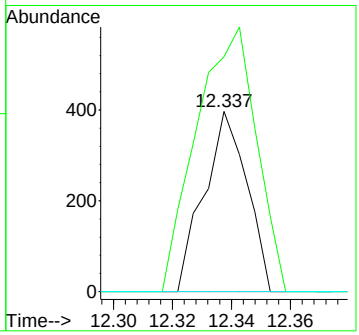




#75
toluene
Concen: 0.27 ug/L
RT: 12.337 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i225721.d
Acq: 25 Apr 2019 6:39 pm

Tgt Ion: 92 Resp: 400

Ion	Ratio	Lower	Upper
92	100		
91	130.2	149.6	189.6#
65	0.0	0.0	38.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44289.d
Acq On : 24 Apr 2019 2:38 pm
Operator : roberts
Sample : jc86406-1 Inst : MS3V
Misc : MS34034,V3V1778,3.8,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:50:37 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

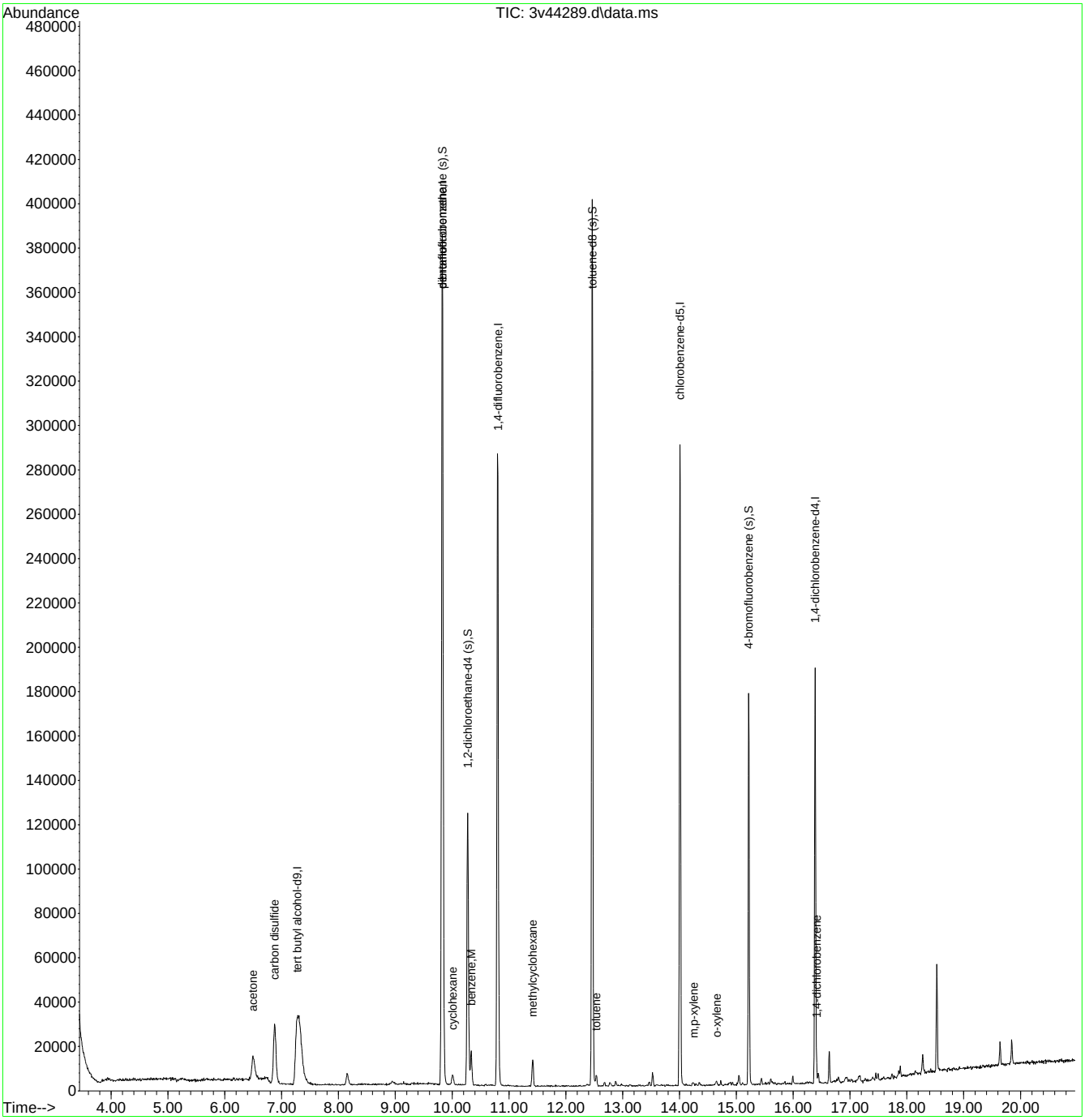
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	118544	500.00	ug/L	-0.03
5) pentafluorobenzene	9.828	168	168727	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.803	114	220664	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	137909	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	40148	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	95149	53.64	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 107.28%			
53) 1,2-dichloroethane-d4 (s)	10.274	65	89087	57.01	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 114.02%			
75) toluene-d8 (s)	12.465	98	230737	67.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 134.64%#			
98) 4-bromofluorobenzene (s)	15.218	95	51261	72.32	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 144.64%#			
Target Compounds						Qvalue
20) acetone	6.493	58	7355	48.24	ug/L	89
23) carbon disulfide	6.876	76	64266	7.63	ug/L	100
47) cyclohexane	10.006	84	1711	0.56	ug/L #	44
55) benzene	10.337	78	13333	1.91	ug/L	96
67) methylcyclohexane	11.411	83	4528	1.55	ug/L	95
76) toluene	12.533	92	1909	0.73	ug/L #	79
90) m,p-xylene	14.248	106	605	0.32	ug/L #	56
91) o-xylene	14.657	106	556	0.28	ug/L #	72
112) 1,4-dichlorobenzene	16.413	146	426	0.28	ug/L	96

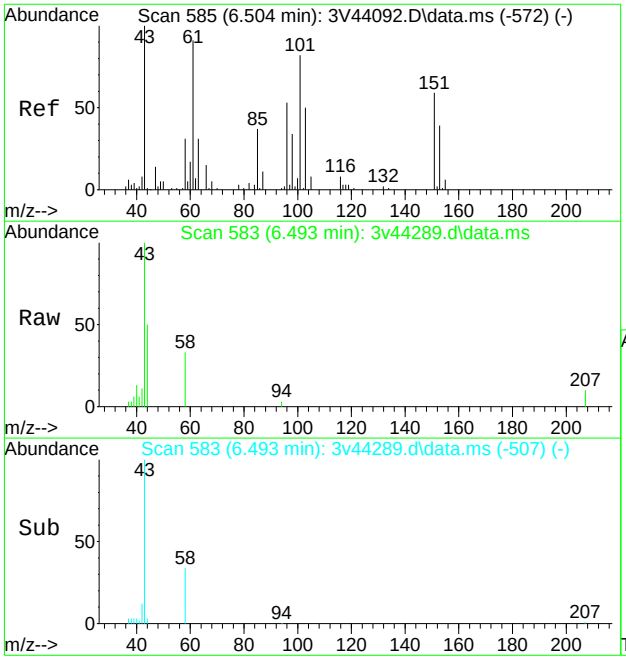
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44289.d
Acq On : 24 Apr 2019 2:38 pm
Operator : roberts
Sample : jc86406-1 Inst : MS3V
Misc : MS34034,V3V1778,3.8,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:50:37 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

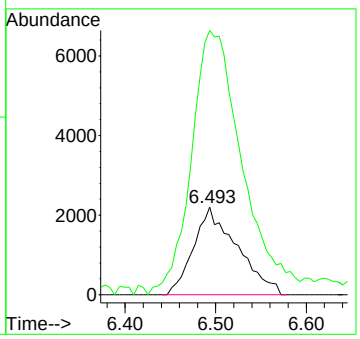


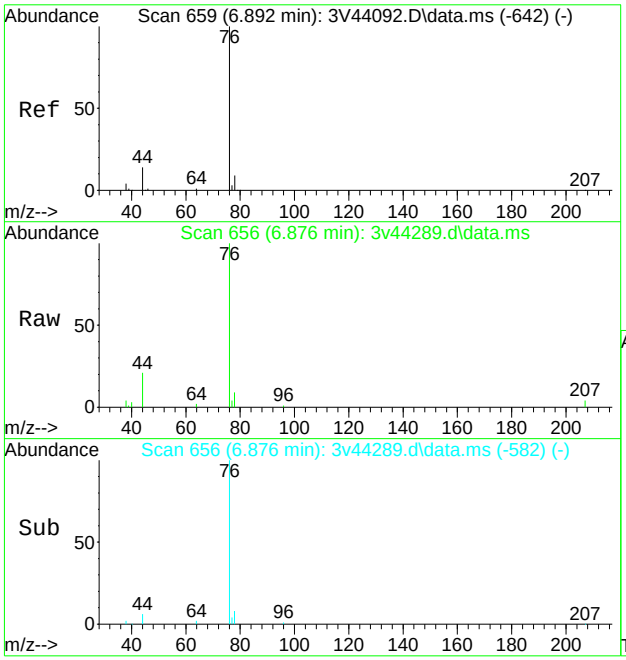


#20
acetone
Concen: 48.24 ug/L
RT: 6.493 min Scan# 583
Delta R.T. 0.000 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 58 Resp: 7355

Ion	Ratio	Lower	Upper
58	100		
43	287.8	279.5	339.5

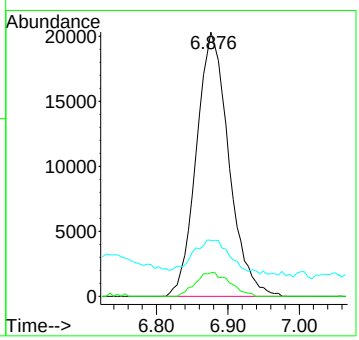


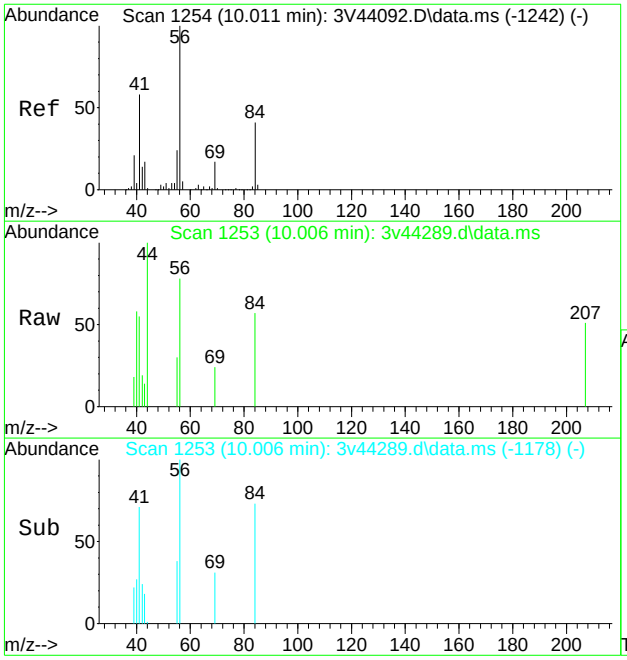


#23
carbon disulfide
Concen: 7.63 ug/L
RT: 6.876 min Scan# 656
Delta R.T. -0.010 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 76 Resp: 64266

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	39.3
44	13.4	0.0	43.4

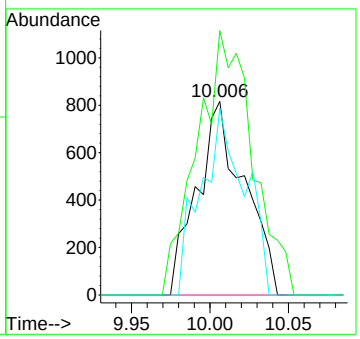


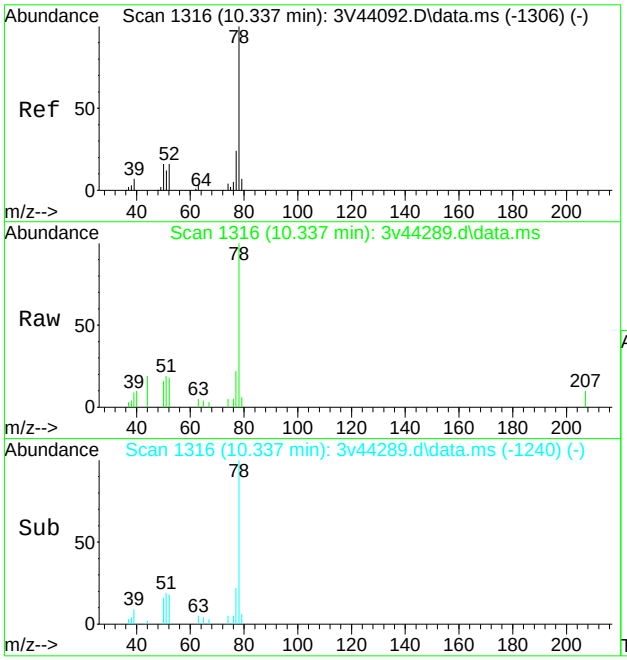


#47
cyclohexane
Concen: 0.56 ug/L
RT: 10.006 min Scan# 1253
Delta R.T. -0.005 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 84 Resp: 1711

Ion	Ratio	Lower	Upper
84	100		
56	136.8	231.2	271.2#
41	96.6	126.7	166.7#

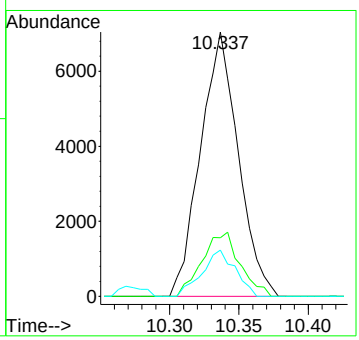


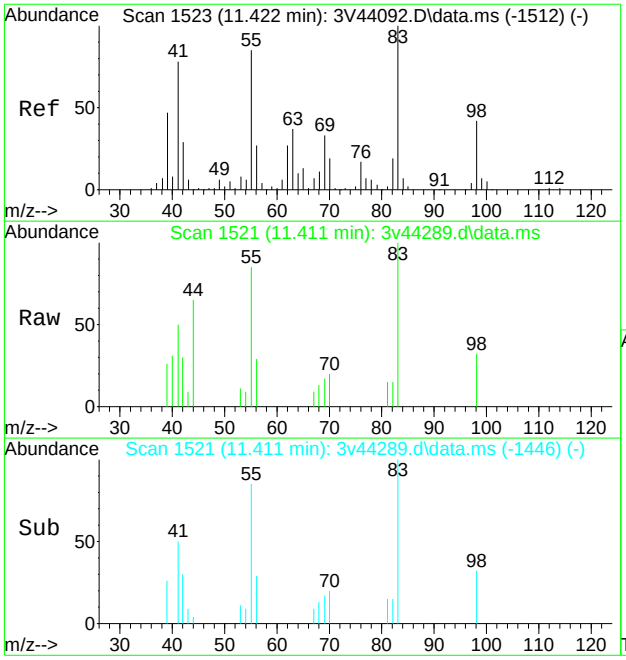


#55
benzene
Concen: 1.91 ug/L
RT: 10.337 min Scan# 1316
Delta R.T. 0.000 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 78 Resp: 13333

Ion	Ratio	Lower	Upper
78	100		
77	22.1	0.0	53.5
52	17.6	0.0	45.6

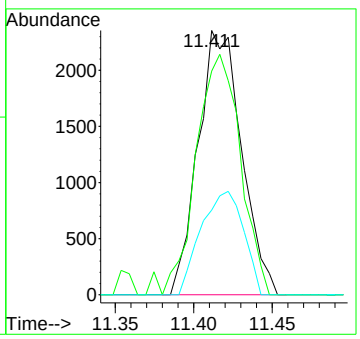


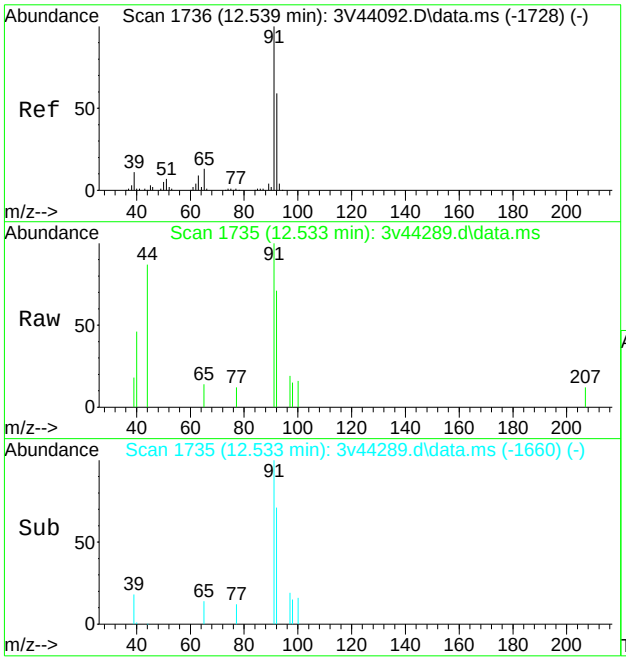


#67
methylcyclohexane
Concen: 1.55 ug/L
RT: 11.411 min Scan# 1521
Delta R.T. -0.005 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 83 Resp: 4528

Ion	Ratio	Lower	Upper
83	100		
55	84.6	55.3	115.3
98	32.0	10.9	70.9

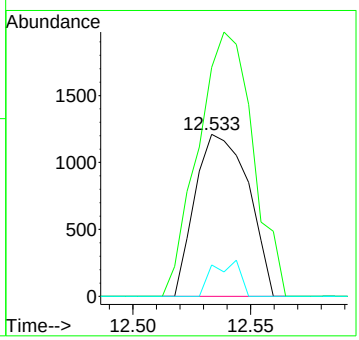


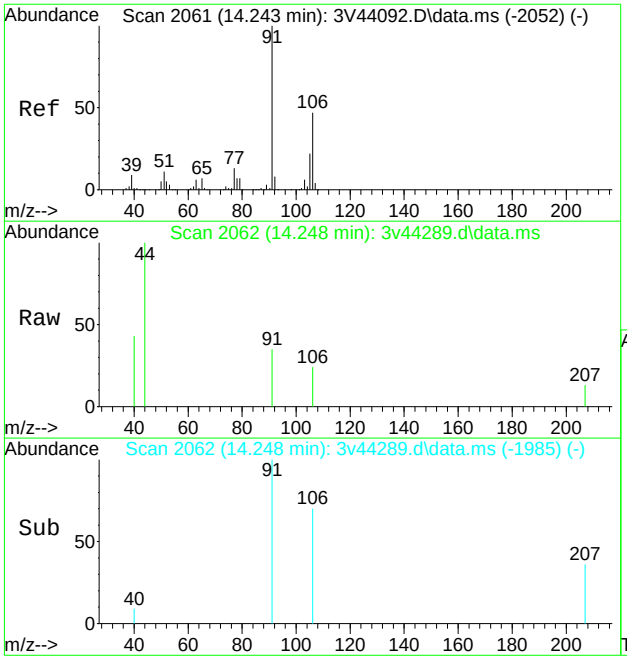


#76
toluene
Concen: 0.73 ug/L
RT: 12.533 min Scan# 1735
Delta R.T. -0.005 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion: 92 Resp: 1909

Ion	Ratio	Lower	Upper
92	100		
91	141.3	153.7	193.7#
65	19.4	1.1	41.1

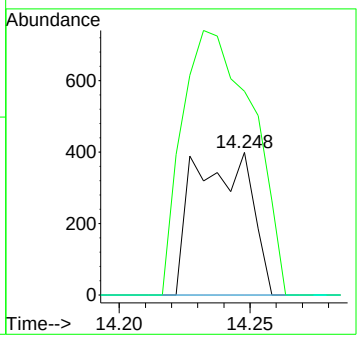


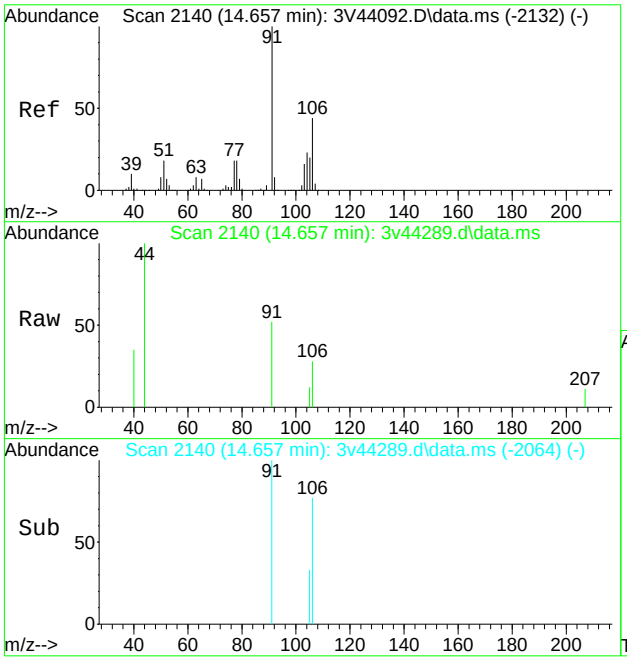


#90
m,p-xylene
Concen: 0.32 ug/L
RT: 14.248 min Scan# 2062
Delta R.T. 0.005 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion:106 Resp: 605

Ion	Ratio	Lower	Upper
106	100		
91	142.9	179.7	239.7#
77	0.0	8.3	48.3#

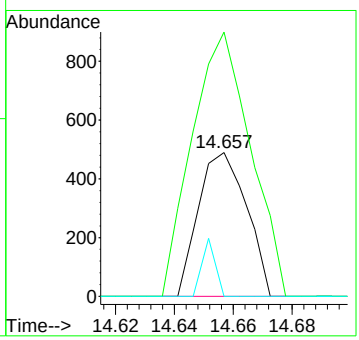


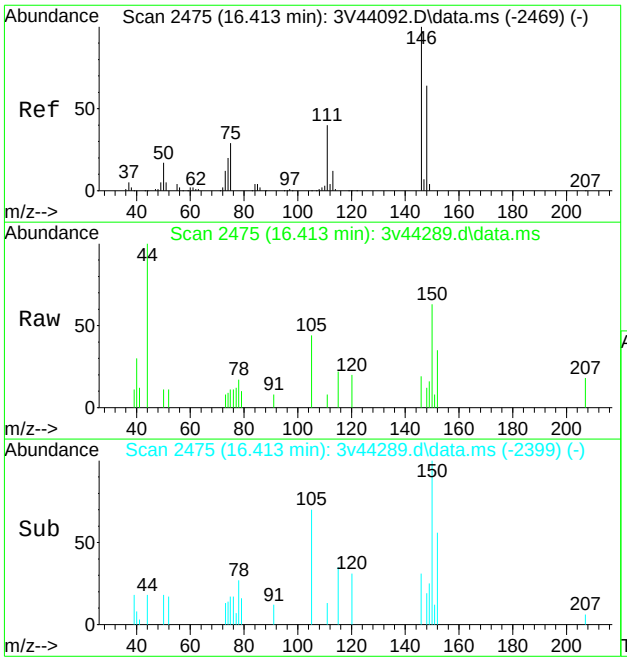


#91
o-xylene
Concen: 0.28 ug/L
RT: 14.657 min Scan# 2140
Delta R.T. 0.000 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion:106 Resp: 556

Ion	Ratio	Lower	Upper
106	100		
91	184.0	184.3	244.3#
77	0.0	25.2	65.2#

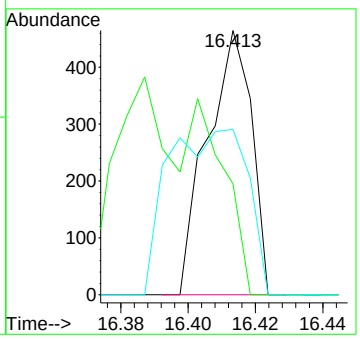




#112
1,4-dichlorobenzene
Concen: 0.28 ug/L
RT: 16.413 min Scan# 2475
Delta R.T. 0.000 min
Lab File: 3v44289.d
Acq: 24 Apr 2019 2:38 pm

Tgt Ion:146 Resp: 426

Ion	Ratio	Lower	Upper
146	100		
111	41.9	8.9	68.9
148	62.6	34.8	94.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264071.d
Acq On : 26 Apr 2019 11:20 am
Operator : juntaep
Sample : JC86406-1 Inst : MSD
Misc : ms34034,vd10644,3.6,,100,10,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 00:59:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

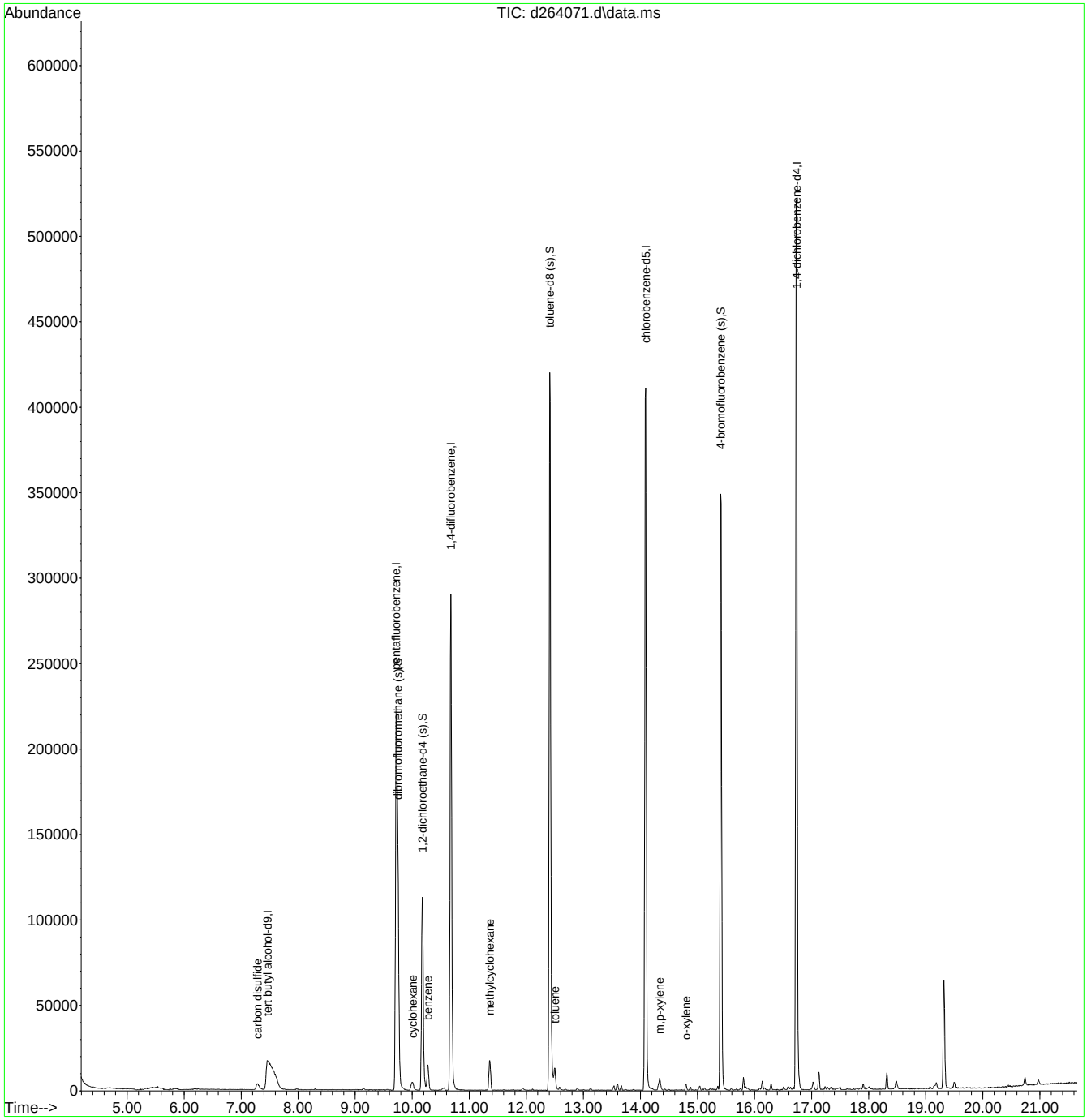
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.463	65	93014	500.00	ug/L	0.00
5) pentafluorobenzene	9.717	168	165988	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	256089	50.00	ug/L	0.00
75) chlorobenzene-d5	14.090	117	254312	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	150656	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.749	113	77579	49.54	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.08%			
55) 1,2-dichloroethane-d4 (s)	10.178	65	87710	45.69	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 91.38%			
76) toluene-d8 (s)	12.411	98	305446	49.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.52%			
100) 4-bromofluorobenzene (s)	15.408	95	131172	46.99	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.98%			
Target Compounds						Qvalue
23) carbon disulfide	7.285	76	10812	1.62	ug/L	95
48) cyclohexane	10.005	84	2441	0.70	ug/L	83
58) benzene	10.272	78	14605	1.88	ug/L	98
66) methylcyclohexane	11.360	83	8030	2.44	ug/L	94
77) toluene	12.500	92	5485	1.13	ug/L	95
91) m,p-xylene	14.335	106	2675	0.73	ug/L	91
92) o-xylene	14.801	91	3008	0.37	ug/L	84

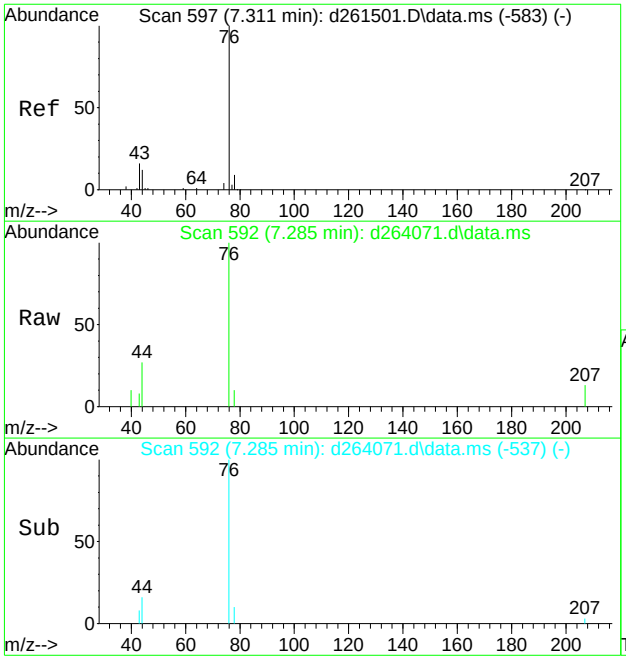
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264071.d
Acq On : 26 Apr 2019 11:20 am
Operator : juntaep
Sample : JC86406-1 Inst : MSD
Misc : ms34034,vd10644,3.6,,100,10,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 00:59:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

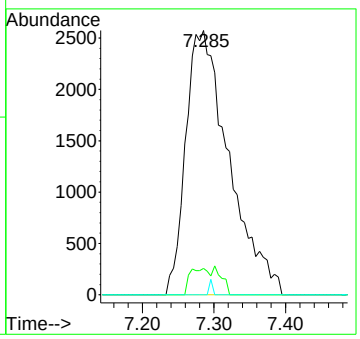


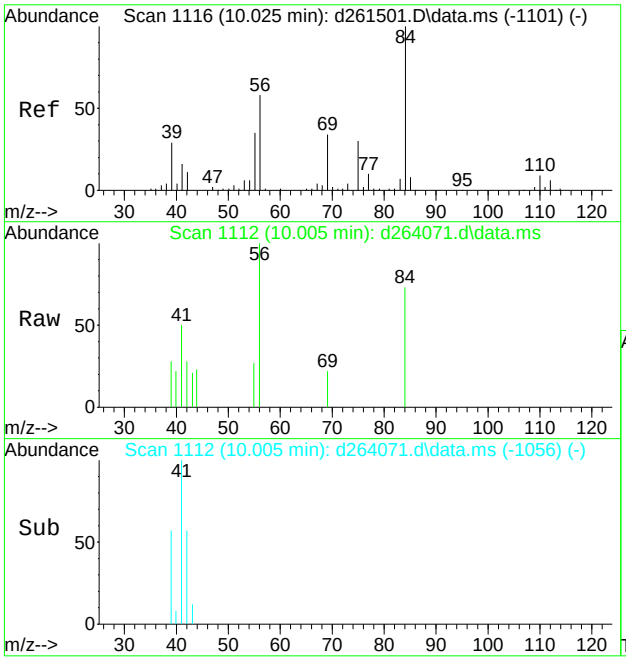


#23
carbon disulfide
Concen: 1.62 ug/L
RT: 7.285 min Scan# 592
Delta R.T. -0.015 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 76 Resp: 10812

Ion	Ratio	Lower	Upper
76	100		
78	9.9	0.0	39.5
38	0.0	0.0	34.3

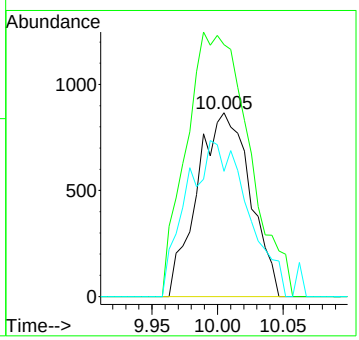


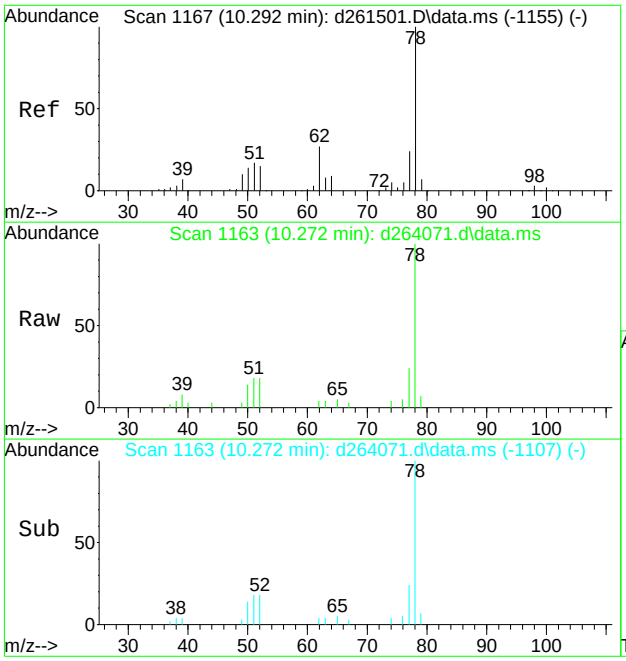


#48
cyclohexane
Concen: 0.70 ug/L
RT: 10.005 min Scan# 1112
Delta R.T. -0.010 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 84 Resp: 2441

Ion	Ratio	Lower	Upper
84	100		
56	137.0	81.8	141.8
41	68.1	33.5	93.5

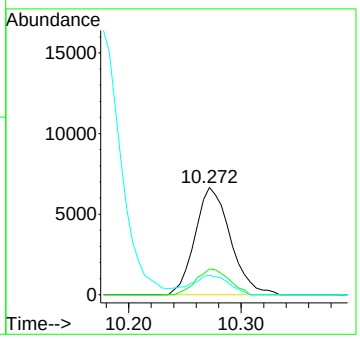


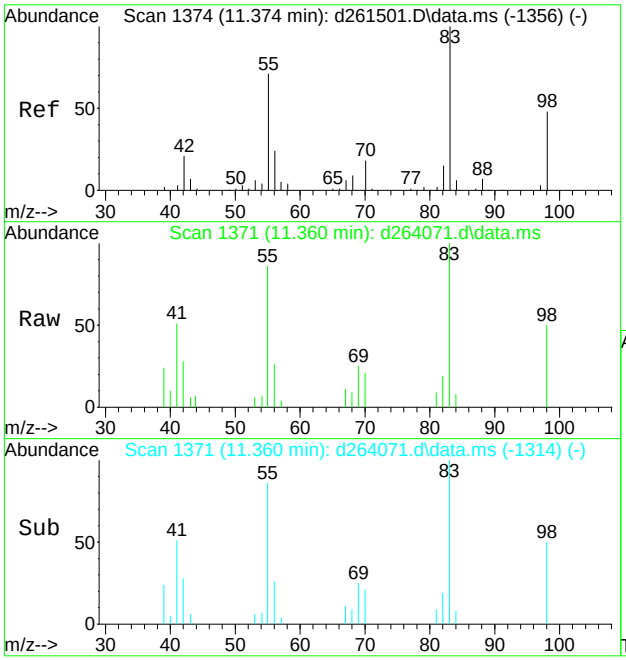


#58
benzene
Concen: 1.88 ug/L
RT: 10.272 min Scan# 1163
Delta R.T. -0.010 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 78 Resp: 14605

Ion	Ratio	Lower	Upper
78	100		
77	24.1	0.0	53.8
51	18.1	0.0	50.1

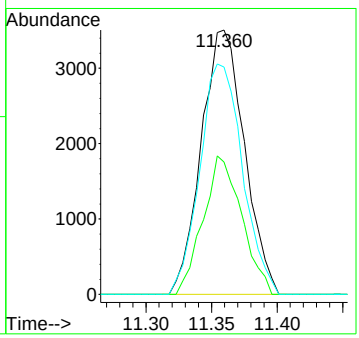


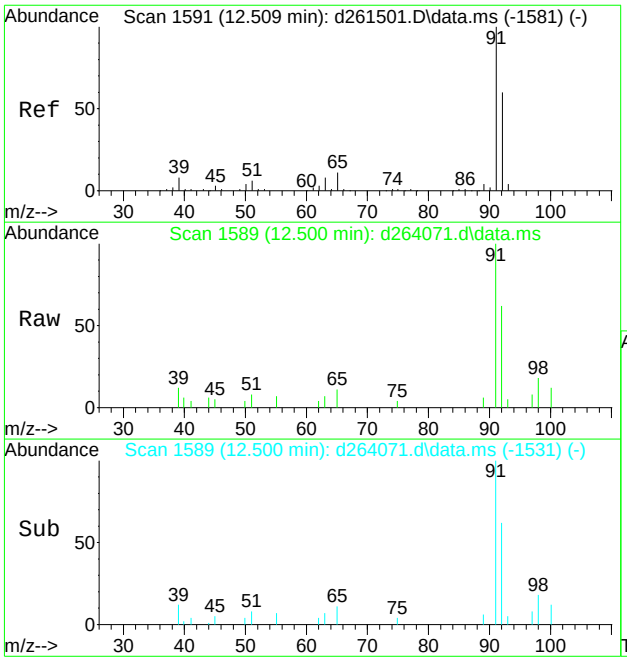


#66
methylcyclohexane
Concen: 2.44 ug/L
RT: 11.360 min Scan# 1371
Delta R.T. -0.004 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 83 Resp: 8030

Ion	Ratio	Lower	Upper
83	100		
98	50.0	27.3	67.3
55	86.0	59.4	99.4

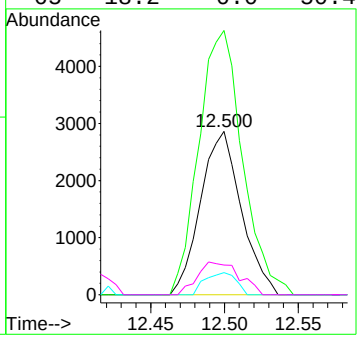


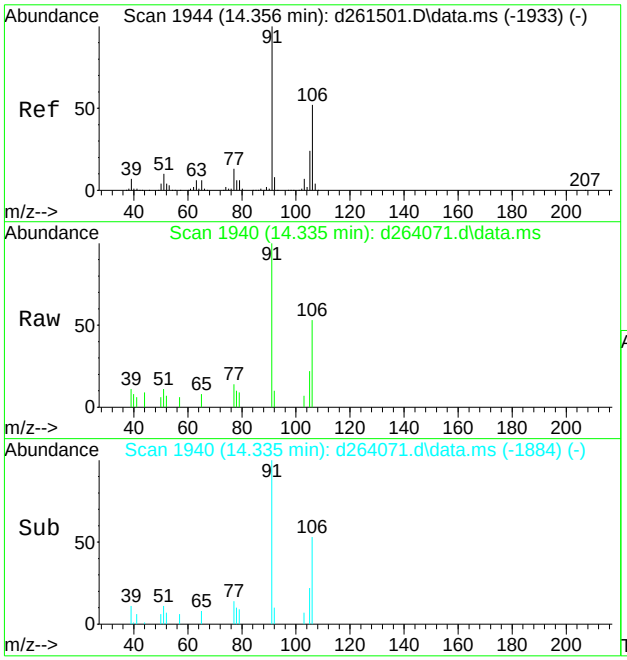


#77
toluene
Concen: 1.13 ug/L
RT: 12.500 min Scan# 1589
Delta R.T. 0.001 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 92 Resp: 5485

Ion	Ratio	Lower	Upper
92	100		
91	161.8	149.2	189.2
51	13.7	0.0	42.2
65	18.2	0.0	50.4

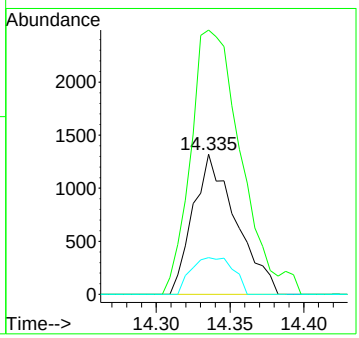


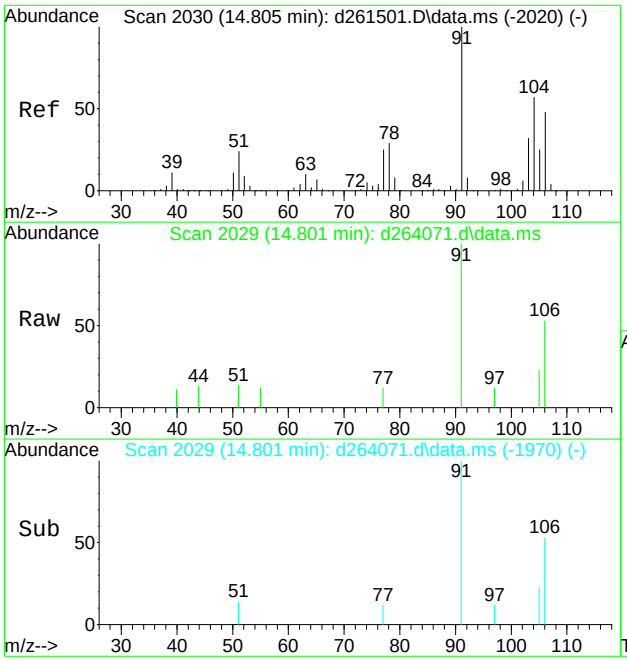


#91
m,p-xylene
Concen: 0.73 ug/L
RT: 14.335 min Scan# 1940
Delta R.T. -0.010 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion:106 Resp: 2675

Ion	Ratio	Lower	Upper
106	100		
91	188.6	173.0	233.0
77	26.2	0.0	57.4

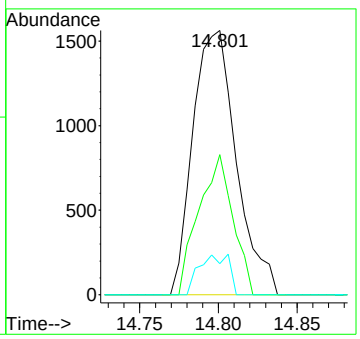




#92
o-xylene
Concen: 0.37 ug/L
RT: 14.801 min Scan# 2029
Delta R.T. 0.006 min
Lab File: d264071.d
Acq: 26 Apr 2019 11:20 am

Tgt Ion: 91 Resp: 3008

Ion	Ratio	Lower	Upper
91	100		
106	53.0	16.5	76.5
77	11.8	0.0	55.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44290.d
Acq On : 24 Apr 2019 3:04 pm
Operator : roberts
Sample : jc86406-2 Inst : MS3V
Misc : MS34034,V3V1778,8.9,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:51:54 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

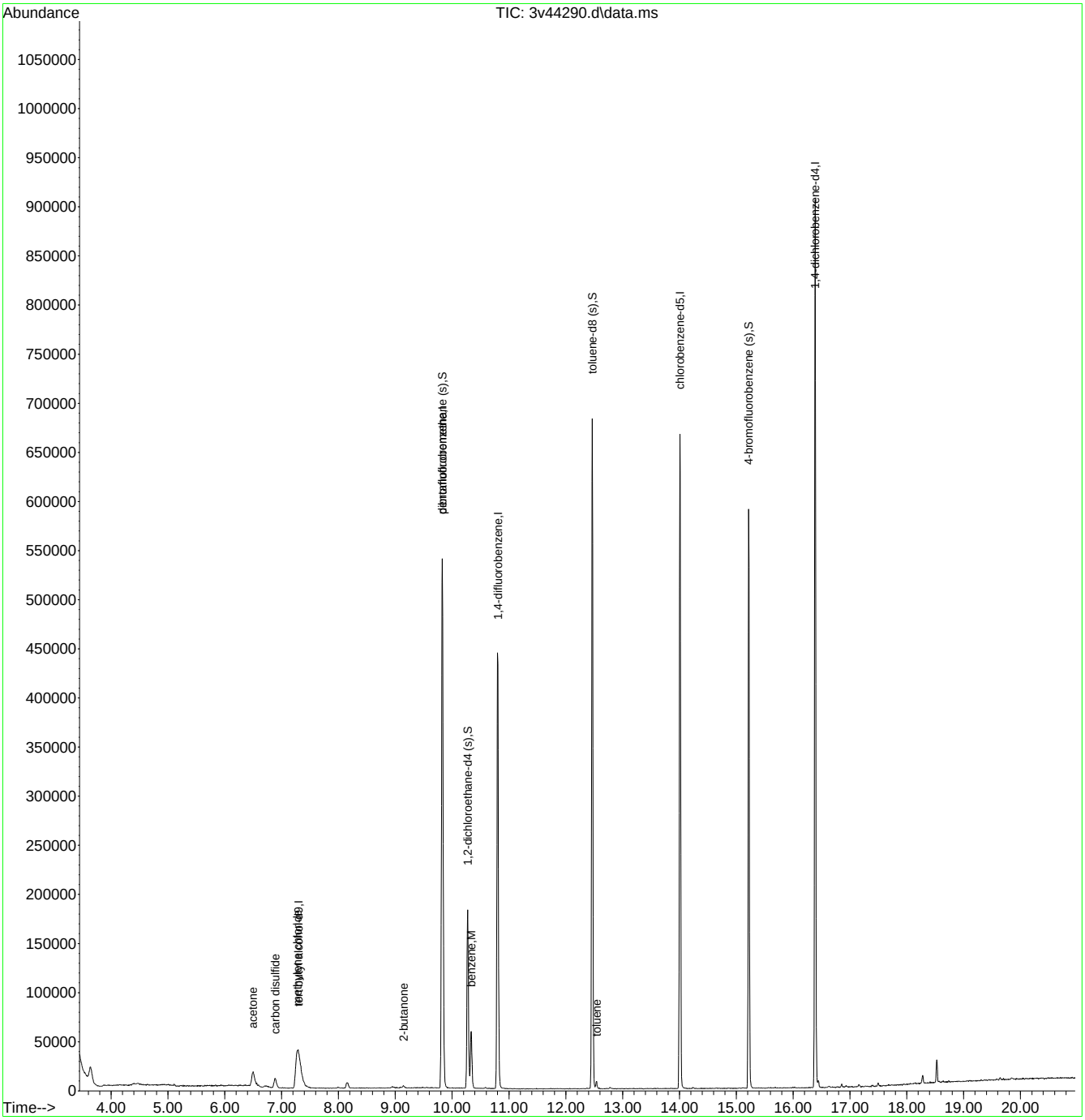
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.296	65	126534	500.00	ug/L		0.00
5) pentafluorobenzene	9.828	168	233573	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	338999	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	316697	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	194807	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	130621	53.19	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.38%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	125844	52.42	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.84%				
75) toluene-d8 (s)	12.465	98	388997	49.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%				
98) 4-bromofluorobenzene (s)	15.218	95	170842	49.67	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.34%				
Target Compounds							Qvalue
20) acetone	6.494	58	9805	46.26	ug/L		88
23) carbon disulfide	6.887	76	23936	2.05	ug/L		98
24) methylene chloride	7.280	84	3636	0.87	ug/L		91
31) 2-butanone	9.147	72	583	2.74	ug/L	#	78
55) benzene	10.337	78	51647	4.81	ug/L		98
76) toluene	12.539	92	2802	0.46	ug/L		93

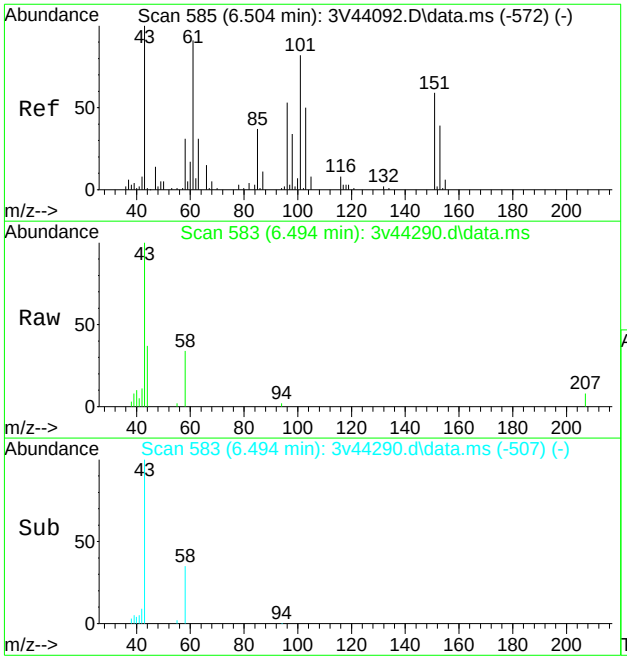
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44290.d
Acq On : 24 Apr 2019 3:04 pm
Operator : roberts
Sample : jc86406-2 Inst : MS3V
Misc : MS34034,V3V1778,8.9,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:51:54 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

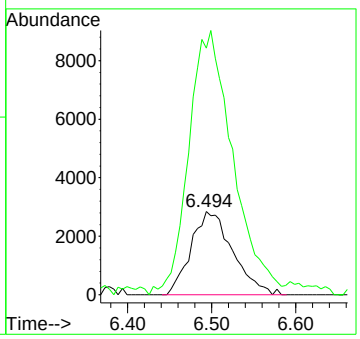


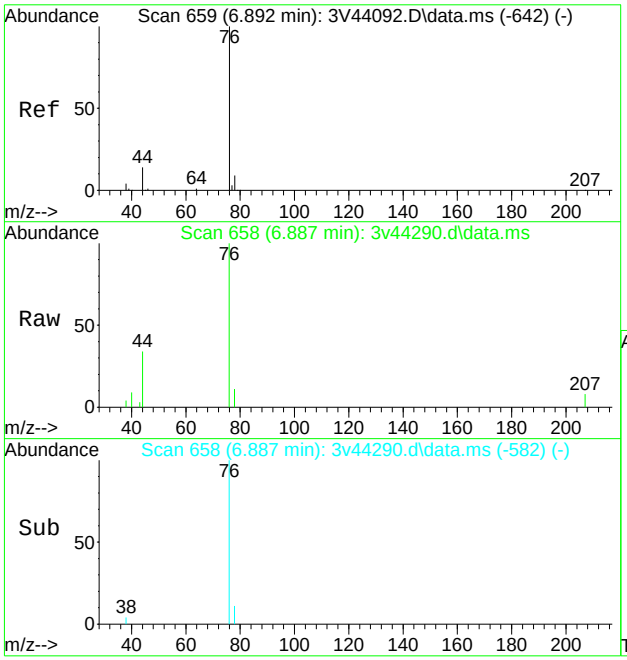


#20
acetone
Concen: 46.26 ug/L
RT: 6.494 min Scan# 583
Delta R.T. 0.000 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 58 Resp: 9805

Ion	Ratio	Lower	Upper
58	100		
43	286.0	279.5	339.5

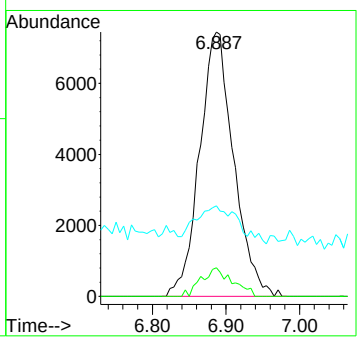


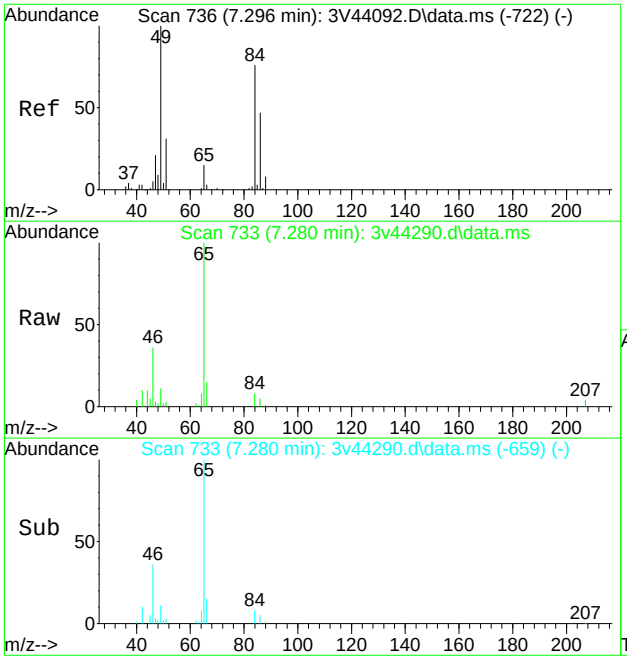


#23
carbon disulfide
Concen: 2.05 ug/L
RT: 6.887 min Scan# 658
Delta R.T. 0.000 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 76 Resp: 23936

Ion	Ratio	Lower	Upper
76	100		
78	10.8	0.0	39.3
44	13.0	0.0	43.4

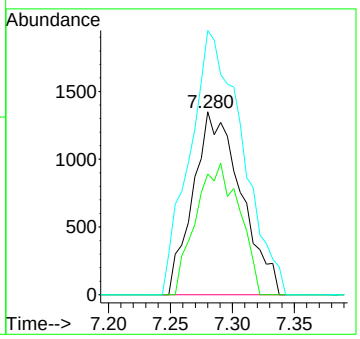


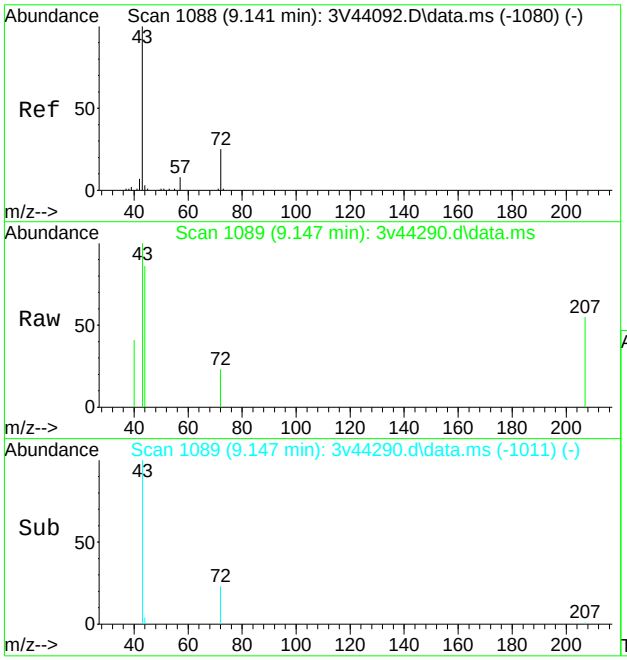


#24
methylene chloride
Concen: 0.87 ug/L
RT: 7.280 min Scan# 733
Delta R.T. -0.010 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 84 Resp: 3636

Ion	Ratio	Lower	Upper
84	100		
86	66.0	33.8	93.8
49	144.4	101.0	161.0

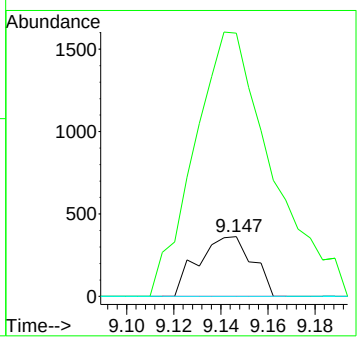


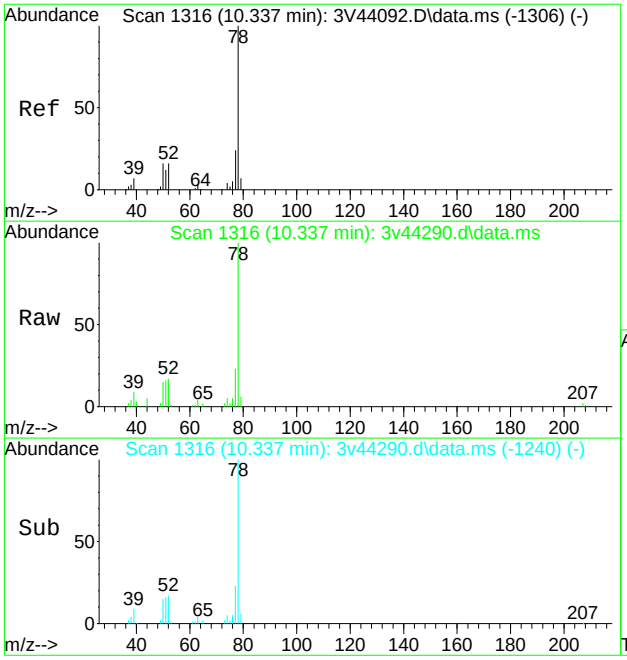


#31
2-butanone
Concen: 2.74 ug/L
RT: 9.147 min Scan# 1089
Delta R.T. 0.011 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 72 Resp: 583

Ion	Ratio	Lower	Upper
72	100		
43	366.7	384.9	444.9#
57	0.0	1.1	61.1#

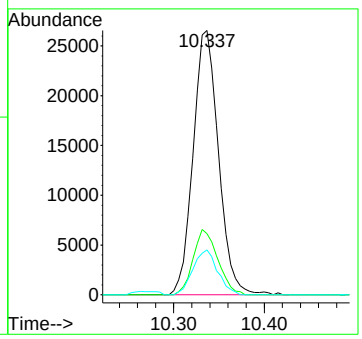


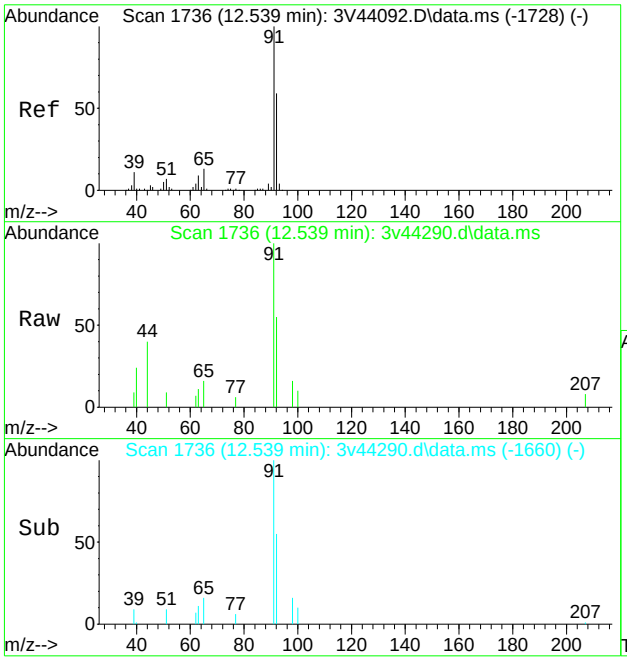


#55
benzene
Concen: 4.81 ug/L
RT: 10.337 min Scan# 1316
Delta R.T. 0.000 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 78 Resp: 51647

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	53.5
52	16.9	0.0	45.6

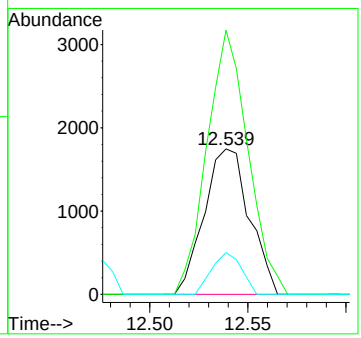




#76
toluene
Concen: 0.46 ug/L
RT: 12.539 min Scan# 1736
Delta R.T. 0.000 min
Lab File: 3v44290.d
Acq: 24 Apr 2019 3:04 pm

Tgt Ion: 92 Resp: 2802

Ion	Ratio	Lower	Upper
92	100		
91	181.6	153.7	193.7
65	28.7	1.1	41.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10644\
Data File : d264076.D
Acq On : 26 Apr 2019 2:03 pm
Operator : juntaep
Sample : JC86406-3
Misc : ms34034,vd10644,3.8,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 29 17:20:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

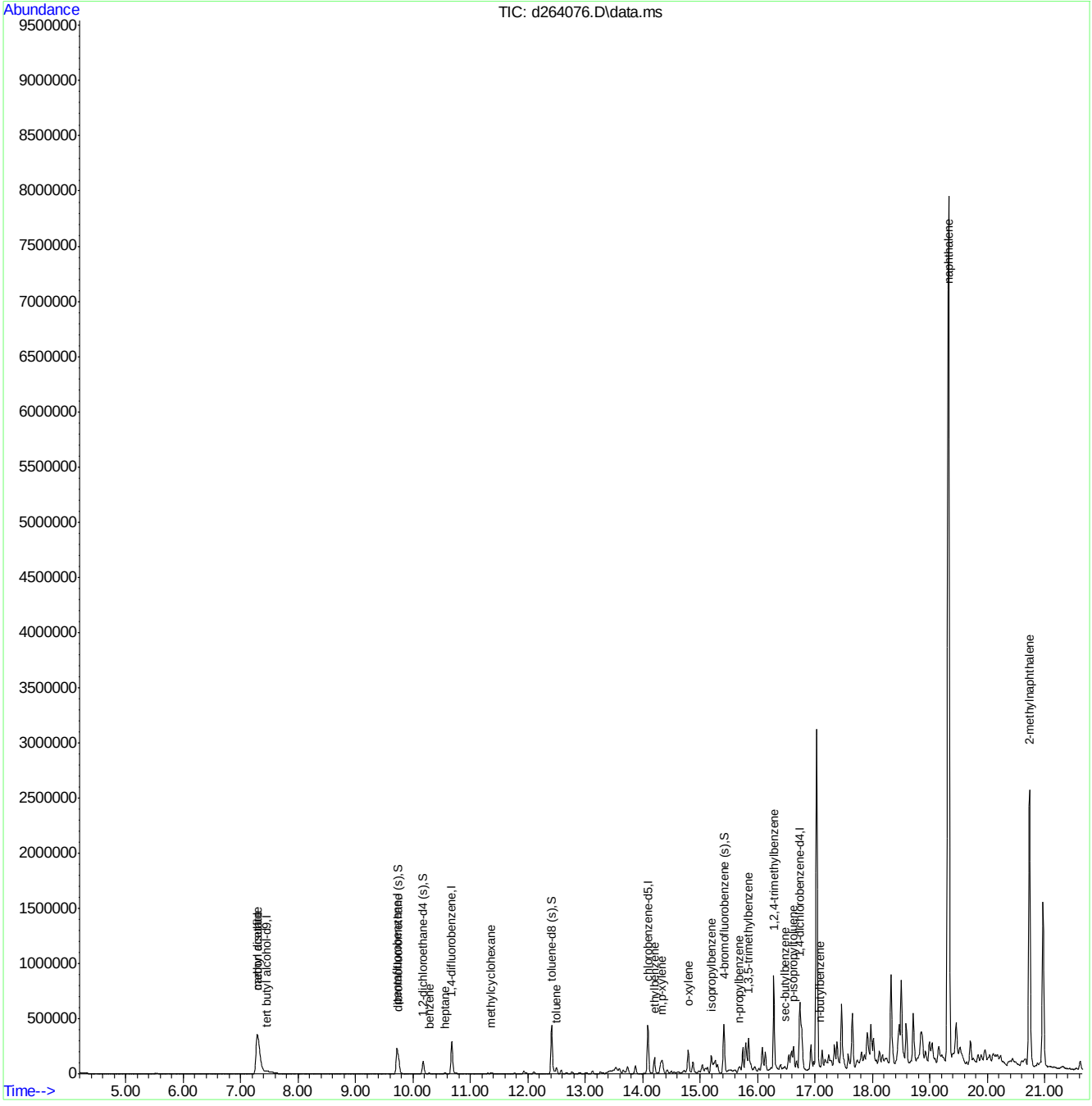
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.458	65	92615	500.00	ug/L	-0.01
5) pentafluorobenzene	9.723	168	174413	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	263127	50.00	ug/L	0.00
75) chlorobenzene-d5	14.090	117	268255	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	175292	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.749	113	81364	49.44	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.88%			
55) 1,2-dichloroethane-d4 (s)	10.178	65	88352	44.79	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.58%			
76) toluene-d8 (s)	12.411	98	317509	48.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.08%			
100) 4-bromofluorobenzene (s)	15.408	95	153153	47.15	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.30%			
Target Compounds						Qvalue
23) carbon disulfide	7.285	76	1325589	189.06	ug/L	98
25) methyl acetate	7.296	43	13957	11.66	ug/L	97
58) benzene	10.277	78	5797	0.73	ug/L	95
60) heptane	10.554	57	1336	1.25	ug/L #	58
66) methylcyclohexane	11.365	83	5848	1.73	ug/L	97
77) toluene	12.495	92	23778	4.63	ug/L	94
90) ethylbenzene	14.205	91	116932	11.50	ug/L	100
91) m,p-xylene	14.336	106	42892	11.07	ug/L	98
92) o-xylene	14.791	91	122316	14.37	ug/L	91
96) isopropylbenzene	15.193	105	88951	8.95	ug/L	96
105) n-propylbenzene	15.664	91	26325	2.17	ug/L	98
108) 1,3,5-trimethylbenzene	15.842	105	155888	16.80	ug/L	99
110) 1,2,4-trimethylbenzene	16.281	105	517900	55.99	ug/L	99
111) sec-butylbenzene	16.475	105	10028	0.95	ug/L	85
112) p-isopropyltoluene	16.621	119	72768	8.25	ug/L	97
117) n-butylbenzene	17.087	92	8375	2.03	ug/L	94
124) naphthalene	19.325	128	7627611	1006.86	ug/L	88
126) 2-methylnaphthalene	20.732	142	1460545	932.55	ug/L	99

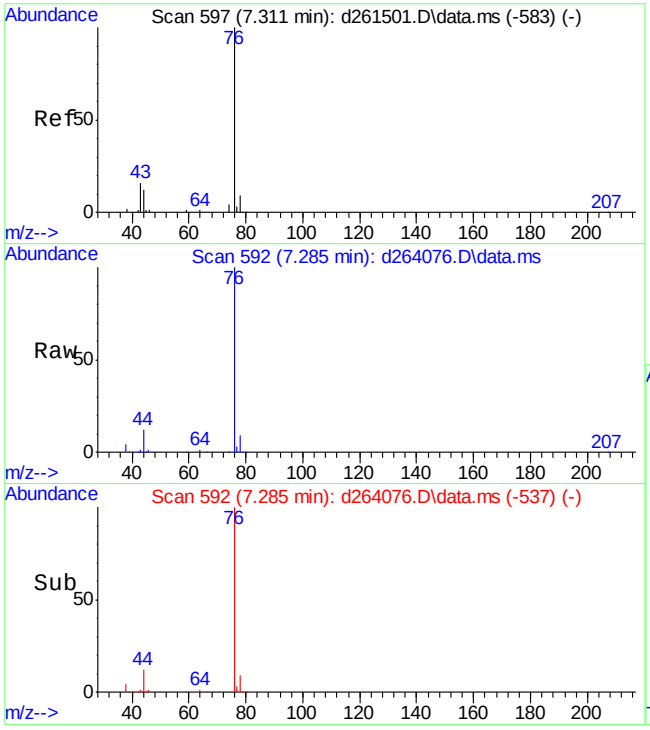
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10644\
Data File : d264076.D
Acq On : 26 Apr 2019 2:03 pm
Operator : juntaep
Sample : JC86406-3
Misc : ms34034,vd10644,3.8,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 29 17:20:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

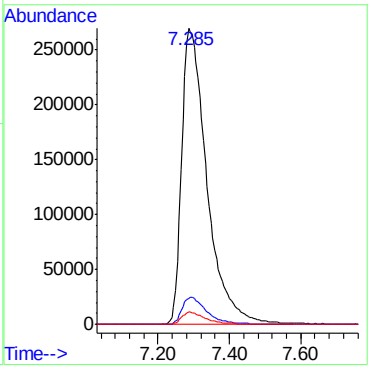


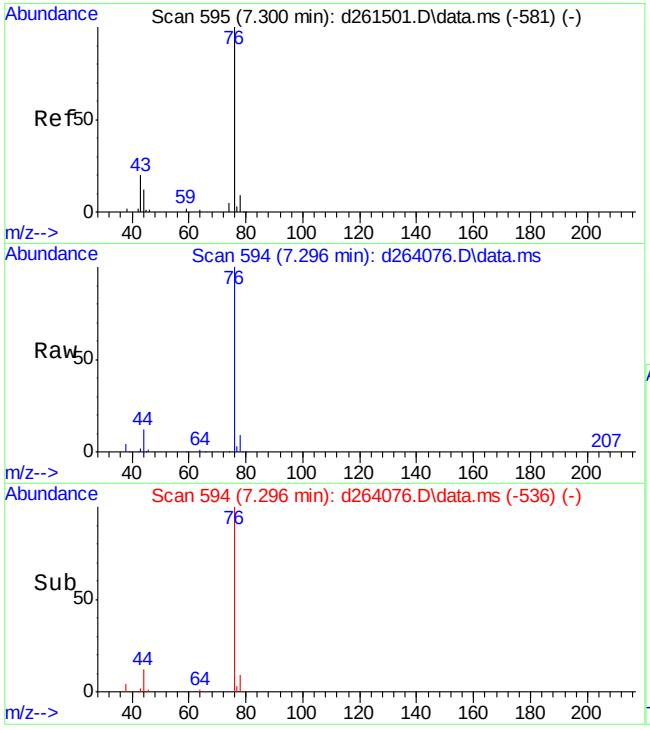


#23
carbon disulfide
Concen: 189.06 ug/L
RT: 7.285 min Scan# 592
Delta R.T. -0.015 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 76 Resp: 1325589

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	39.5
38	4.1	0.0	34.3

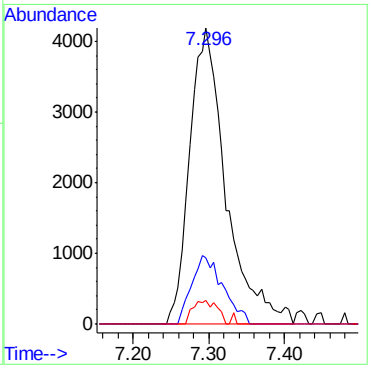


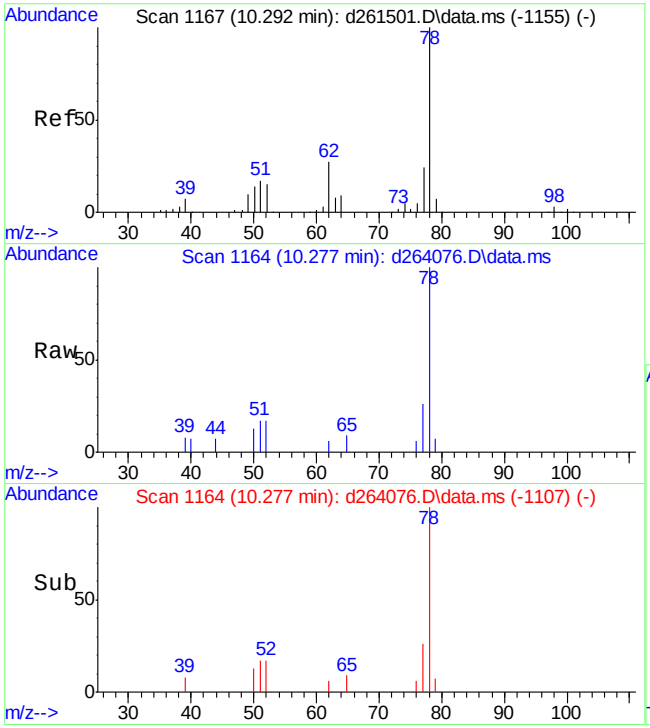


#25
methyl acetate
Concen: 11.66 ug/L
RT: 7.296 min Scan# 594
Delta R.T. 0.001 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 43 Resp: 13957

Ion	Ratio	Lower	Upper
43	100		
74	22.4	0.0	50.5
59	7.9	0.0	37.9

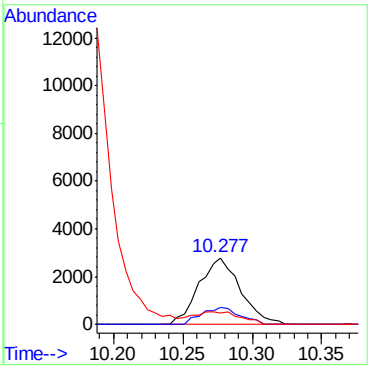


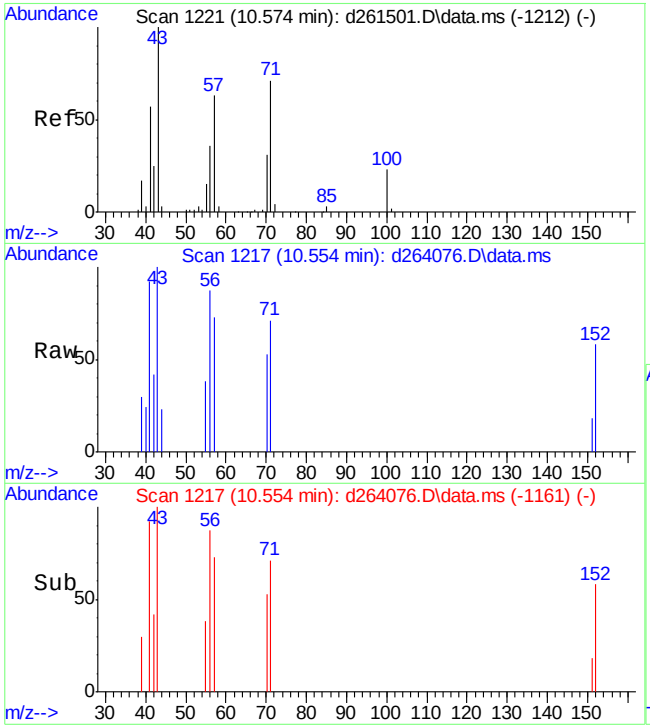


#58
benzene
Concen: 0.73 ug/L
RT: 10.277 min Scan# 1164
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 78 Resp: 5797

Ion	Ratio	Lower	Upper
78	100		
77	26.0	0.0	53.8
51	17.3	0.0	50.1

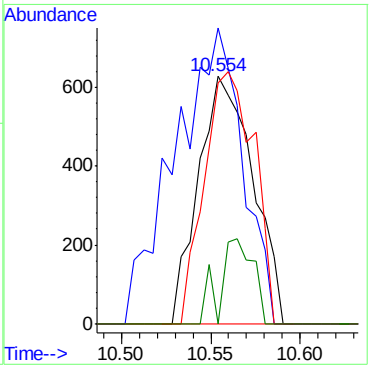


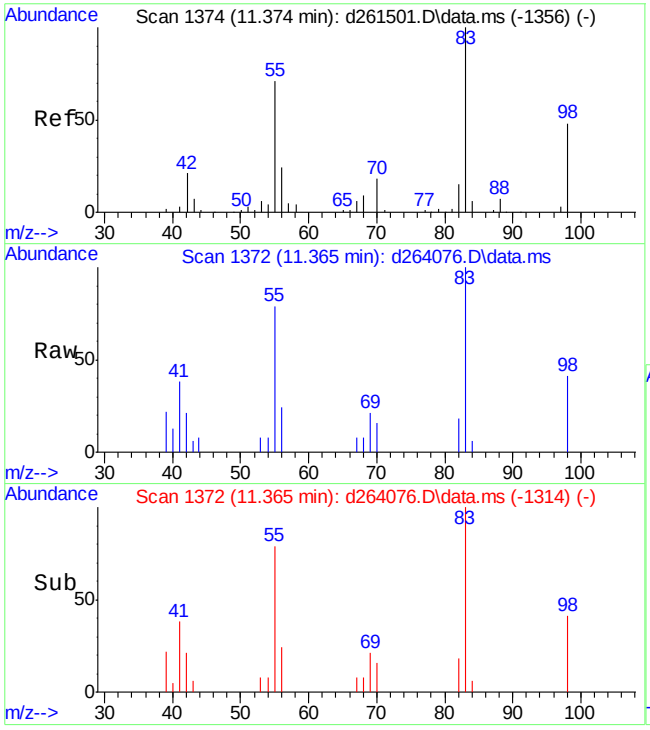


#60
heptane
Concen: 1.25 ug/L
RT: 10.554 min Scan# 1217
Delta R.T. -0.009 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 57 Resp: 1336

Ion	Ratio	Lower	Upper
57	100		
56	119.2	30.3	90.3#
71	97.3	84.6	144.6
100	0.0	8.4	68.4#

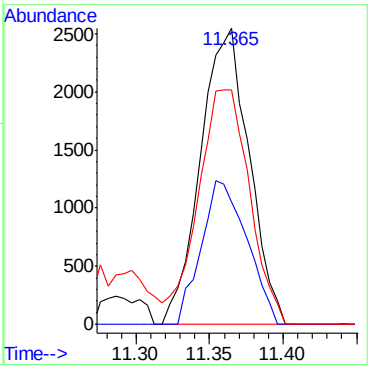


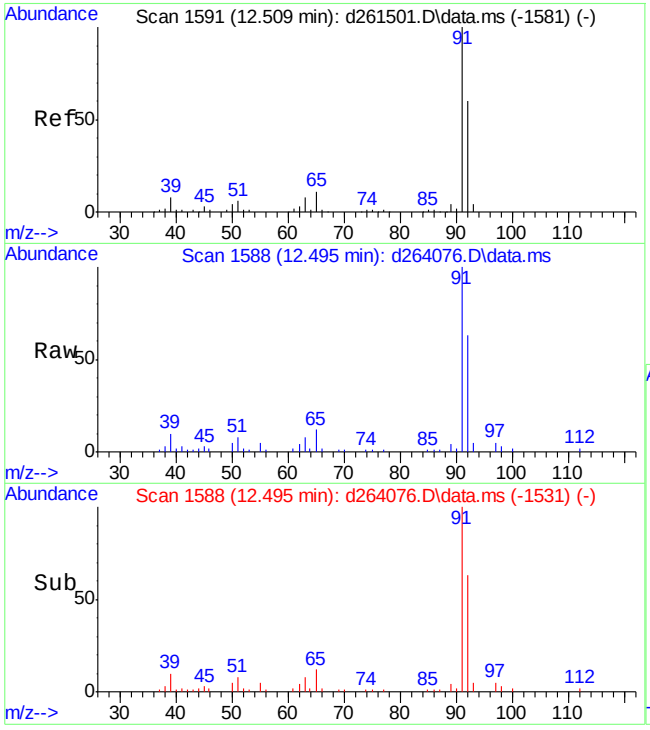


#66
methylcyclohexane
Concen: 1.73 ug/L
RT: 11.365 min Scan# 1372
Delta R.T. 0.001 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 83 Resp: 5848

Ion	Ratio	Lower	Upper
83	100		
98	41.3	27.3	67.3
55	79.2	59.4	99.4

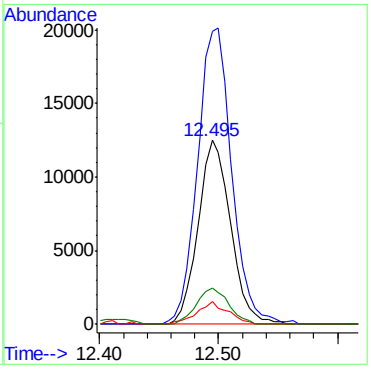


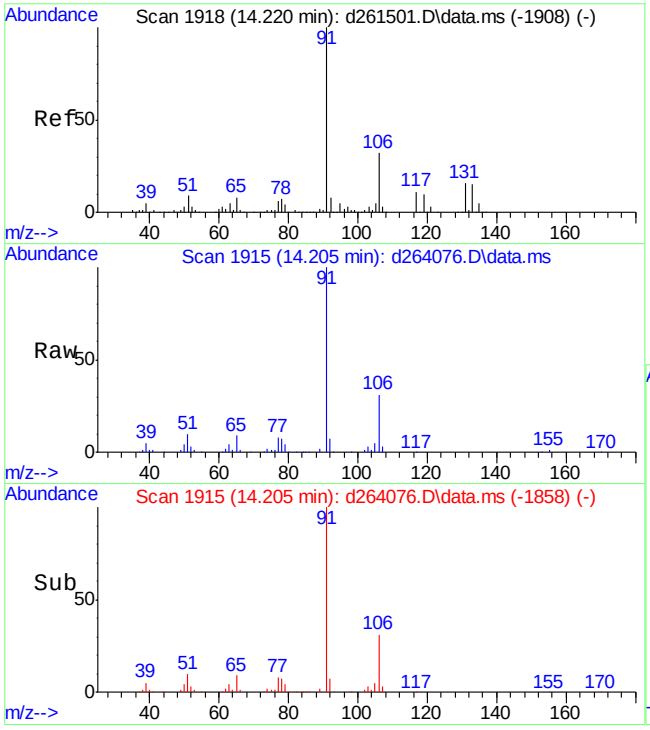


#77
toluene
Concen: 4.63 ug/L
RT: 12.495 min Scan# 1588
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 92 Resp: 23778

Ion	Ratio	Lower	Upper
92	100		
91	159.5	149.2	189.2
51	12.0	0.0	42.2
65	19.5	0.0	50.4

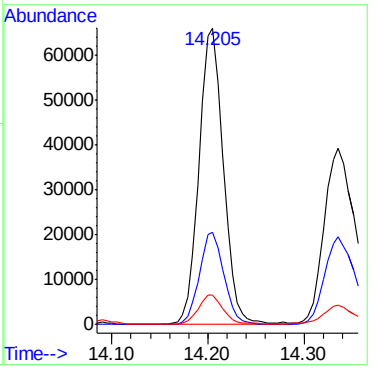


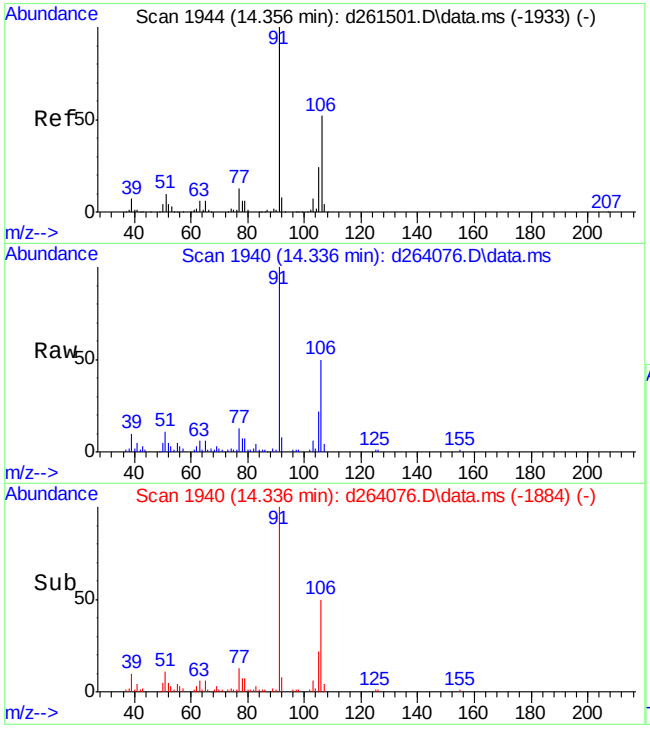


#90
ethylbenzene
Concen: 11.50 ug/L
RT: 14.205 min Scan# 1915
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 91 Resp: 116932

Ion	Ratio	Lower	Upper
91	100		
106	31.0	1.2	61.2
51	9.7	0.0	40.0

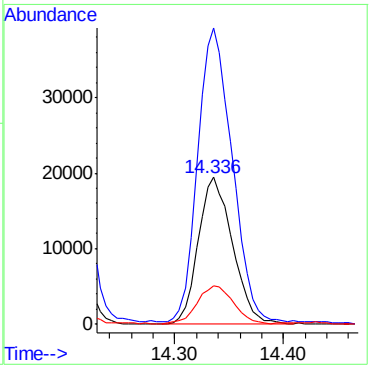


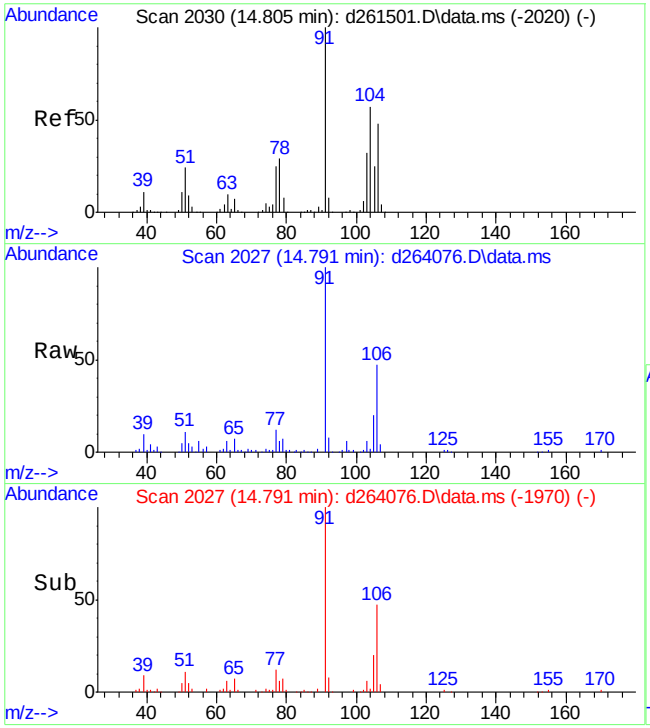


#91
m,p-xylene
Concen: 11.07 ug/L
RT: 14.336 min Scan# 1940
Delta R.T. -0.009 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:106 Resp: 42892

Ion	Ratio	Lower	Upper
106	100		
91	200.6	173.0	233.0
77	26.2	0.0	57.4

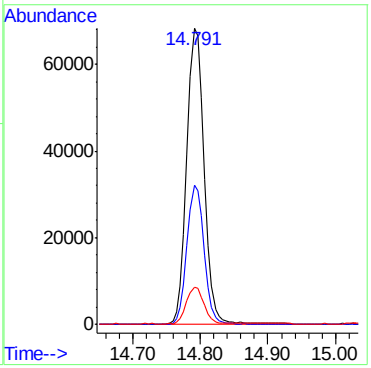


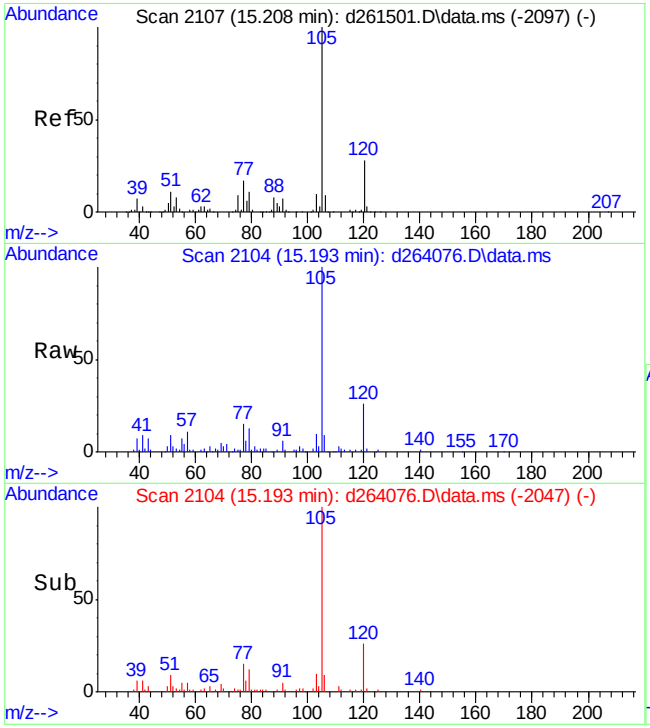


#92
o-xylene
Concen: 14.37 ug/L
RT: 14.791 min Scan# 2027
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 91 Resp: 122316

Ion	Ratio	Lower	Upper
91	100		
106	46.8	16.5	76.5
77	12.5	0.0	55.2

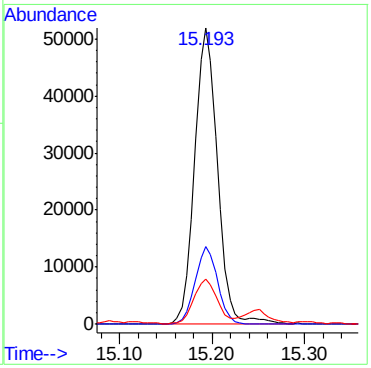


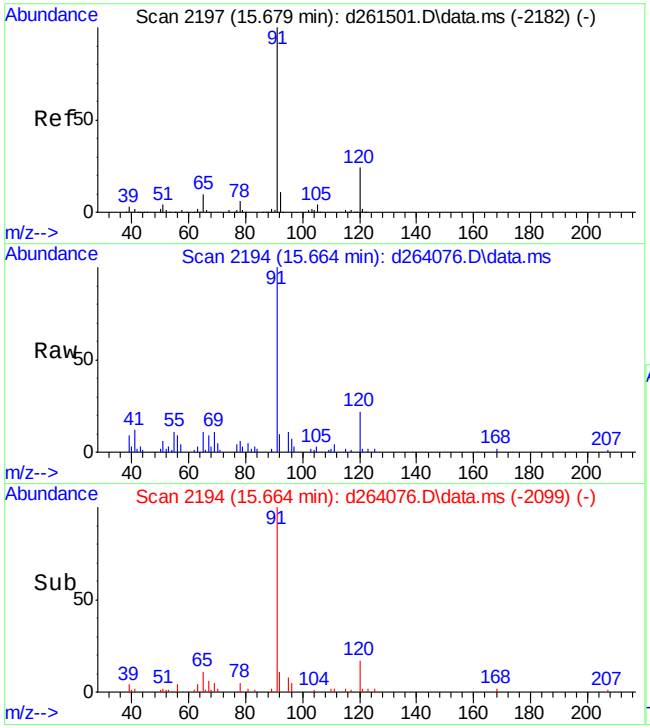


#96
isopropylbenzene
Concen: 8.95 ug/L
RT: 15.193 min Scan# 2104
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:105 Resp: 88951

Ion	Ratio	Lower	Upper
105	100		
120	26.3	7.0	47.0
77	15.2	0.0	38.6

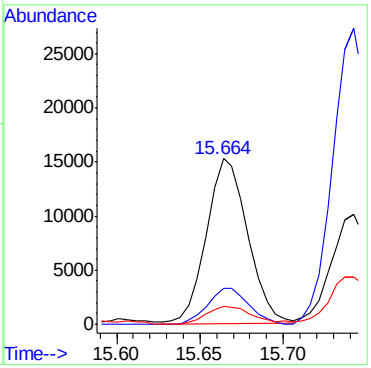


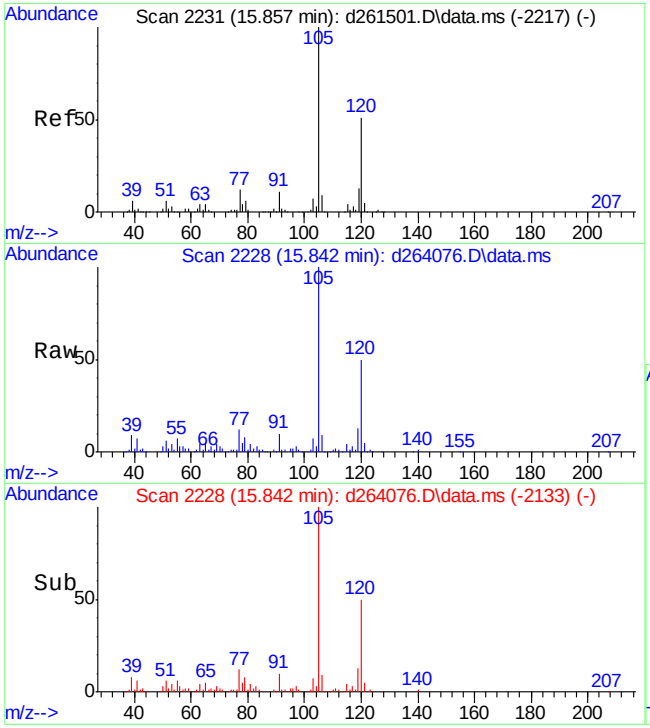


#105
n-propylbenzene
Concen: 2.17 ug/L
RT: 15.664 min Scan# 2194
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 91 Resp: 26325

Ion	Ratio	Lower	Upper
91	100		
120	22.3	0.0	53.5
65	10.8	0.0	40.9

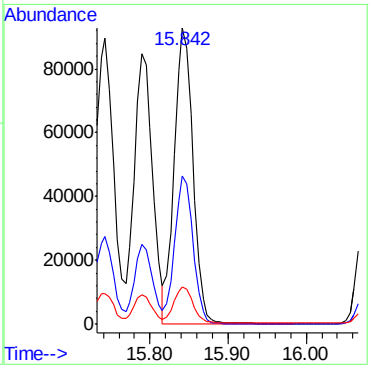


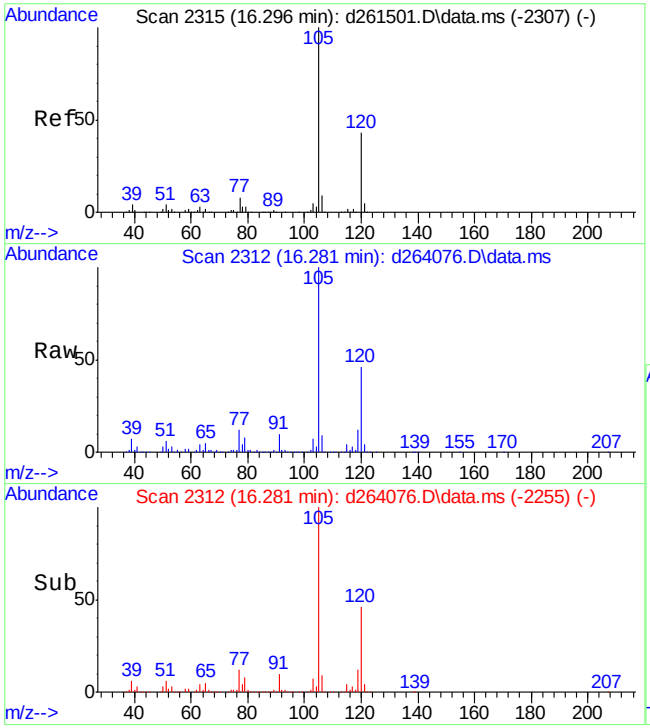


#108
1,3,5-trimethylbenzene
Concen: 16.80 ug/L
RT: 15.842 min Scan# 2228
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:105 Resp: 155888

Ion	Ratio	Lower	Upper
105	100		
120	49.9	19.7	79.7
77	12.0	0.0	42.9

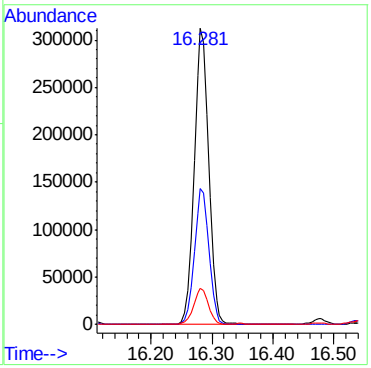


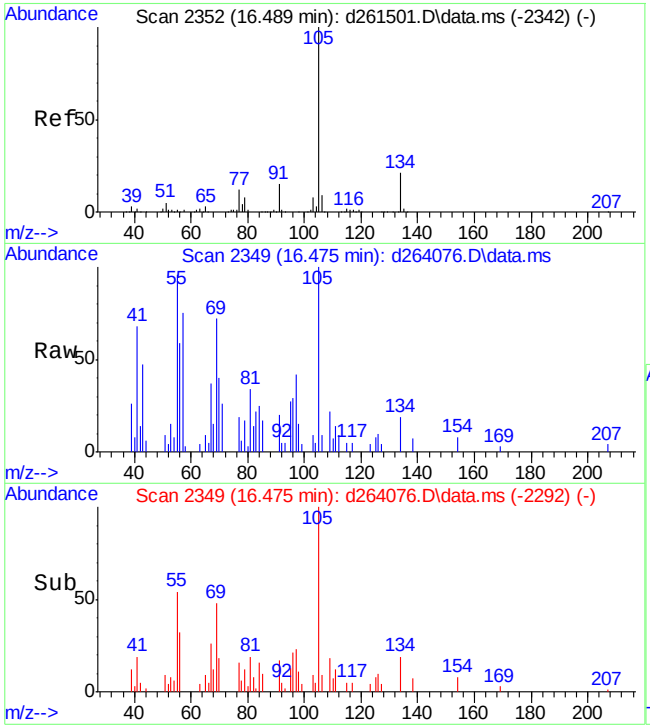


#110
1,2,4-trimethylbenzene
Concen: 55.99 ug/L
RT: 16.281 min Scan# 2312
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:105 Resp: 517900

Ion	Ratio	Lower	Upper
105	100		
120	46.0	16.4	76.4
77	12.1	0.0	42.6

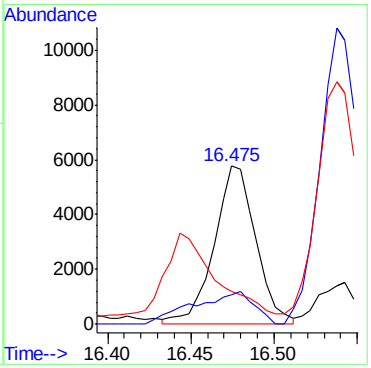


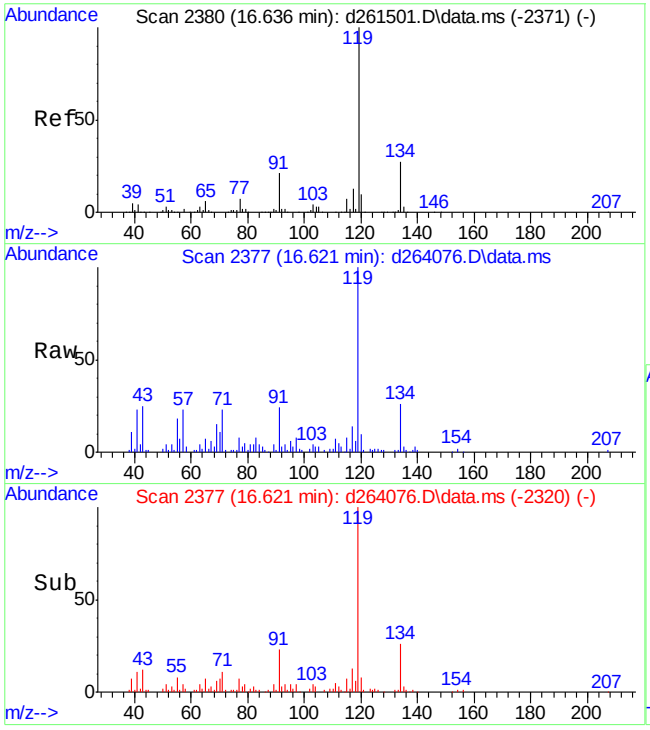


#111
sec-butylbenzene
Concen: 0.95 ug/L
RT: 16.475 min Scan# 2349
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:105 Resp: 10028

Ion	Ratio	Lower	Upper
105	100		
134	13.4	0.0	51.1
91	9.9	0.0	45.9

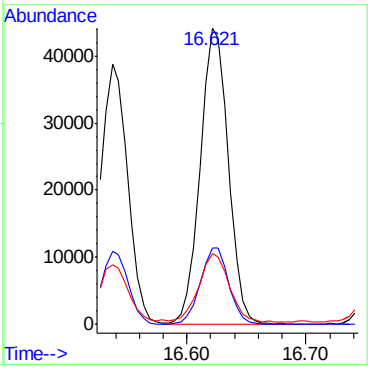


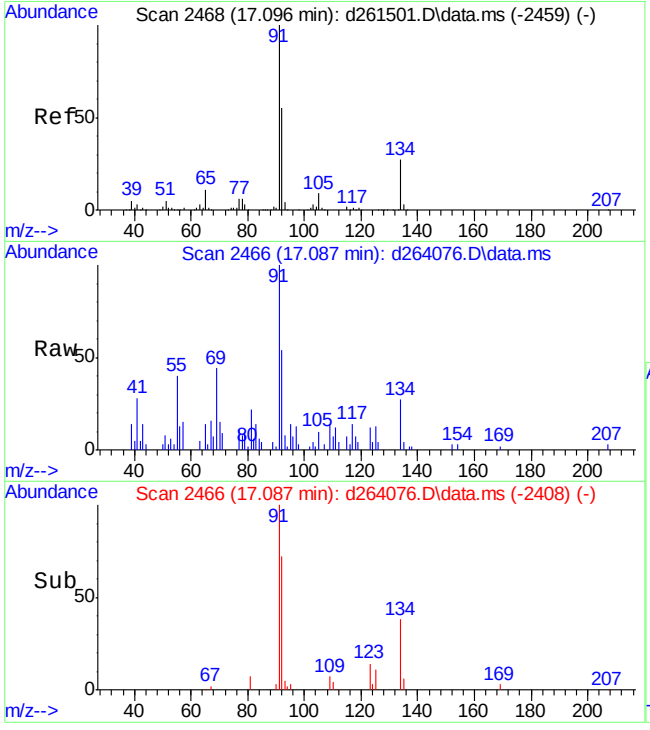


#112
p-isopropyltoluene
Concen: 8.25 ug/L
RT: 16.621 min Scan# 2377
Delta R.T. -0.004 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:119 Resp: 72768

Ion	Ratio	Lower	Upper
119	100		
134	25.6	0.0	57.5
91	23.2	0.0	54.1

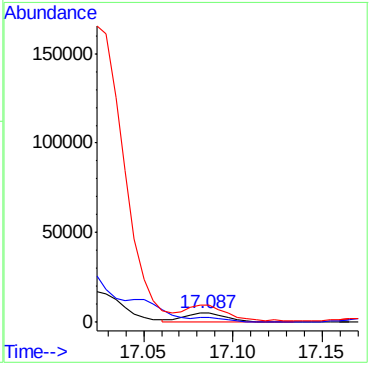


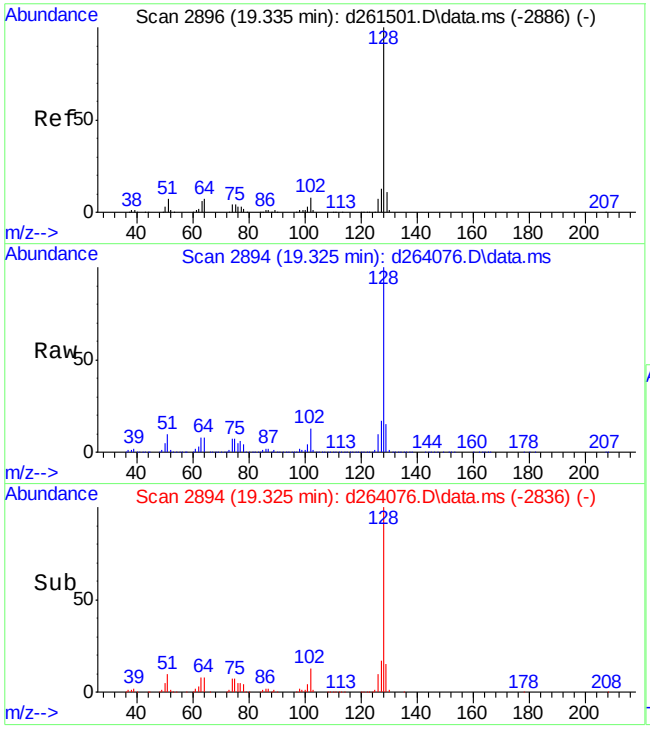


#117
n-butylbenzene
Concen: 2.03 ug/L
RT: 17.087 min Scan# 2466
Delta R.T. 0.001 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion: 92 Resp: 8375

Ion	Ratio	Lower	Upper
92	100		
134	49.3	20.4	80.4
91	166.5	147.6	207.6

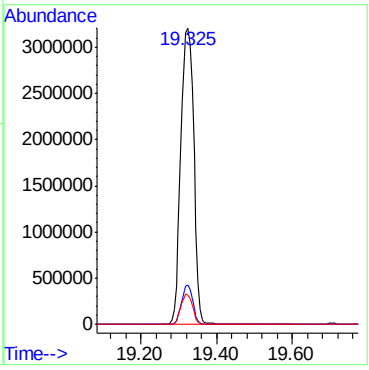


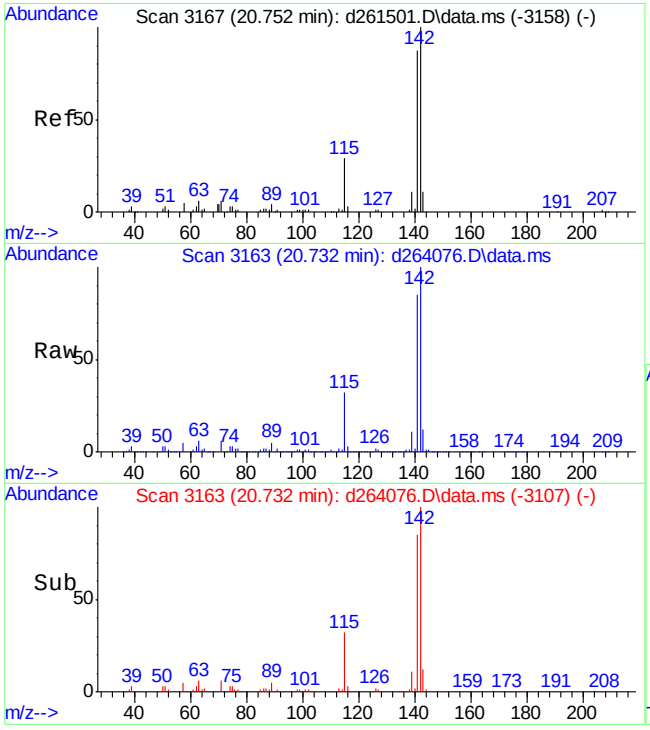


#124
naphthalene
Concen: 1006.86 ug/L
RT: 19.325 min Scan# 2894
Delta R.T. 0.001 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:128 Resp: 7627611

Ion	Ratio	Lower	Upper
128	100		
102	13.4	0.0	38.5
51	10.0	0.0	36.8

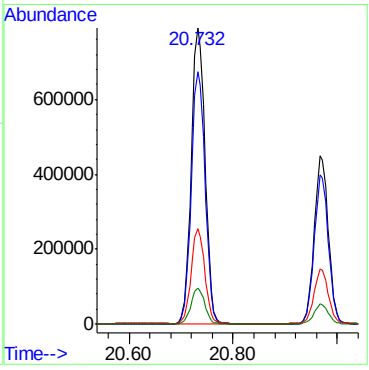




#126
2-methylnaphthalene
Concen: 932.55 ug/L
RT: 20.732 min Scan# 3163
Delta R.T. -0.009 min
Lab File: d264076.D
Acq: 26 Apr 2019 2:03 pm

Tgt Ion:142 Resp: 1460545

Ion	Ratio	Lower	Upper
142	100		
141	85.2	64.5	104.5
115	32.0	1.9	61.9
143	12.0	0.0	40.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225722.d
Acq On : 25 Apr 2019 7:08 pm
Operator : thienn
Sample : jc86406-4 Inst : GCMSI
Misc : MS34034,VI9093,3.7,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:45:50 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

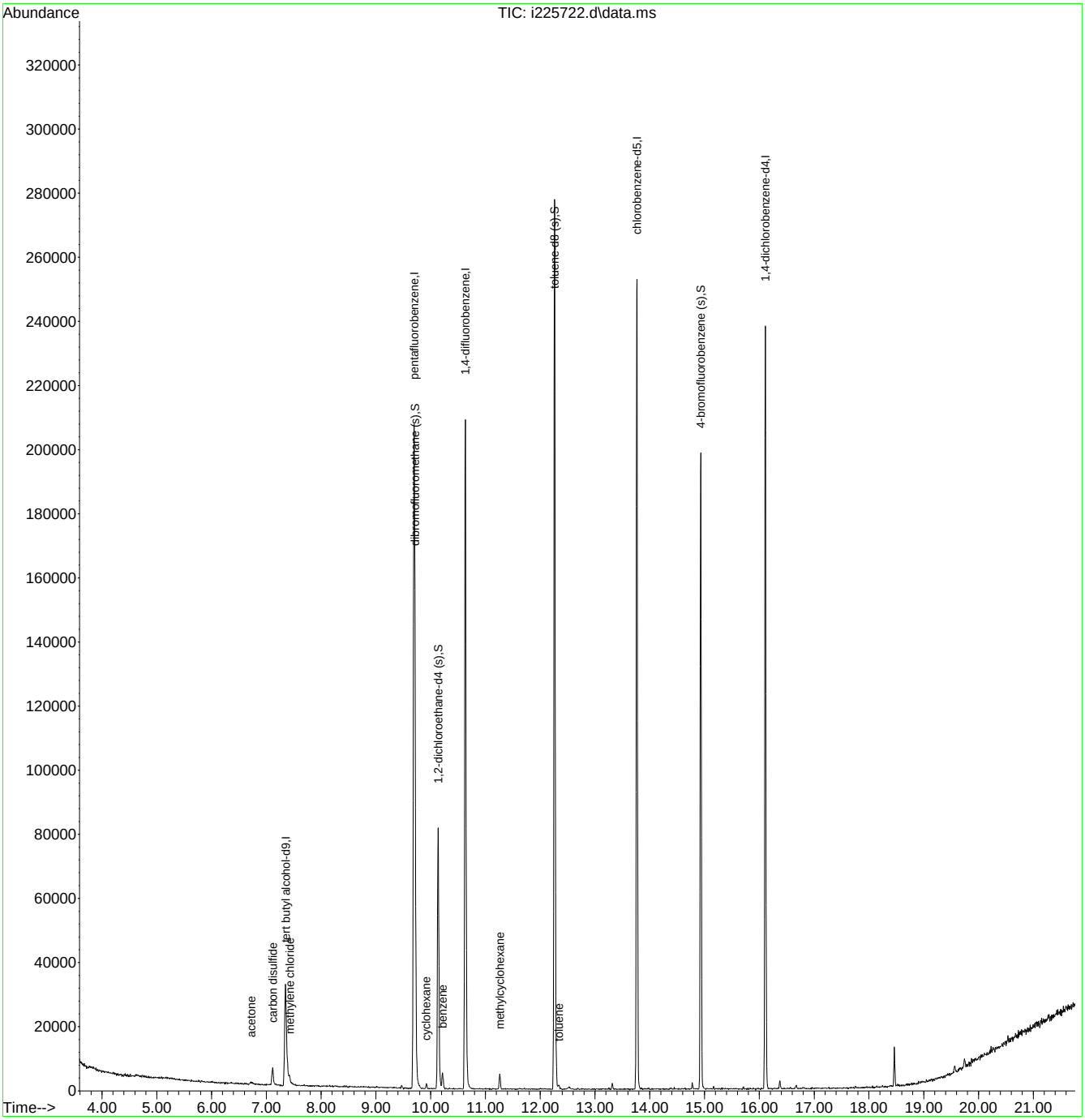
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	48666	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	127480	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	162750	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.765	117	127902	50.00	ug/L	-0.02
96) 1,4-dichlorobenzene-d4	16.109	152	56439	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	53982	53.89	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 107.78%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	59136	58.21	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 116.42%			
74) toluene-d8 (s)	12.259	98	172477	52.60	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.20%			
97) 4-bromofluorobenzene (s)	14.926	95	52768	61.31	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 122.62%			
Target Compounds						Qvalue
19) acetone	6.720	43	1742	8.11	ug/L	95
21) carbon disulfide	7.118	76	8674	3.39	ug/L	91
24) methylene chloride	7.432	84	442	0.50	ug/L	95
49) cyclohexane	9.916	84	472	0.40	ug/L #	66
55) benzene	10.214	78	4080	1.28	ug/L	98
62) methylcyclohexane	11.260	83	1821	1.26	ug/L	96
75) toluene	12.338	92	444	0.25	ug/L #	74

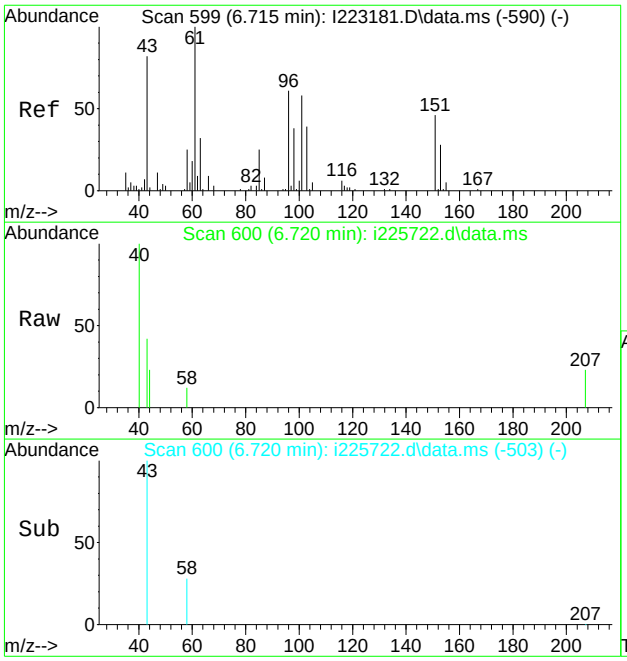
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225722.d
Acq On : 25 Apr 2019 7:08 pm
Operator : thienn
Sample : jc86406-4 Inst : GCMSI
Misc : MS34034,VI9093,3.7,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:45:50 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

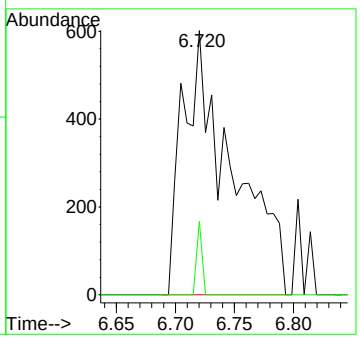


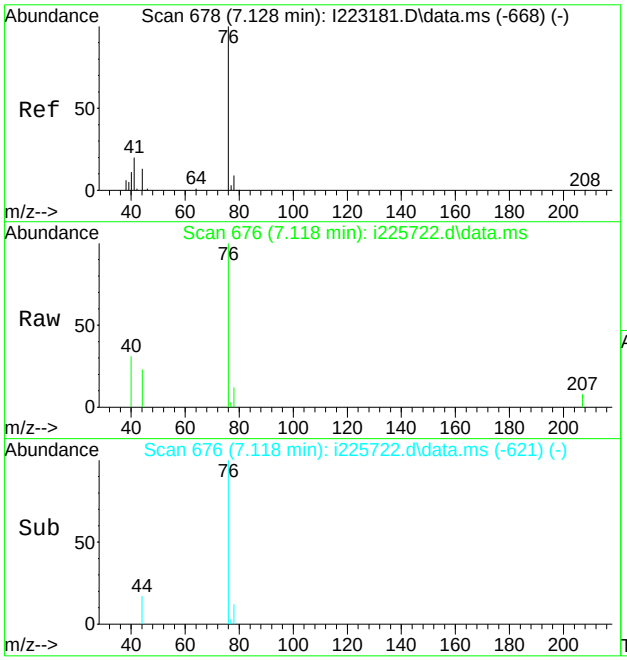


#19
acetone
Concen: 8.11 ug/L
RT: 6.720 min Scan# 600
Delta R.T. 0.005 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 43 Resp: 1742

Ion	Ratio	Lower	Upper
43	100		
58	27.7	0.2	60.2

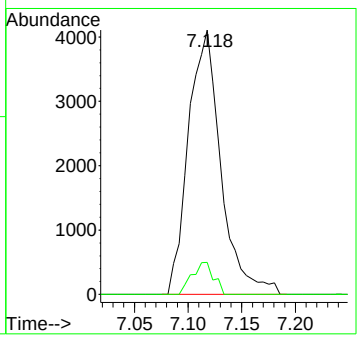


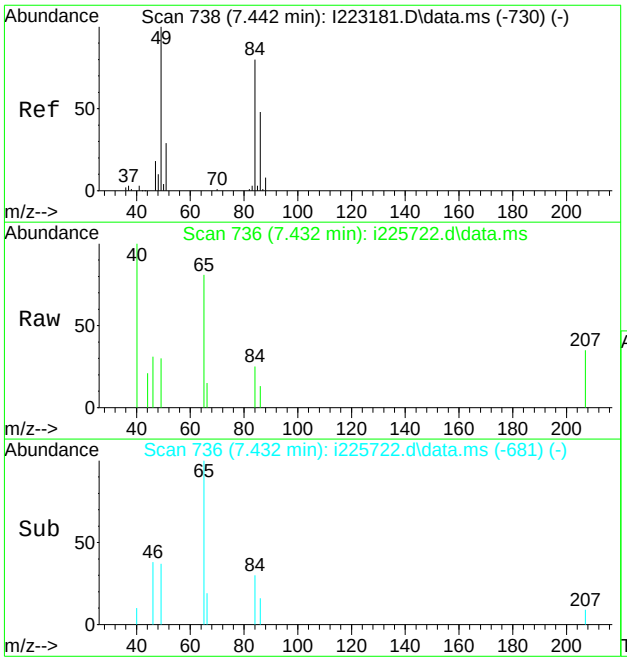


#21
carbon disulfide
Concen: 3.39 ug/L
RT: 7.118 min Scan# 676
Delta R.T. -0.010 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 76 Resp: 8674

Ion	Ratio	Lower	Upper
76	100		
78	12.1	0.0	29.0

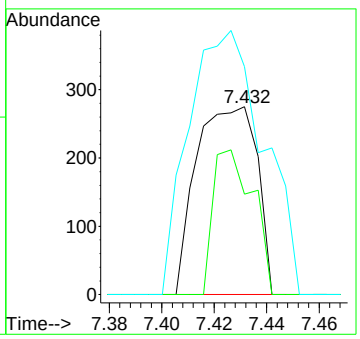


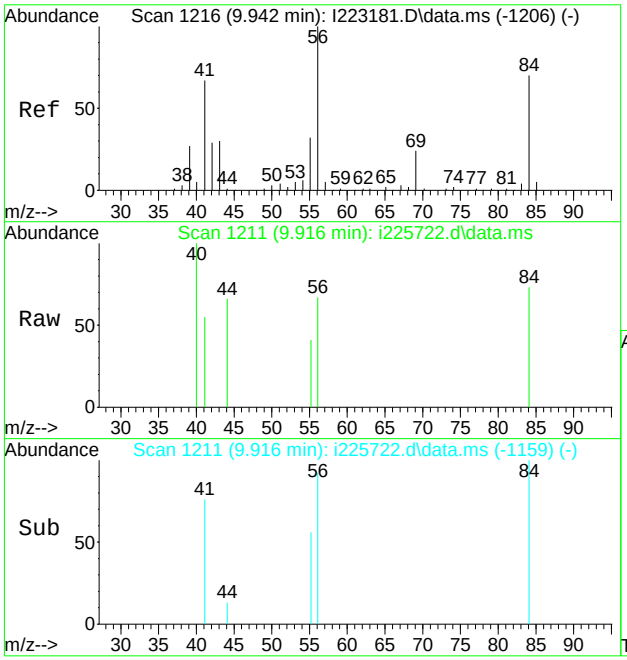


#24
methylene chloride
Concen: 0.50 ug/L
RT: 7.432 min Scan# 736
Delta R.T. -0.010 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 84 Resp: 442

Ion	Ratio	Lower	Upper
84	100		
86	53.5	30.4	90.4
49	121.5	95.7	155.7

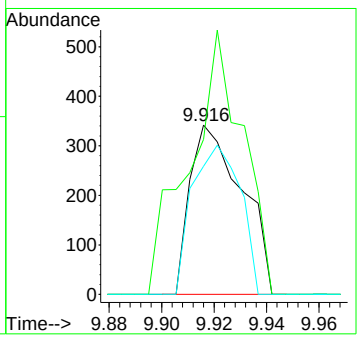


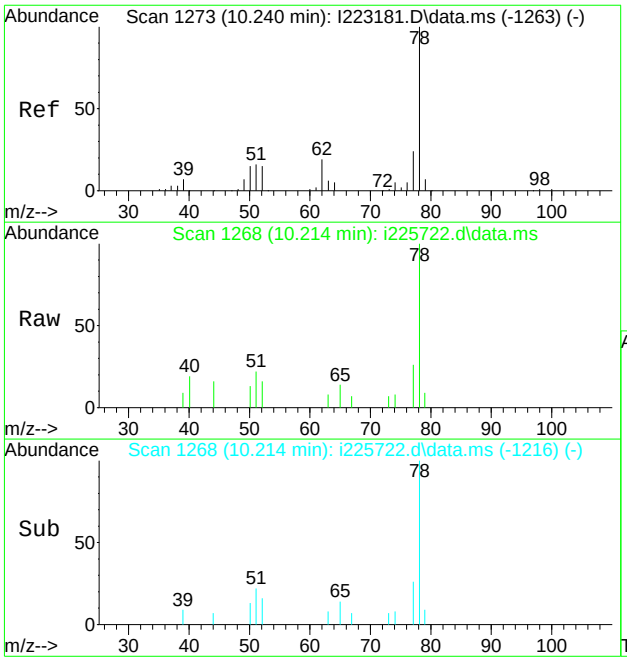


#49
cyclohexane
Concen: 0.40 ug/L
RT: 9.916 min Scan# 1211
Delta R.T. -0.026 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 84 Resp: 472

Ion	Ratio	Lower	Upper
84	100		
56	91.5	113.6	173.6#
41	75.7	66.1	126.1

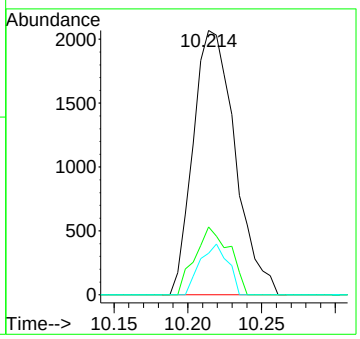


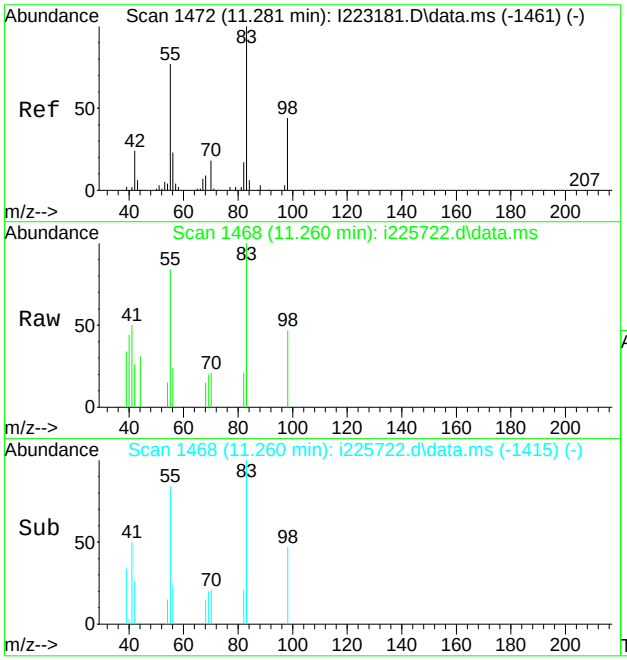


#55
benzene
Concen: 1.28 ug/L
RT: 10.214 min Scan# 1268
Delta R.T. -0.026 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 78 Resp: 4080

Ion	Ratio	Lower	Upper
78	100		
77	25.7	0.0	54.0
52	15.7	0.0	45.4

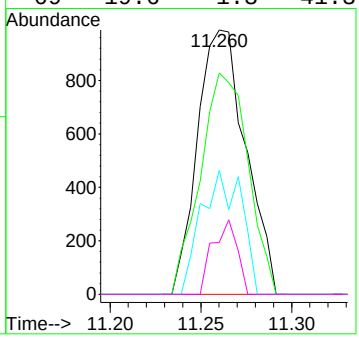


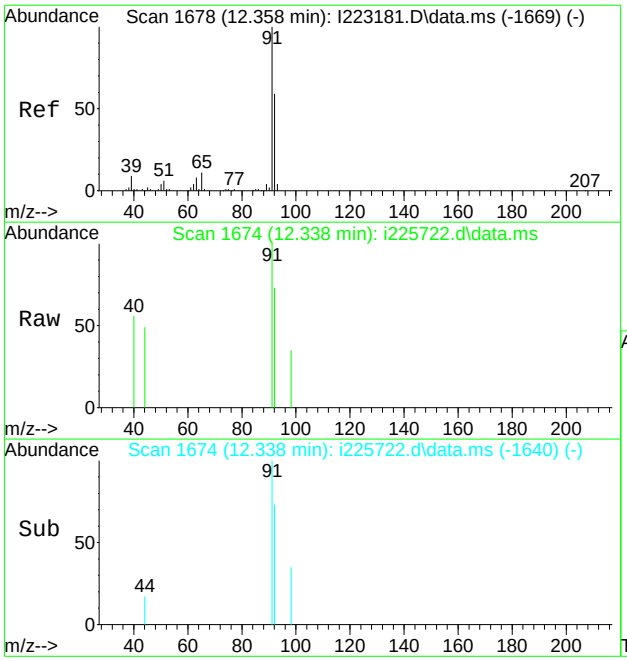


#62
methylcyclohexane
Concen: 1.26 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 83 Resp: 1821

Ion	Ratio	Lower	Upper
83	100		
55	83.7	59.8	99.8
98	46.8	24.4	64.4
69	19.6	1.3	41.3

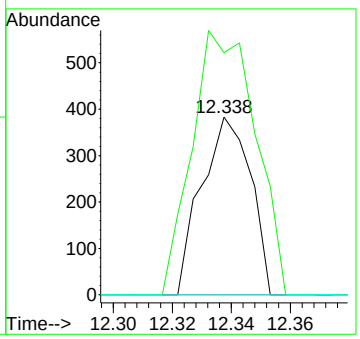




#75
toluene
Concen: 0.25 ug/L
RT: 12.338 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i225722.d
Acq: 25 Apr 2019 7:08 pm

Tgt Ion: 92 Resp: 444

Ion	Ratio	Lower	Upper
92	100		
91	136.3	149.6	189.6#
65	0.0	0.0	38.7



7.1.6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264077.d
Acq On : 26 Apr 2019 2:32 pm
Operator : juntaep
Sample : JC86406-5 Inst : MSD
Misc : ms34034,vd10644,3.8,,20,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:38:08 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

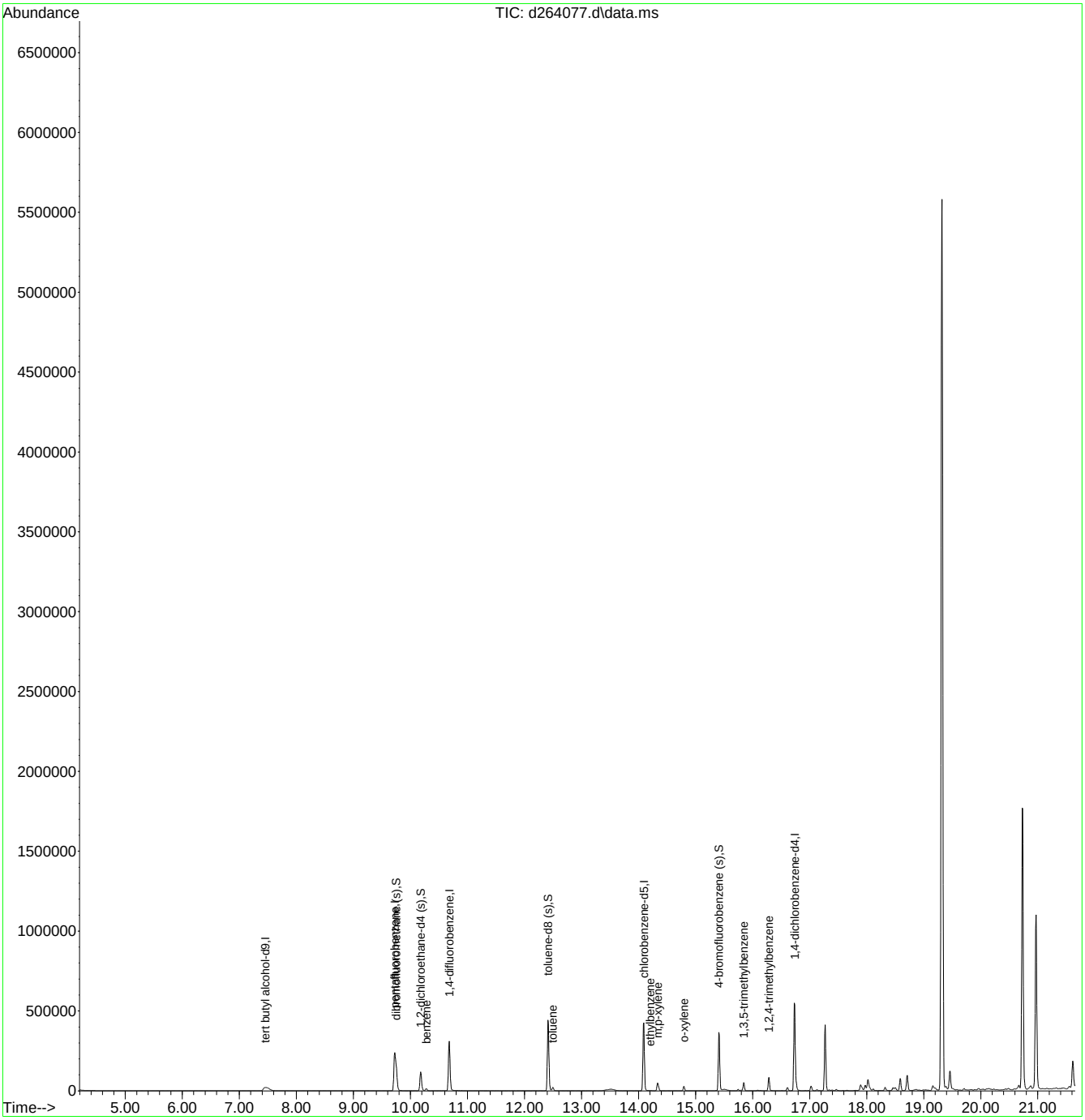
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.454	65	88565	500.00	ug/L	-0.02
5) pentafluorobenzene	9.724	168	183079	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.681	114	276892	50.00	ug/L	0.00
75) chlorobenzene-d5	14.091	117	261591	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.737	152	160187	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.750	113	82710	47.88	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 95.76%			
55) 1,2-dichloroethane-d4 (s)	10.179	65	90507	43.60	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 87.20%			
76) toluene-d8 (s)	12.412	98	322738	50.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.20%			
100) 4-bromofluorobenzene (s)	15.409	95	137819	46.43	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.86%			
Target Compounds						Qvalue
58) benzene	10.278	78	13128	1.56	ug/L	97
77) toluene	12.496	92	10485	2.10	ug/L	97
90) ethylbenzene	14.206	91	2386	0.24	ug/L	75
91) m,p-xylene	14.337	106	18664	4.94	ug/L	96
92) o-xylene	14.797	91	18373	2.21	ug/L	89
108) 1,3,5-trimethylbenzene	15.843	105	31734	3.74	ug/L	100
110) 1,2,4-trimethylbenzene	16.282	105	52341	6.19	ug/L	98

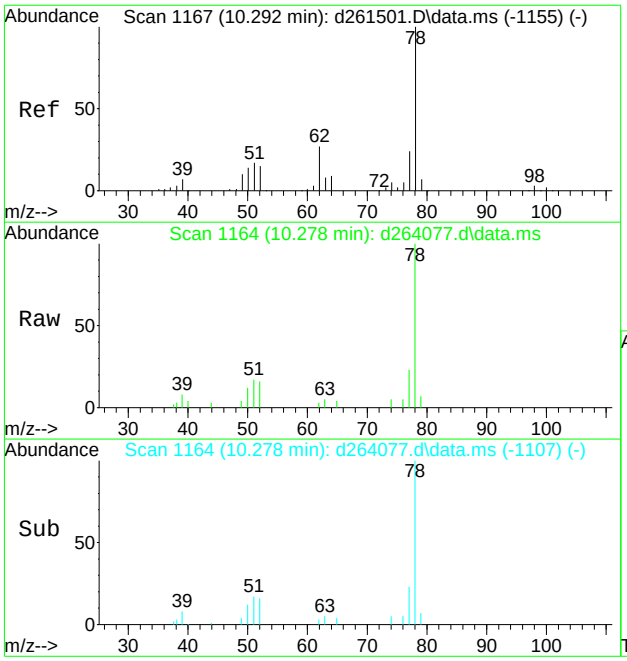
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264077.d
Acq On : 26 Apr 2019 2:32 pm
Operator : juntaep
Sample : JC86406-5 Inst : MSD
Misc : ms34034,vd10644,3.8,,20,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:38:08 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

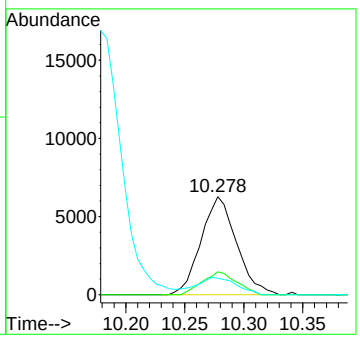


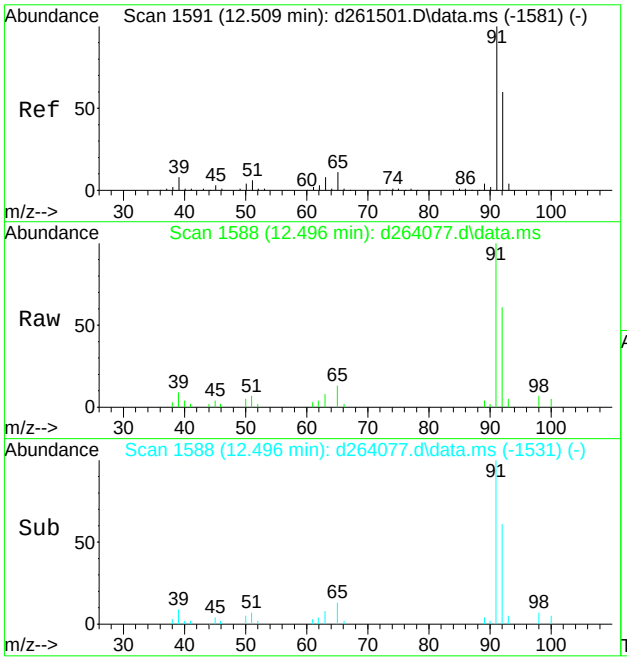


#58
benzene
Concen: 1.56 ug/L
RT: 10.278 min Scan# 1164
Delta R.T. -0.003 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion: 78 Resp: 13128

Ion	Ratio	Lower	Upper
78	100		
77	23.4	0.0	53.8
51	17.0	0.0	50.1

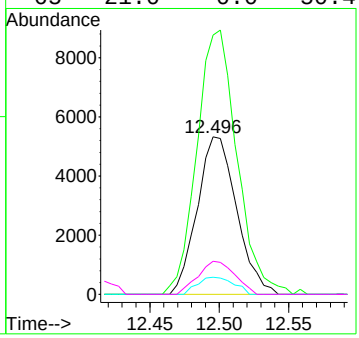


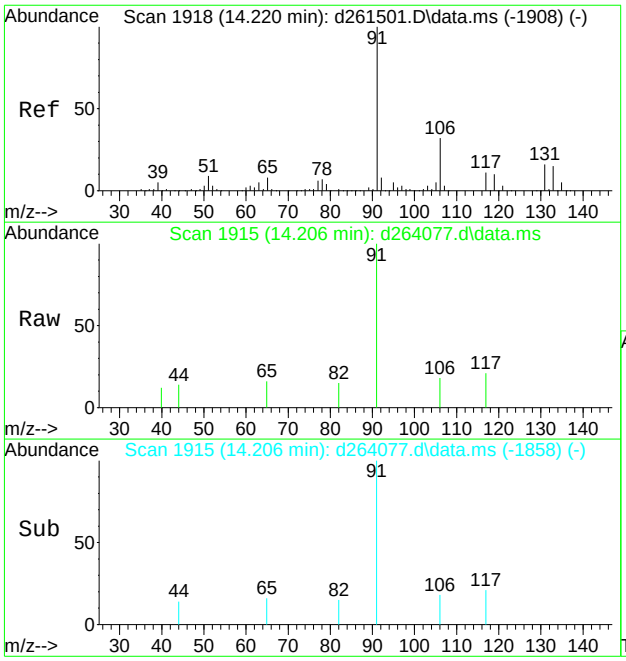


#77
toluene
Concen: 2.10 ug/L
RT: 12.496 min Scan# 1588
Delta R.T. -0.003 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion: 92 Resp: 10485

Ion	Ratio	Lower	Upper
92	100		
91	164.5	149.2	189.2
51	10.8	0.0	42.2
65	21.0	0.0	50.4

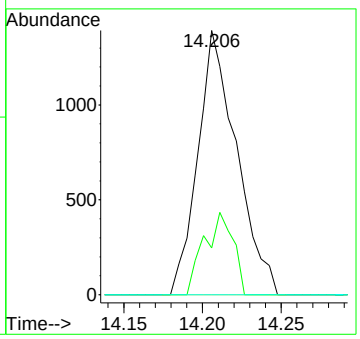


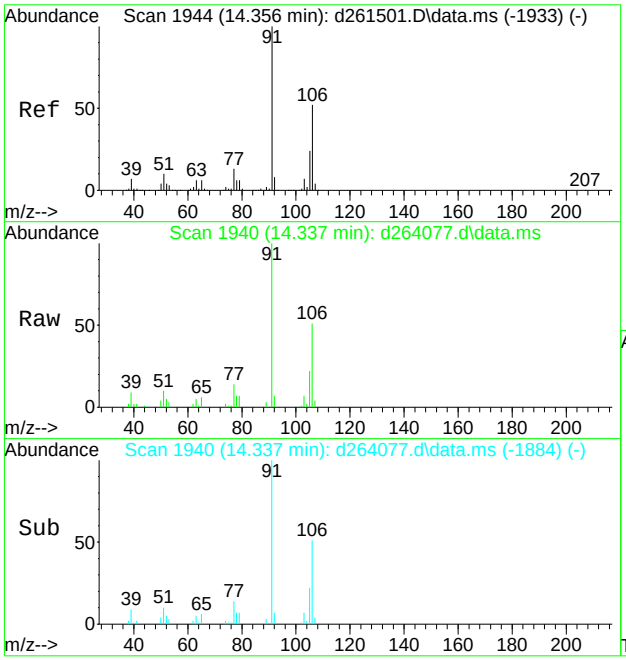


#90
ethylbenzene
Concen: 0.24 ug/L
RT: 14.206 min Scan# 1915
Delta R.T. -0.003 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion: 91 Resp: 2386

Ion	Ratio	Lower	Upper
91	100		
106	17.7	1.2	61.2
51	0.0	0.0	40.0

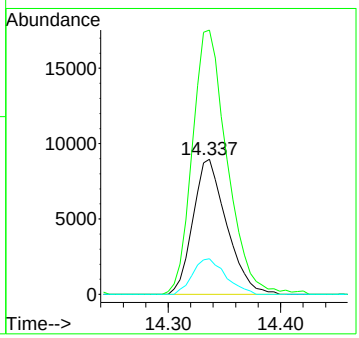


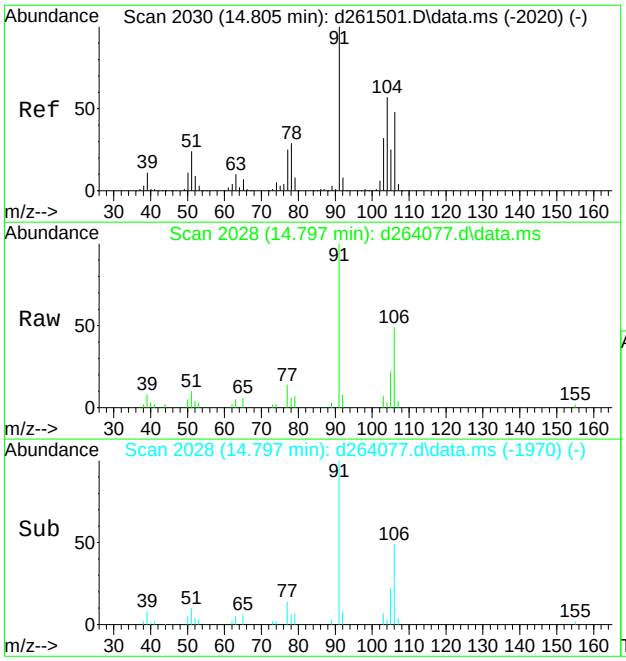


#91
m,p-xylene
Concen: 4.94 ug/L
RT: 14.337 min Scan# 1940
Delta R.T. -0.008 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion:106 Resp: 18664

Ion	Ratio	Lower	Upper
106	100		
91	195.6	173.0	233.0
77	26.4	0.0	57.4

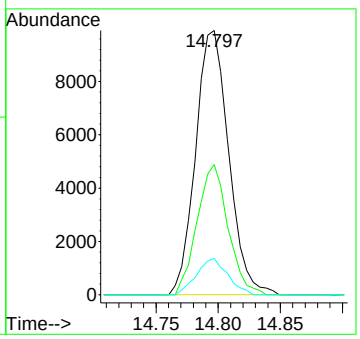


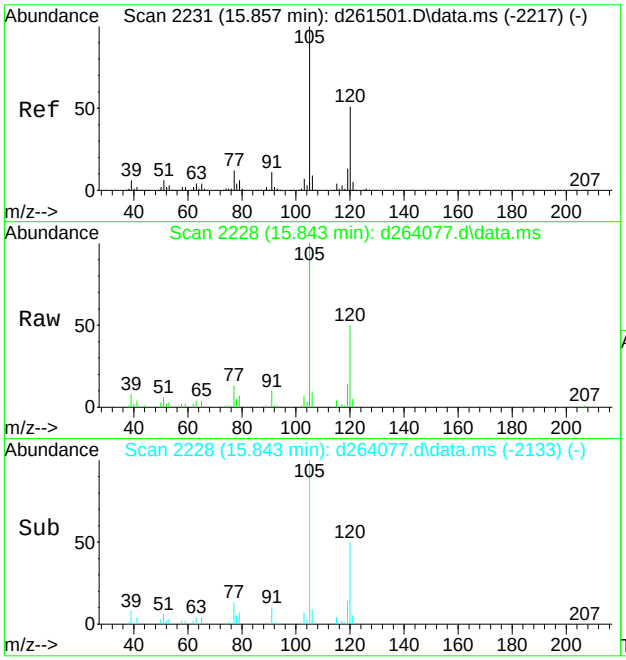


#92
o-xylene
Concen: 2.21 ug/L
RT: 14.797 min Scan# 2028
Delta R.T. 0.002 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion: 91 Resp: 18373

Ion	Ratio	Lower	Upper
91	100		
106	49.3	16.5	76.5
77	13.8	0.0	55.2

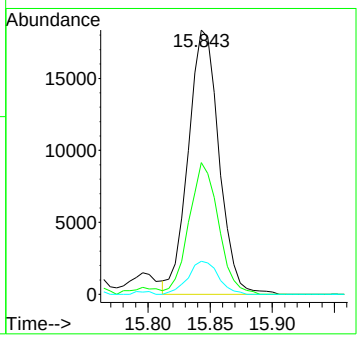


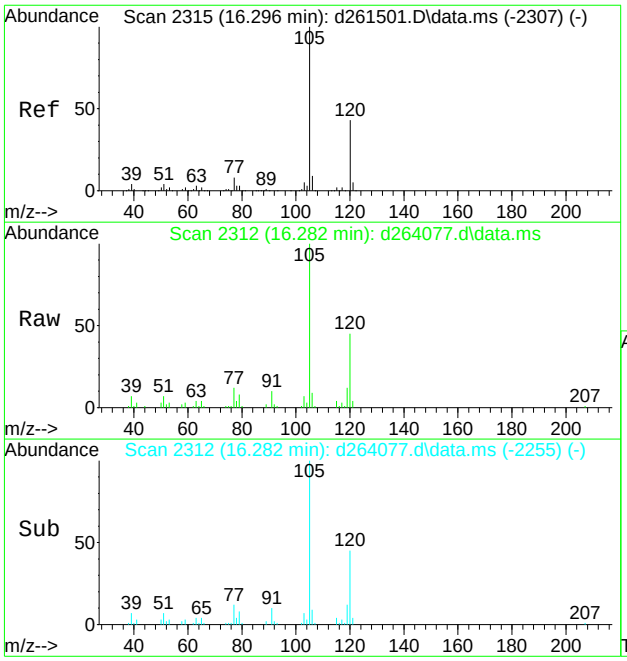


#108
1,3,5-trimethylbenzene
Concen: 3.74 ug/L
RT: 15.843 min Scan# 2228
Delta R.T. -0.003 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion:105 Resp: 31734

Ion	Ratio	Lower	Upper
105	100		
120	49.8	19.7	79.7
77	12.5	0.0	42.9

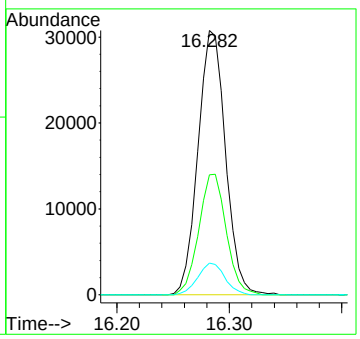




#110
1,2,4-trimethylbenzene
Concen: 6.19 ug/L
RT: 16.282 min Scan# 2312
Delta R.T. -0.003 min
Lab File: d264077.d
Acq: 26 Apr 2019 2:32 pm

Tgt Ion:105 Resp: 52341

Ion	Ratio	Lower	Upper
105	100		
120	45.3	16.4	76.4
77	12.0	0.0	42.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44292.d
Acq On : 24 Apr 2019 3:56 pm
Operator : roberts
Sample : jc86406-6 Inst : MS3V
Misc : MS34034,V3V1778,6.6,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:54:20 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

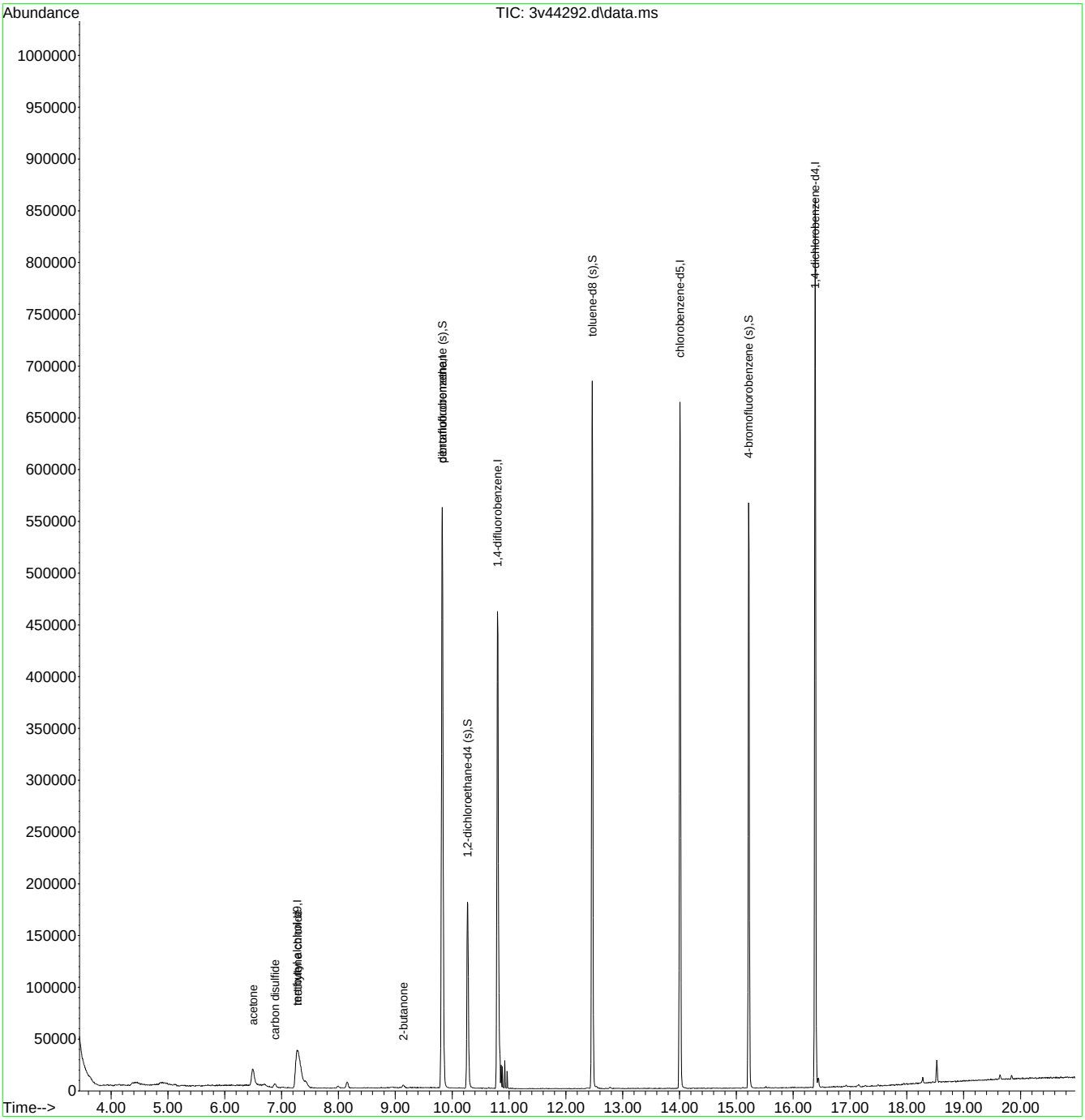
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.269	65	123966	500.00	ug/L	-0.03
5) pentafluorobenzene	9.828	168	246713	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.798	114	346653	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	315478	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	183098	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	131786	50.80	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.60%			
53) 1,2-dichloroethane-d4 (s)	10.269	65	127363	51.88	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.76%			
75) toluene-d8 (s)	12.465	98	398412	50.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.62%			
98) 4-bromofluorobenzene (s)	15.218	95	165600	51.23	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.46%			
Target Compounds						Qvalue
20) acetone	6.499	58	10688	47.91	ug/L	93
23) carbon disulfide	6.882	76	9001	0.73	ug/L	98
24) methylene chloride	7.285	84	1849	0.42	ug/L	89
31) 2-butanone	9.141	72	866	3.85	ug/L #	43

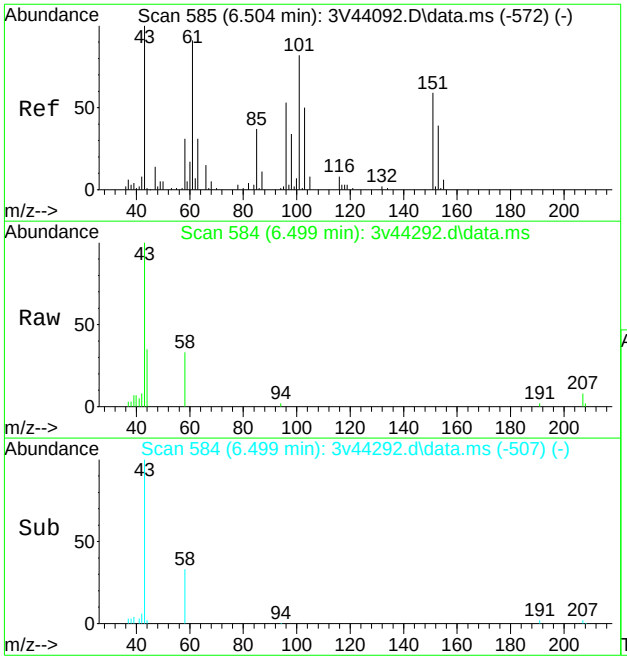
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44292.d
Acq On : 24 Apr 2019 3:56 pm
Operator : roberts
Sample : jc86406-6 Inst : MS3V
Misc : MS34034,V3V1778,6.6,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:54:20 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

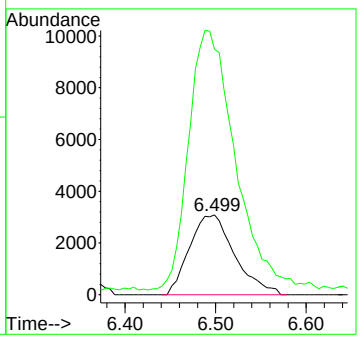


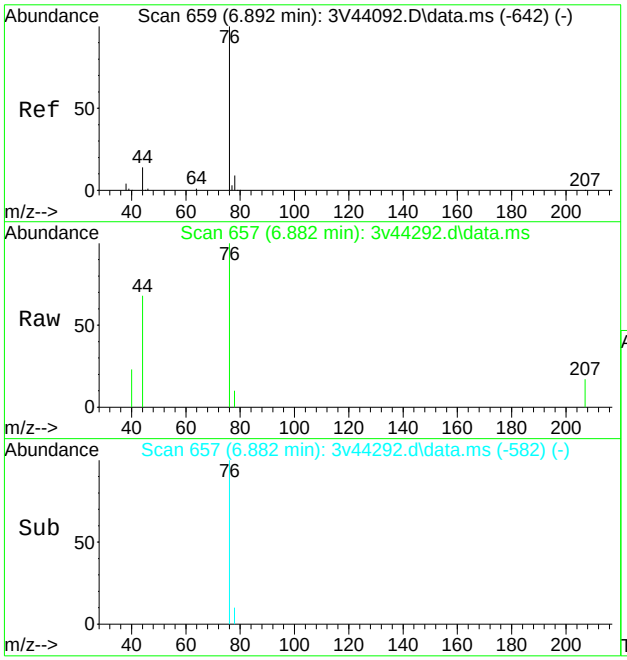


#20
acetone
Concen: 47.91 ug/L
RT: 6.499 min Scan# 584
Delta R.T. 0.005 min
Lab File: 3v44292.d
Acq: 24 Apr 2019 3:56 pm

Tgt Ion: 58 Resp: 10688

Ion	Ratio	Lower	Upper
58	100		
43	296.1	279.5	339.5

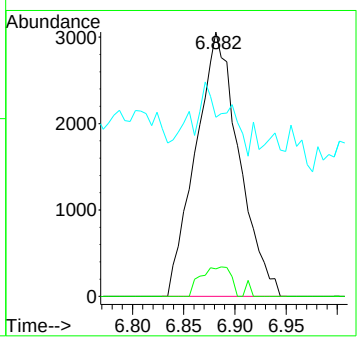


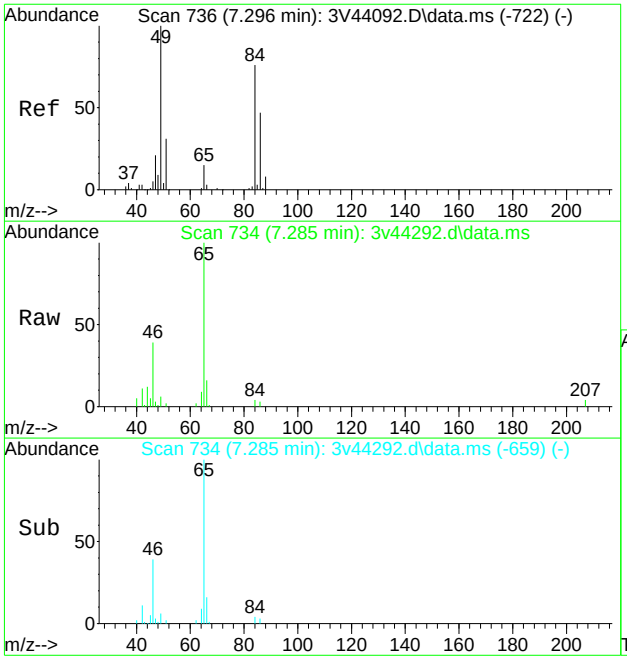


#23
carbon disulfide
Concen: 0.73 ug/L
RT: 6.882 min Scan# 657
Delta R.T. -0.005 min
Lab File: 3v44292.d
Acq: 24 Apr 2019 3:56 pm

Tgt Ion: 76 Resp: 9001

Ion	Ratio	Lower	Upper
76	100		
78	10.4	0.0	39.3
44	12.8	0.0	43.4

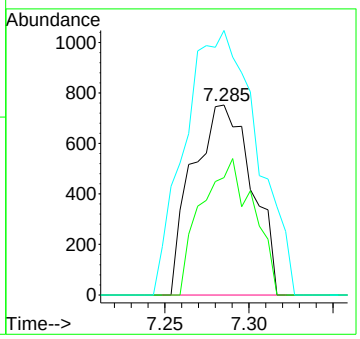


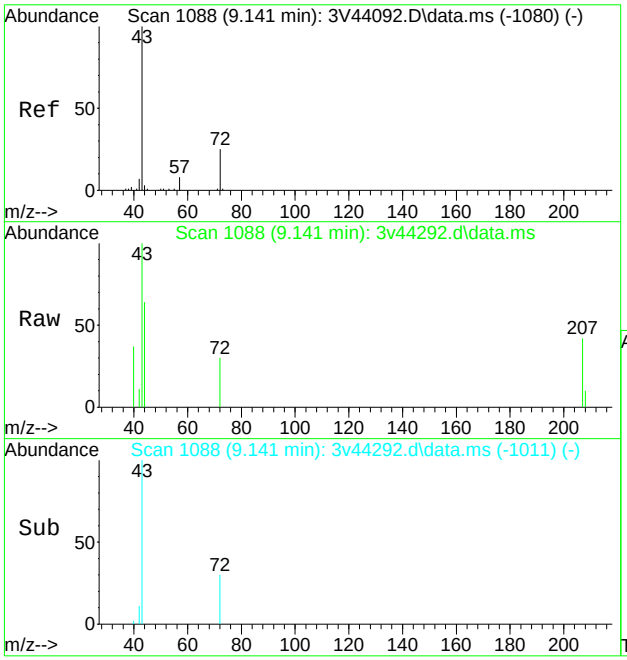


#24
methylene chloride
Concen: 0.42 ug/L
RT: 7.285 min Scan# 734
Delta R.T. -0.005 min
Lab File: 3v44292.d
Acq: 24 Apr 2019 3:56 pm

Tgt Ion: 84 Resp: 1849

Ion	Ratio	Lower	Upper
84	100		
86	61.8	33.8	93.8
49	113.8	101.0	161.0

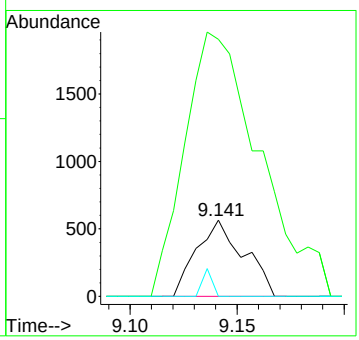




#31
2-butanone
Concen: 3.85 ug/L
RT: 9.141 min Scan# 1088
Delta R.T. 0.005 min
Lab File: 3v44292.d
Acq: 24 Apr 2019 3:56 pm

Tgt Ion: 72 Resp: 866

Ion	Ratio	Lower	Upper
72	100		
43	276.9	384.9	444.9#
57	0.0	1.1	61.1#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184763.d
Acq On : 26 Apr 2019 12:22 pm
Operator : EddieH
Sample : jc86406-7 Inst : MSY
Misc : MS34034,VY8016,4.5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:26:35 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

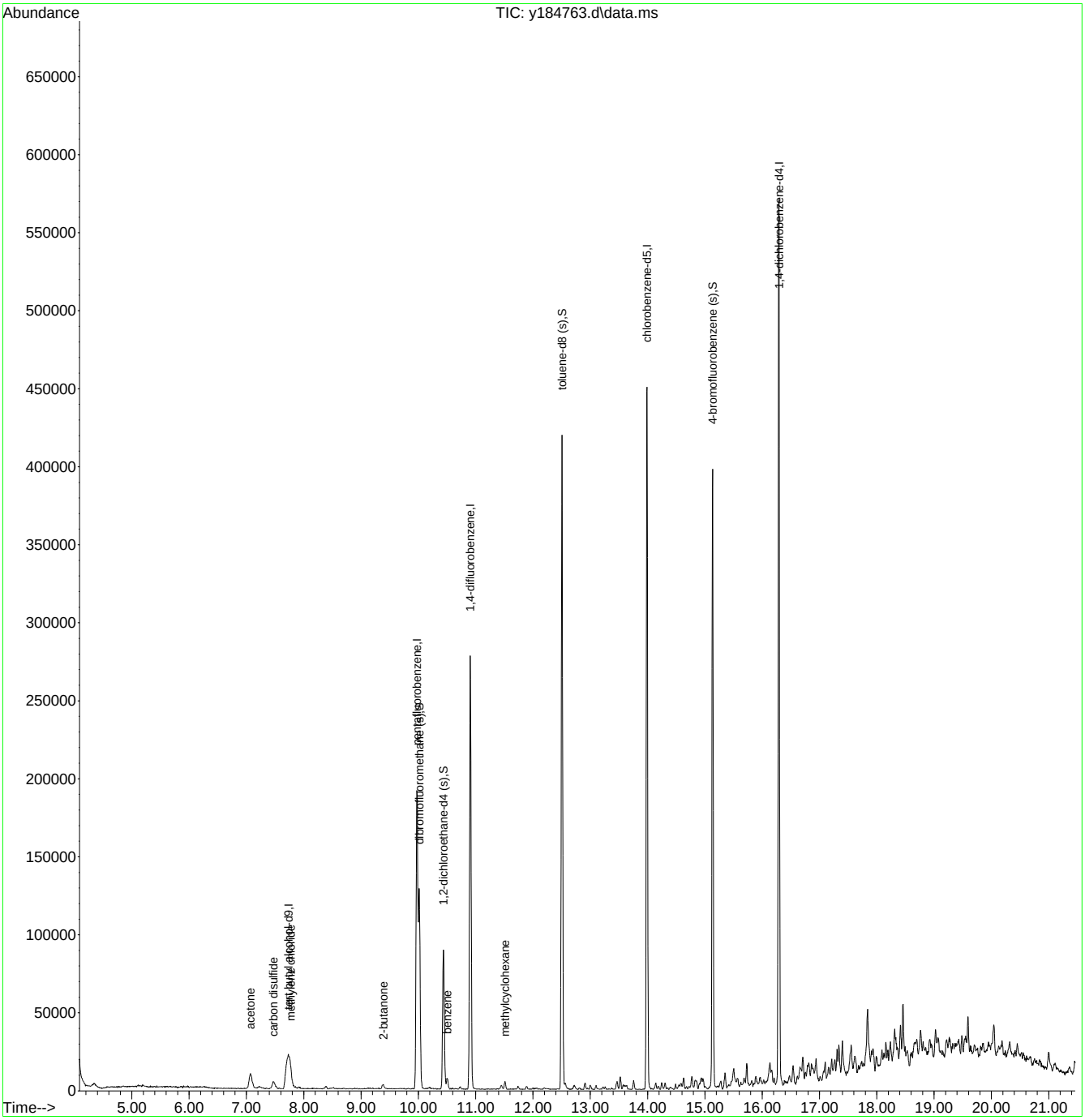
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.730	65	70311	500.00	ug/L	-0.01
5) pentafluorobenzene	9.974	168	155905	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	241000	50.00	ug/L	0.00
74) chlorobenzene-d5	13.991	117	241382	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.292	152	140295	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	81500	57.63	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 115.26%			
53) 1,2-dichloroethane-d4 (s)	10.434	65	68313	50.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.48%			
75) toluene-d8 (s)	12.506	98	266083	43.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.12%			
98) 4-bromofluorobenzene (s)	15.136	95	113586	48.83	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.66%			
Target Compounds						Qvalue
20) acetone	7.071	43	23970	62.76	ug/L	99
23) carbon disulfide	7.469	76	13188	2.52	ug/L	93
24) methylene chloride	7.772	84	2030	0.98	ug/L	80
31) 2-butanone	9.388	72	1036	8.25	ug/L #	30
57) benzene	10.502	78	6789	0.98	ug/L	87
67) methylcyclohexane	11.512	83	2029	0.71	ug/L	80

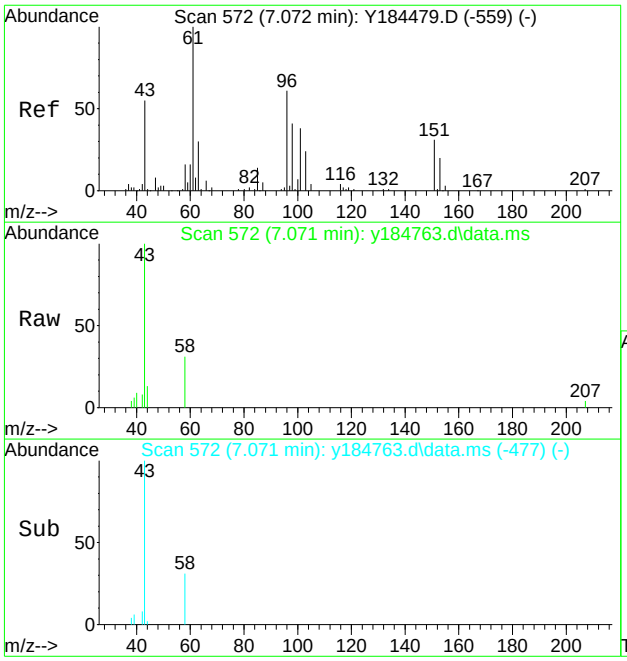
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184763.d
Acq On : 26 Apr 2019 12:22 pm
Operator : EddieH
Sample : jc86406-7 Inst : MSY
Misc : MS34034,VY8016,4.5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:26:35 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

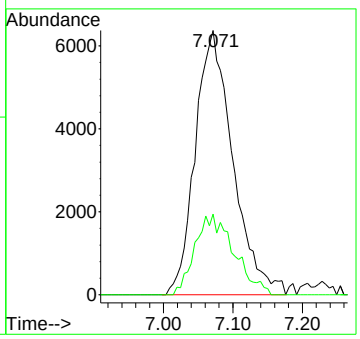


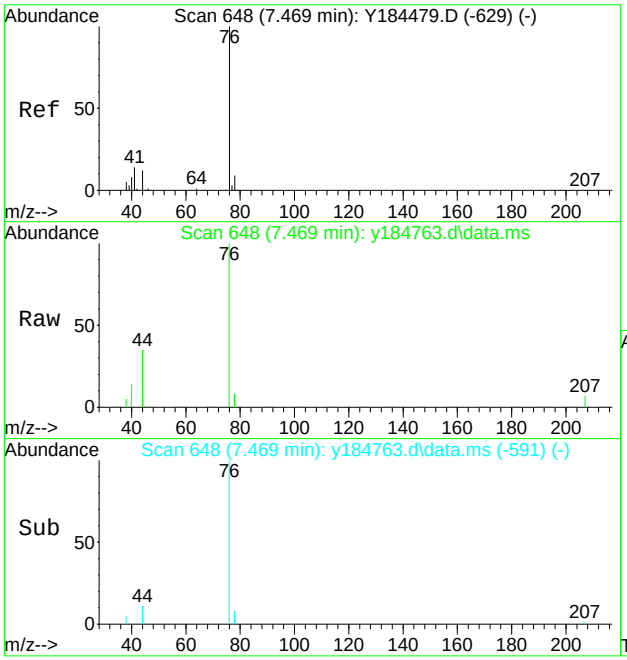


#20
acetone
Concen: 62.76 ug/L
RT: 7.071 min Scan# 572
Delta R.T. -0.005 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 43 Resp: 23970

Ion	Ratio	Lower	Upper
43	100		
58	30.6	1.4	61.4

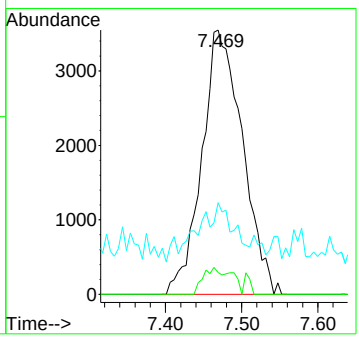


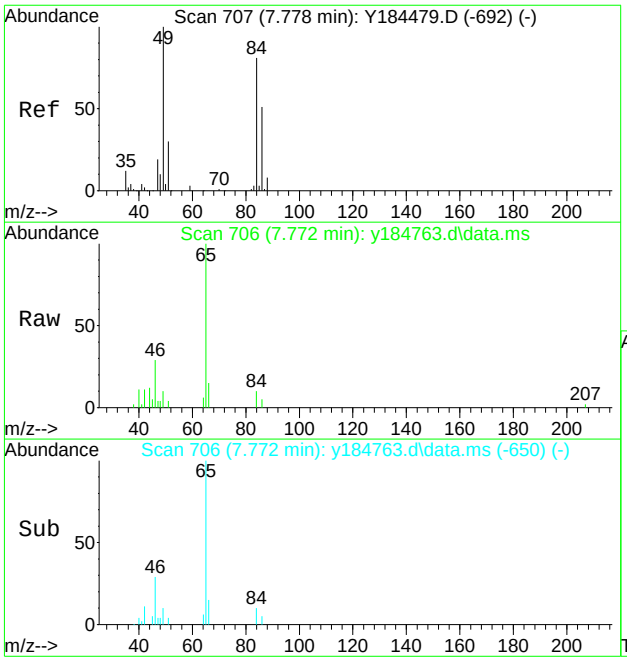


#23
carbon disulfide
Concen: 2.52 ug/L
RT: 7.469 min Scan# 648
Delta R.T. -0.000 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 76 Resp: 13188

Ion	Ratio	Lower	Upper
76	100		
78	8.3	0.0	38.7
44	17.2	0.0	42.6

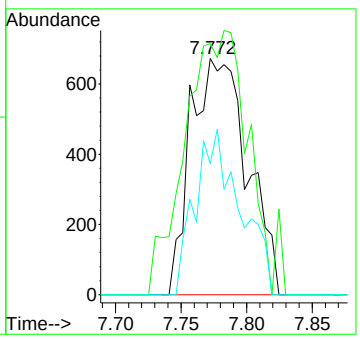


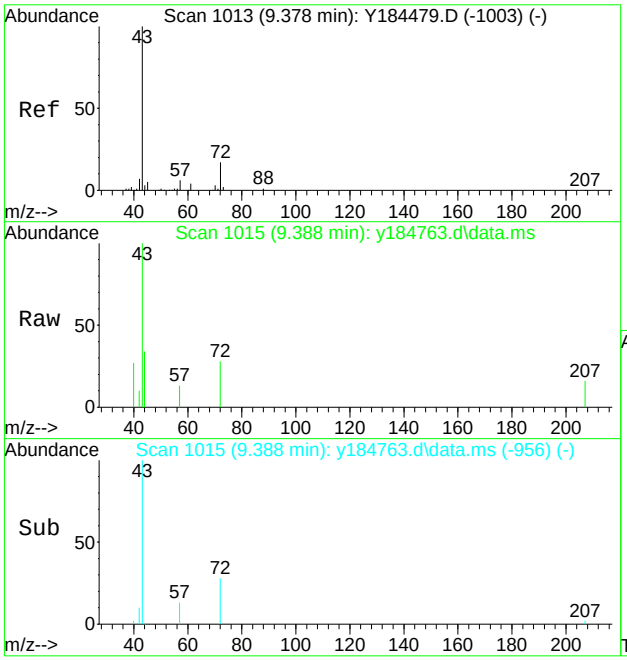


#24
methylene chloride
Concen: 0.98 ug/L
RT: 7.772 min Scan# 706
Delta R.T. -0.005 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 84 Resp: 2030

Ion	Ratio	Lower	Upper
84	100		
49	106.2	104.2	164.2
86	55.4	35.3	95.3

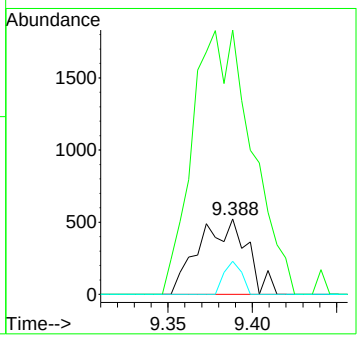


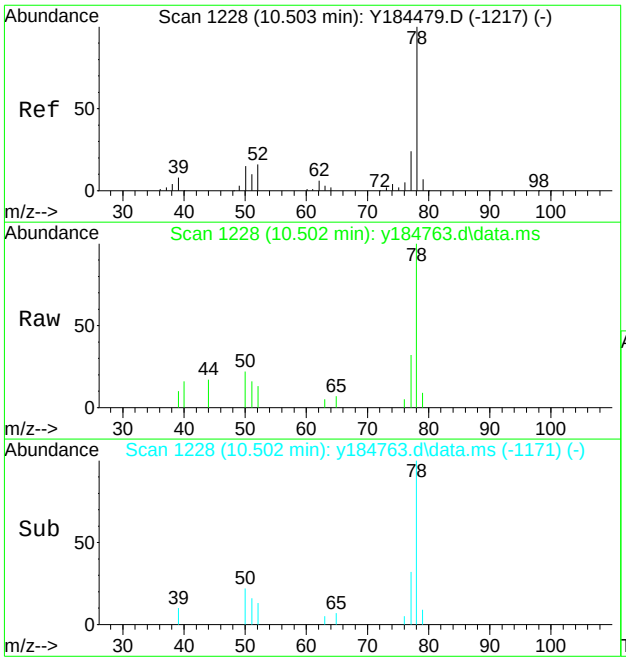


#31
2-butanone
Concen: 8.25 ug/L
RT: 9.388 min Scan# 1015
Delta R.T. 0.010 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 72 Resp: 1036

Ion	Ratio	Lower	Upper
72	100		
43	351.0	537.8	597.8#
57	44.1	1.1	61.1

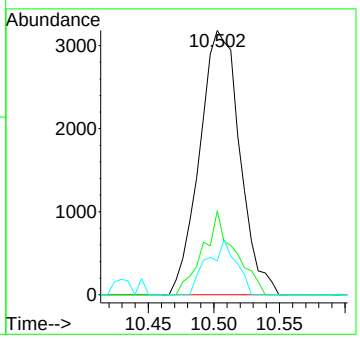


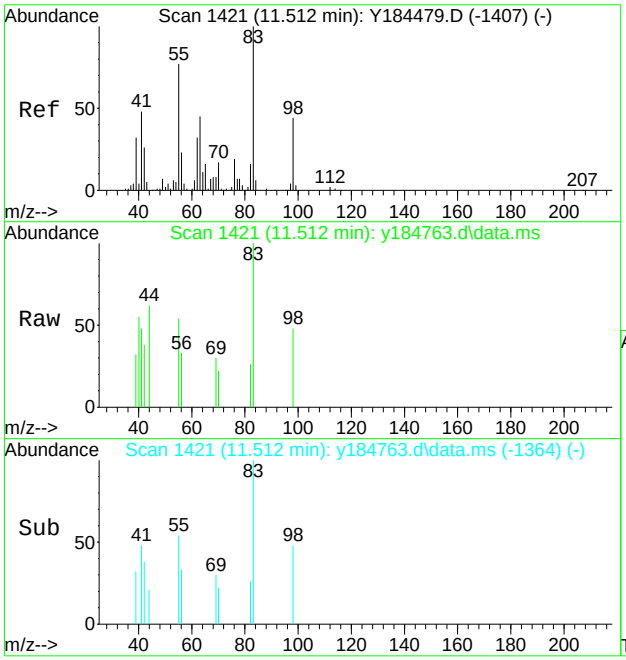


#57
benzene
Concen: 0.98 ug/L
RT: 10.502 min Scan# 1228
Delta R.T. -0.000 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 78 Resp: 6789

Ion	Ratio	Lower	Upper
78	100		
77	31.8	0.0	53.1
52	12.8	0.0	45.8

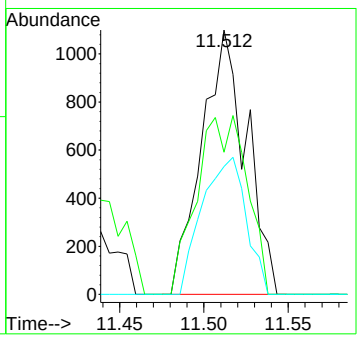




#67
methylcyclohexane
Concen: 0.71 ug/L
RT: 11.512 min Scan# 1421
Delta R.T. -0.000 min
Lab File: y184763.d
Acq: 26 Apr 2019 12:22 pm

Tgt Ion: 83 Resp: 2029

Ion	Ratio	Lower	Upper
83	100		
55	53.7	49.0	109.0
98	48.4	15.7	75.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264060.d
Acq On : 25 Apr 2019 6:55 pm
Operator : juntaep
Sample : JC86406-8 Inst : MSD
Misc : ms34034,vd10643,4.2,,100,10,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:53:24 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

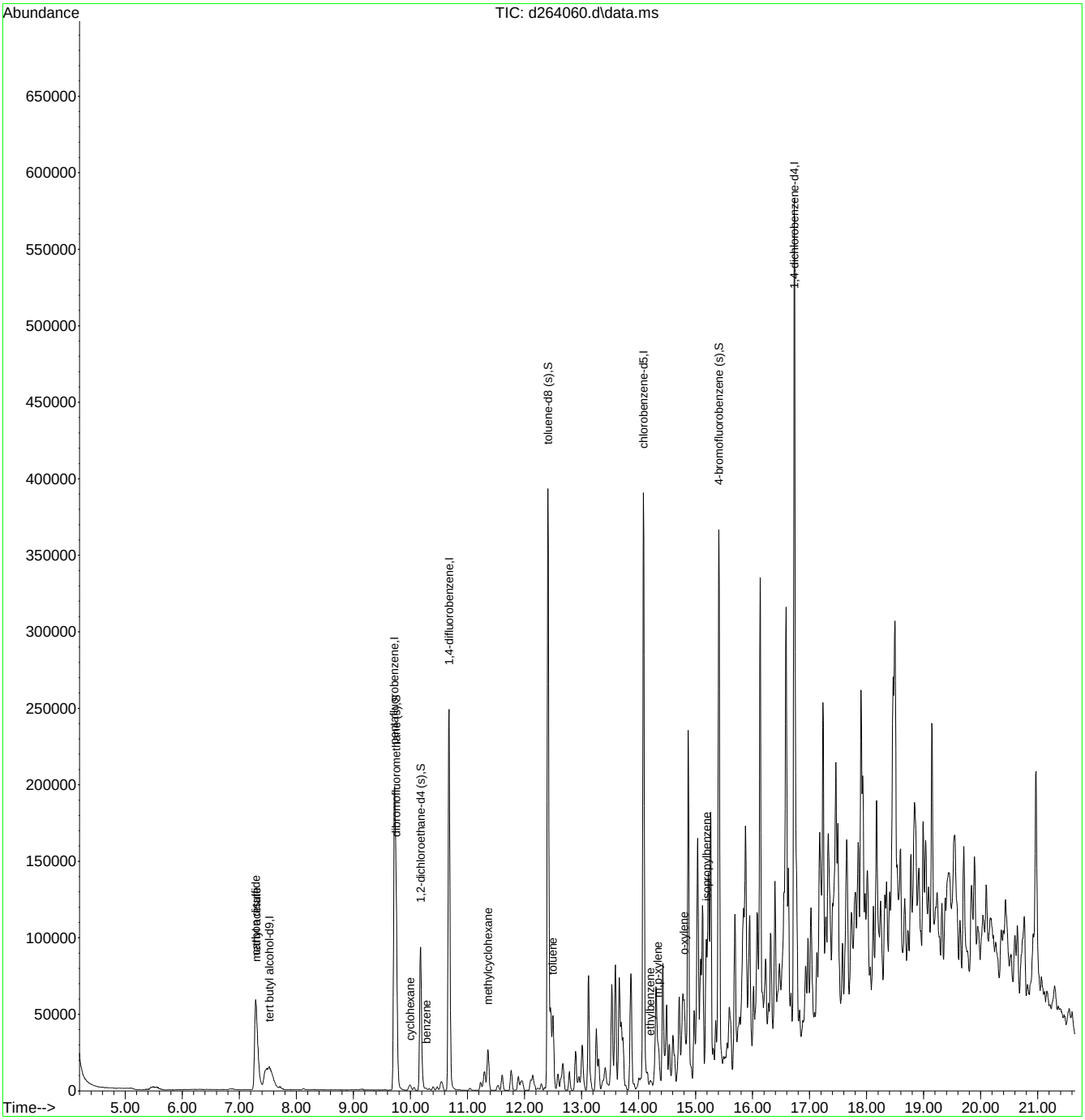
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.528	65	88371	500.00	ug/L	0.06
5) pentafluorobenzene	9.720	168	164942	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.677	114	237583	50.00	ug/L	0.00
75) chlorobenzene-d5	14.087	117	236434	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.733	152	144944	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.751	113	75785	48.70	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.40%			
55) 1,2-dichloroethane-d4 (s)	10.180	65	79874	44.85	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.70%			
76) toluene-d8 (s)	12.413	98	292174	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
100) 4-bromofluorobenzene (s)	15.410	95	135615	50.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.98%			
Target Compounds						Qvalue
23) carbon disulfide	7.288	76	175188	26.42	ug/L	99
25) methyl acetate	7.298	43	11950	10.56	ug/L	91
48) cyclohexane	9.997	84	741	0.21	ug/L #	41
58) benzene	10.279	78	1451	0.20	ug/L	87
66) methylcyclohexane	11.362	83	13465	4.40	ug/L	97
77) toluene	12.492	92	17596	3.89	ug/L	92
90) ethylbenzene	14.207	91	4097	0.46	ug/L	91
91) m,p-xylene	14.338	106	3091	0.91	ug/L #	77
92) o-xylene	14.798	91	4729	0.63	ug/L	93
96) isopropylbenzene	15.196	105	11263	1.29	ug/L	95

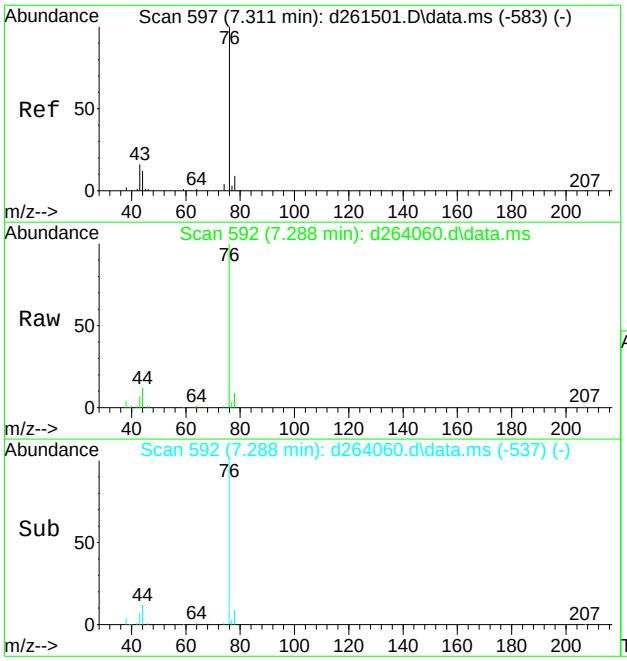
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264060.d
Acq On : 25 Apr 2019 6:55 pm
Operator : juntaep
Sample : JC86406-8 Inst : MSD
Misc : ms34034,vd10643,4.2,,100,10,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:53:24 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

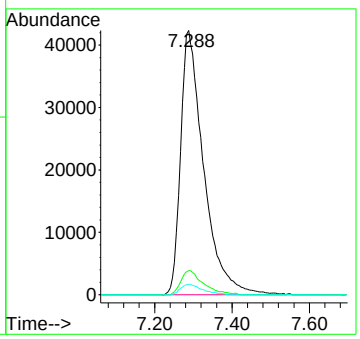


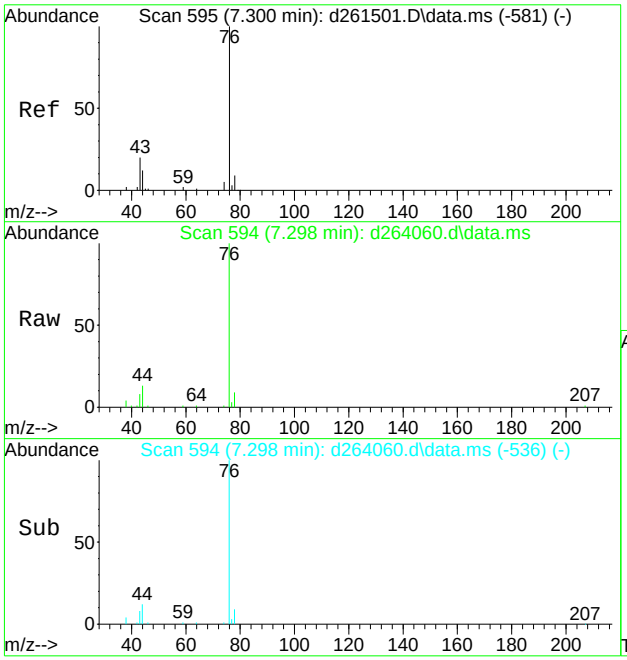


#23
carbon disulfide
Concen: 26.42 ug/L
RT: 7.288 min Scan# 592
Delta R.T. -0.012 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 76 Resp: 175188

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	39.5
38	4.0	0.0	34.3

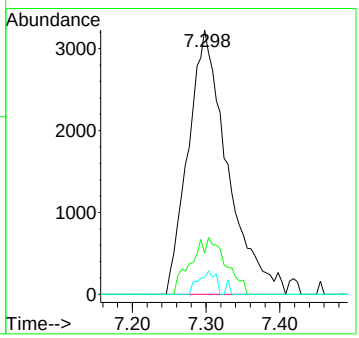


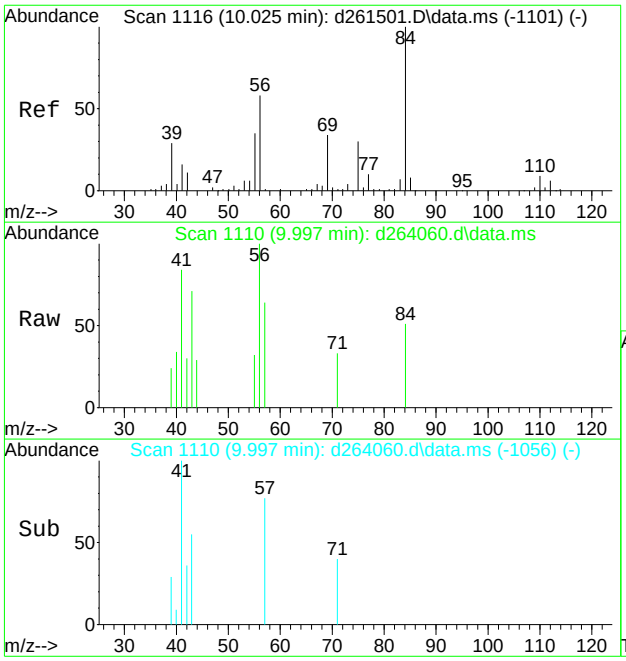


#25
methyl acetate
Concen: 10.56 ug/L
RT: 7.298 min Scan# 594
Delta R.T. 0.003 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 43 Resp: 11950

Ion	Ratio	Lower	Upper
43	100		
74	15.5	0.0	50.5
59	6.3	0.0	37.9

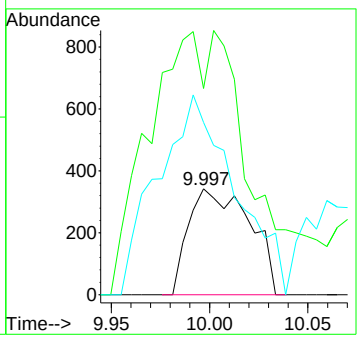


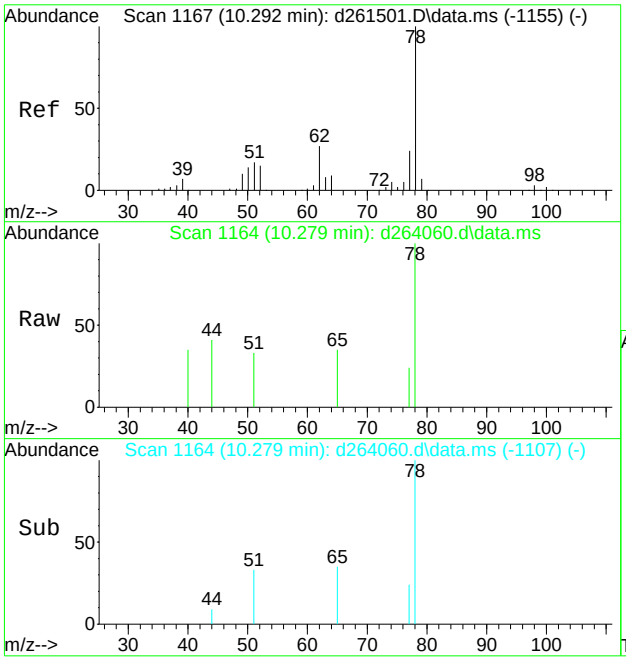


#48
cyclohexane
Concen: 0.21 ug/L
RT: 9.997 min Scan# 1110
Delta R.T. -0.018 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 84 Resp: 741

Ion	Ratio	Lower	Upper
84	100		
56	133.3	81.8	141.8
41	162.9	33.5	93.5#

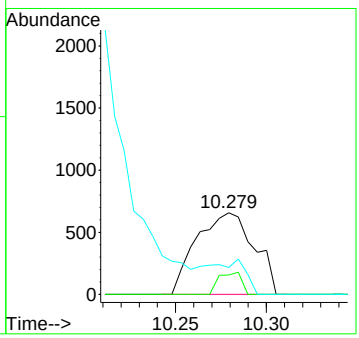


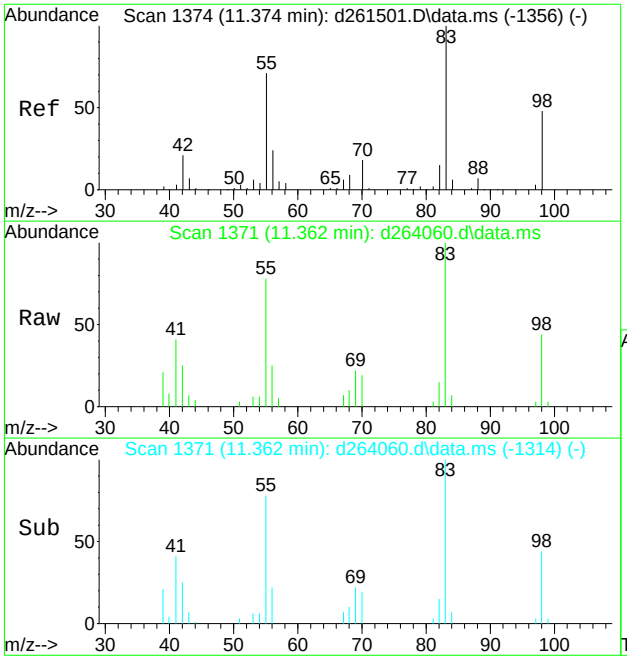


#58
benzene
Concen: 0.20 ug/L
RT: 10.279 min Scan# 1164
Delta R.T. -0.002 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 78 Resp: 1451

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.8
51	33.1	0.0	50.1

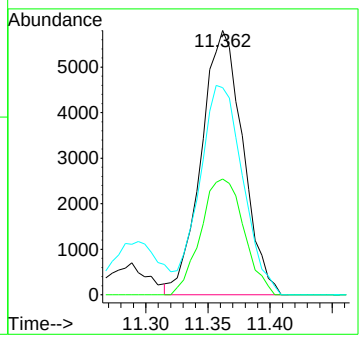


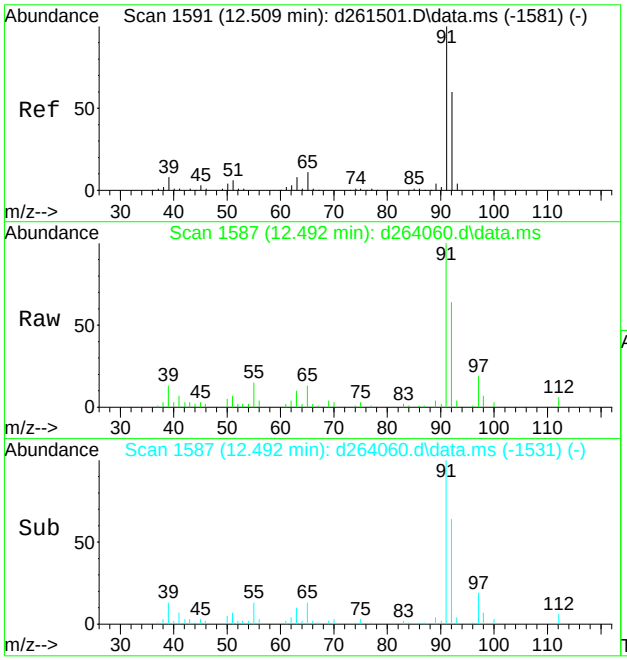


#66
methylcyclohexane
Concen: 4.40 ug/L
RT: 11.362 min Scan# 1371
Delta R.T. -0.002 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 83 Resp: 13465

Ion	Ratio	Lower	Upper
83	100		
98	43.8	27.3	67.3
55	78.3	59.4	99.4

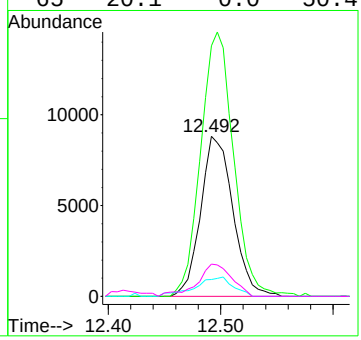


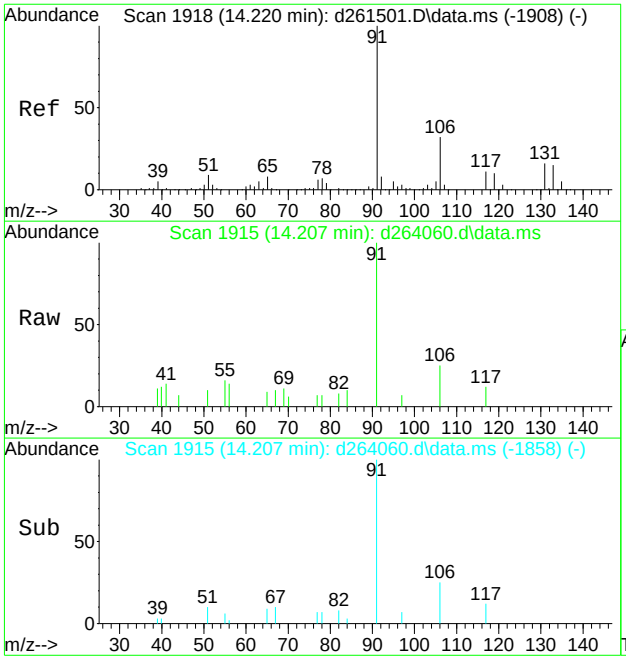


#77
toluene
Concen: 3.89 ug/L
RT: 12.492 min Scan# 1587
Delta R.T. -0.007 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 92 Resp: 17596

Ion	Ratio	Lower	Upper
92	100		
91	156.5	149.2	189.2
51	10.5	0.0	42.2
65	20.1	0.0	50.4

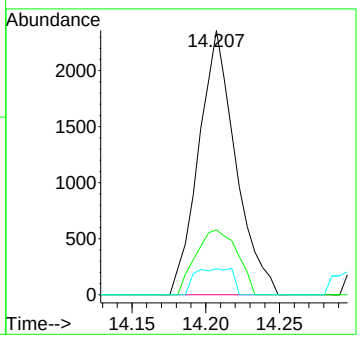


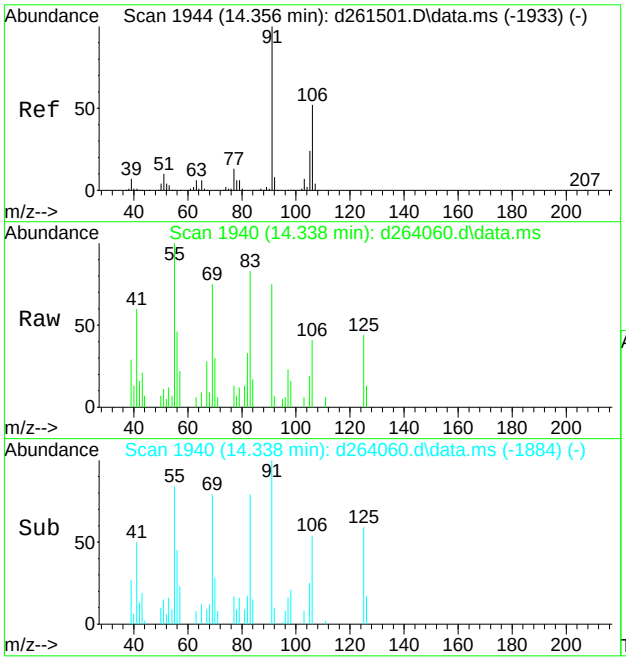


#90
ethylbenzene
Concen: 0.46 ug/L
RT: 14.207 min Scan# 1915
Delta R.T. -0.002 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 91 Resp: 4097

Ion	Ratio	Lower	Upper
91	100		
106	24.6	1.2	61.2
51	9.9	0.0	40.0

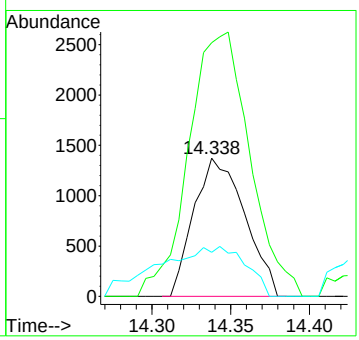


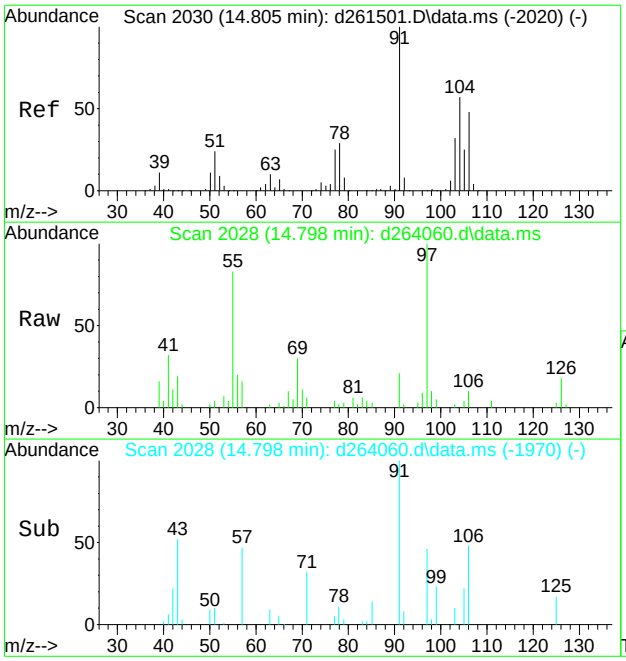


#91
m,p-xylene
Concen: 0.91 ug/L
RT: 14.338 min Scan# 1940
Delta R.T. -0.007 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion:106 Resp: 3091

Ion	Ratio	Lower	Upper
106	100		
91	165.5	173.0	233.0#
77	31.9	0.0	57.4

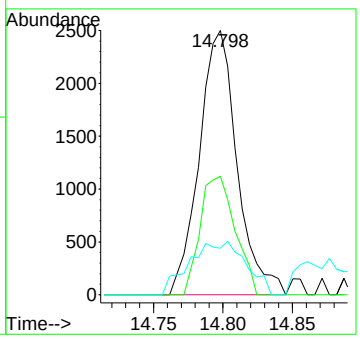


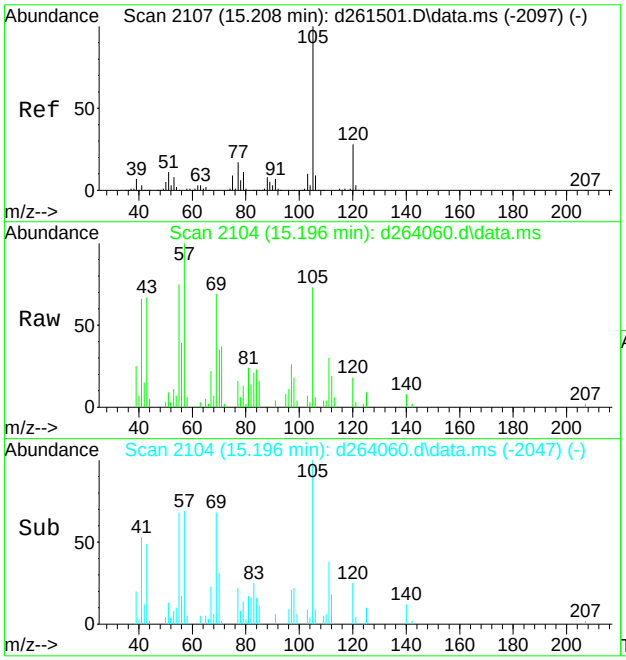


#92
o-xylene
Concen: 0.63 ug/L
RT: 14.798 min Scan# 2028
Delta R.T. 0.003 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion: 91 Resp: 4729

Ion	Ratio	Lower	Upper
91	100		
106	44.8	16.5	76.5
77	17.6	0.0	55.2

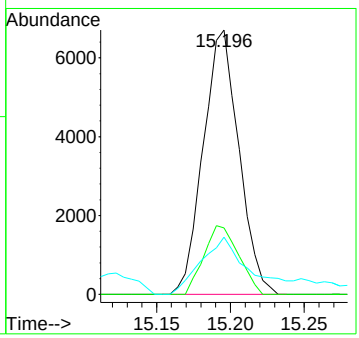




#96
isopropylbenzene
Concen: 1.29 ug/L
RT: 15.196 min Scan# 2104
Delta R.T. -0.002 min
Lab File: d264060.d
Acq: 25 Apr 2019 6:55 pm

Tgt Ion:105 Resp: 11263

Ion	Ratio	Lower	Upper
105	100		
120	25.2	7.0	47.0
77	21.6	0.0	38.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184762.d
Acq On : 26 Apr 2019 11:53 am
Operator : EddieH
Sample : jc86406-9 Inst : MSY
Misc : MS34034,VY8016,3.2,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:25:26 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

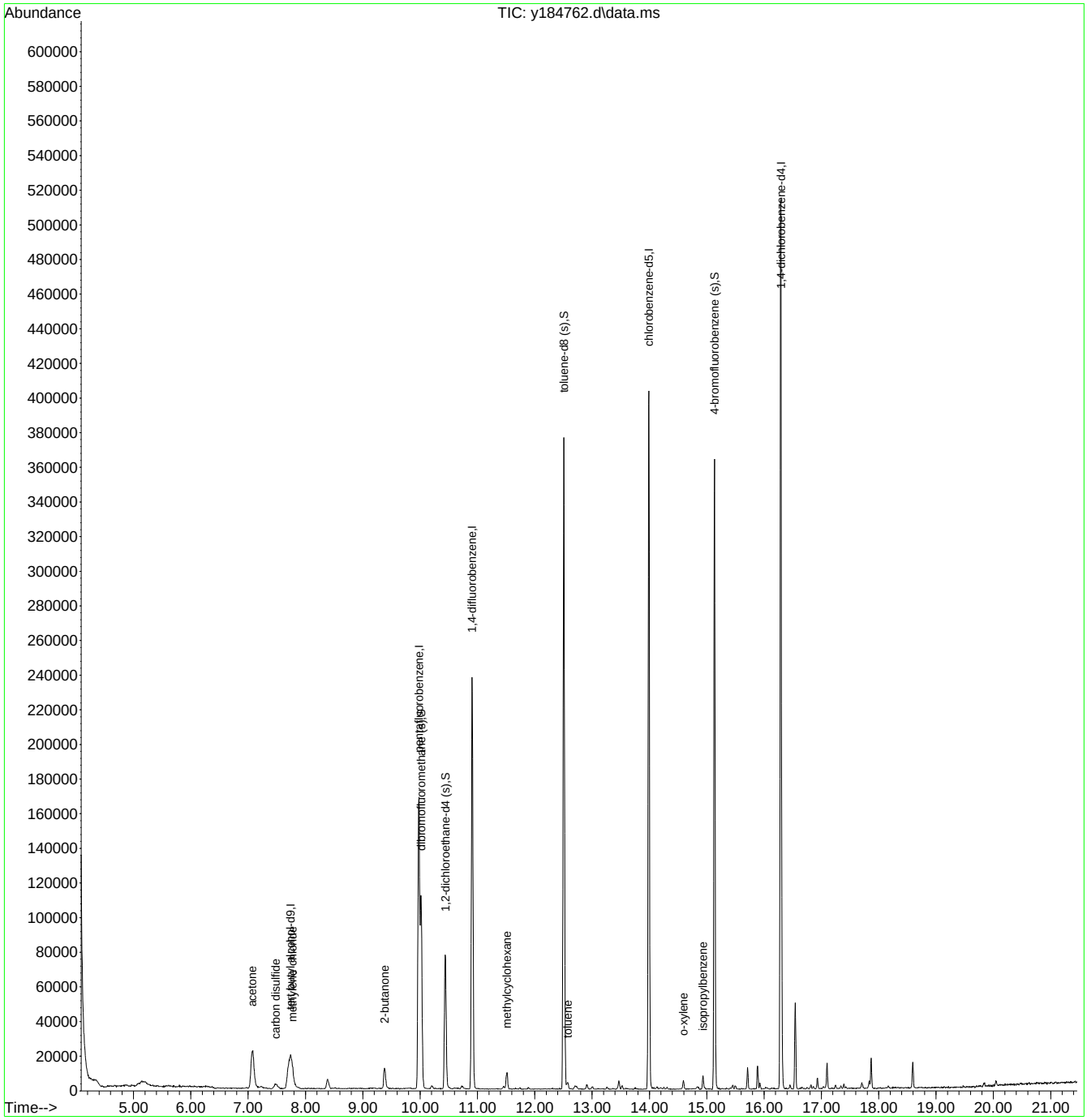
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.741	65	59706	500.00	ug/L		0.00
5) pentafluorobenzene	9.979	168	136969	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.905	114	210801	50.00	ug/L		0.00
74) chlorobenzene-d5	13.991	117	213917	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.292	152	125739	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.016	113	71674	57.69	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 115.38%				
53) 1,2-dichloroethane-d4 (s)	10.440	65	60343	51.24	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.48%				
75) toluene-d8 (s)	12.506	98	235051	43.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 86.84%				
98) 4-bromofluorobenzene (s)	15.137	95	102102	48.97	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.94%				
Target Compounds							Qvalue
20) acetone	7.071	43	56068	167.09	ug/L		94
23) carbon disulfide	7.479	76	7789	1.69	ug/L		97
24) methylene chloride	7.772	84	1959	1.07	ug/L	#	66
31) 2-butanone	9.378	72	4343	39.37	ug/L	#	51
67) methylcyclohexane	11.512	83	4457	1.77	ug/L		98
76) toluene	12.574	92	1327	0.32	ug/L		87
91) o-xylene	14.593	91	2569	0.40	ug/L		95
95) isopropylbenzene	14.933	105	4894	0.63	ug/L		96

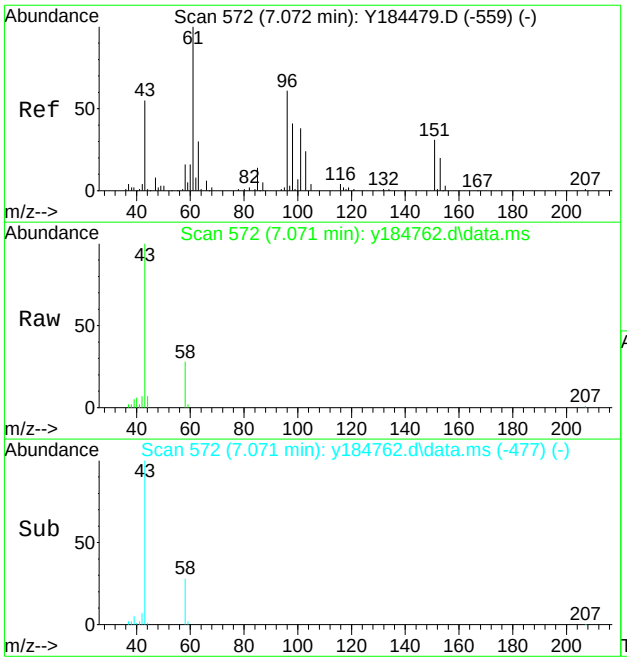
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184762.d
Acq On : 26 Apr 2019 11:53 am
Operator : EddieH
Sample : jc86406-9 Inst : MSY
Misc : MS34034,VY8016,3.2,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:25:26 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

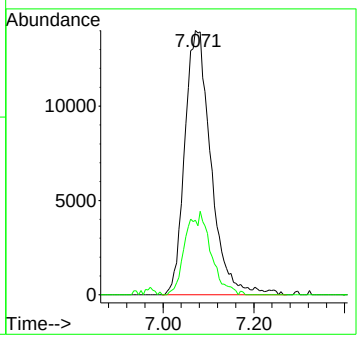


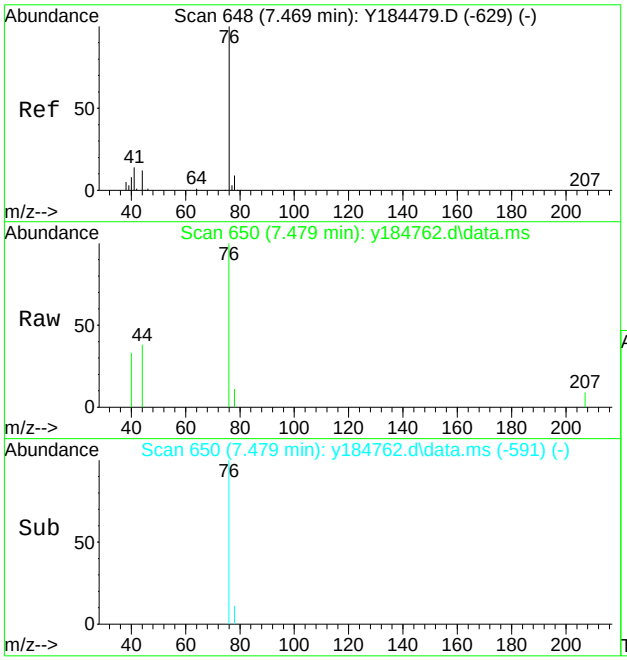


#20
acetone
Concen: 167.09 ug/L
RT: 7.071 min Scan# 572
Delta R.T. -0.005 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 43 Resp: 56068

Ion	Ratio	Lower	Upper
43	100		
58	28.2	1.4	61.4

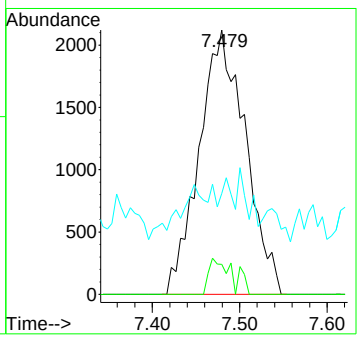


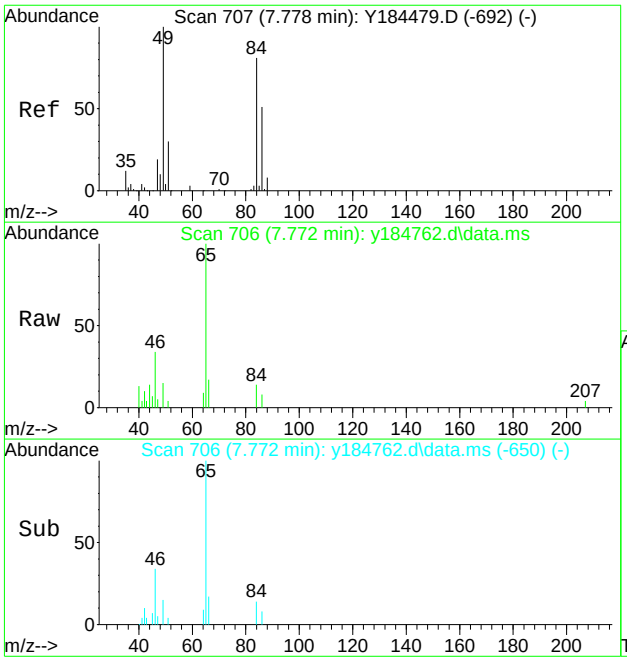


#23
carbon disulfide
Concen: 1.69 ug/L
RT: 7.479 min Scan# 650
Delta R.T. 0.010 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 76 Resp: 7789

Ion	Ratio	Lower	Upper
76	100		
78	11.4	0.0	38.7
44	12.7	0.0	42.6

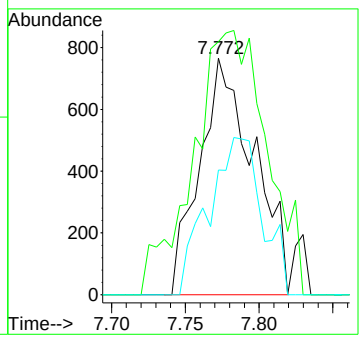


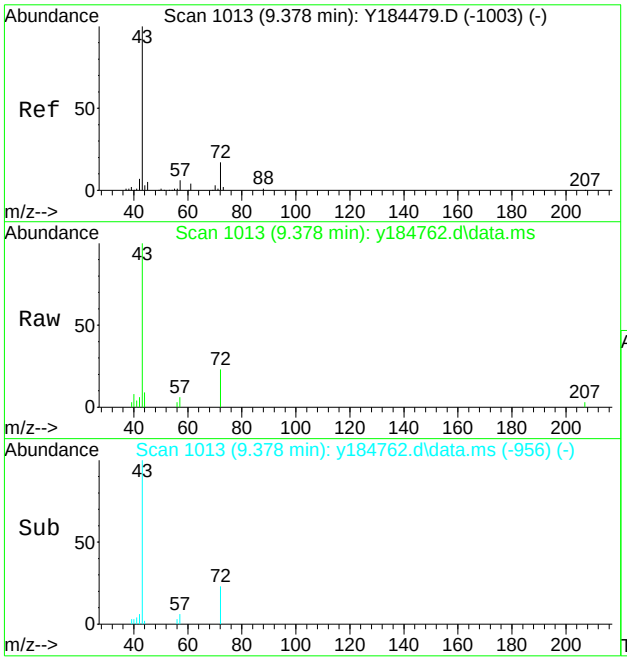


#24
methylene chloride
Concen: 1.07 ug/L
RT: 7.772 min Scan# 706
Delta R.T. -0.005 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 84 Resp: 1959

Ion	Ratio	Lower	Upper
84	100		
49	83.4	104.2	164.2#
86	52.7	35.3	95.3

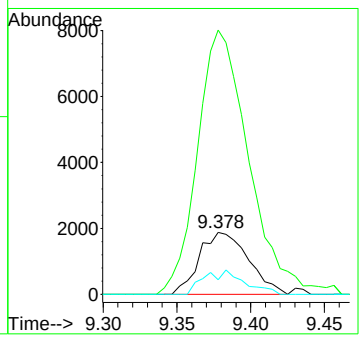


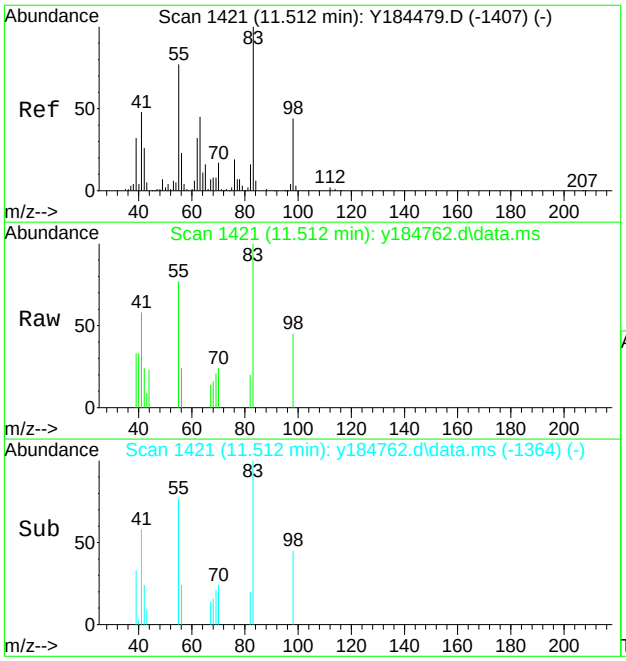


#31
2-butanone
Concen: 39.37 ug/L
RT: 9.378 min Scan# 1013
Delta R.T. -0.000 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 72 Resp: 4343

Ion	Ratio	Lower	Upper
72	100		
43	415.1	537.8	597.8#
57	23.7	1.1	61.1

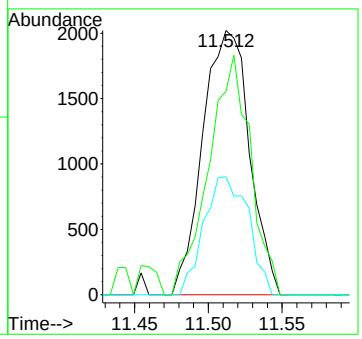


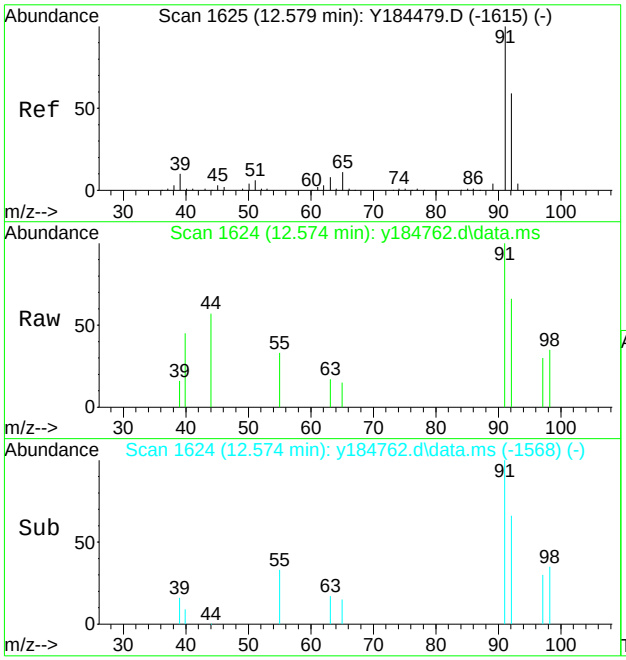


#67
methylcyclohexane
Concen: 1.77 ug/L
RT: 11.512 min Scan# 1421
Delta R.T. -0.000 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 83 Resp: 4457

Ion	Ratio	Lower	Upper
83	100		
55	76.9	49.0	109.0
98	44.6	15.7	75.7

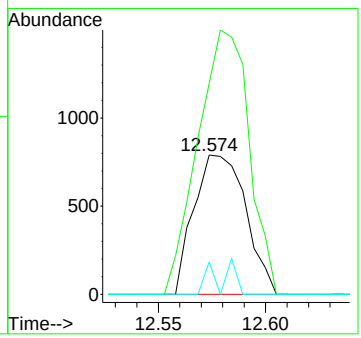


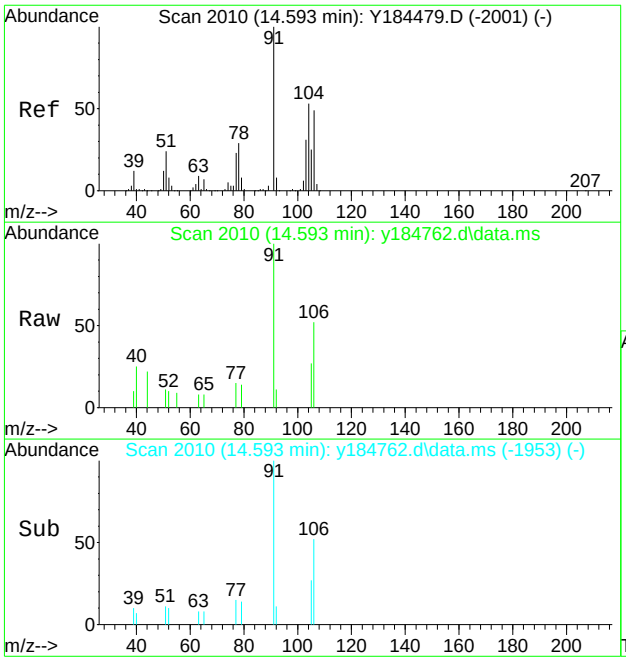


#76
toluene
Concen: 0.32 ug/L
RT: 12.574 min Scan# 1624
Delta R.T. -0.005 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 92 Resp: 1327

Ion	Ratio	Lower	Upper
92	100		
91	151.5	148.7	188.7
65	23.4	0.0	38.2

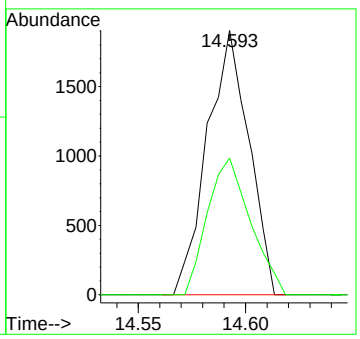


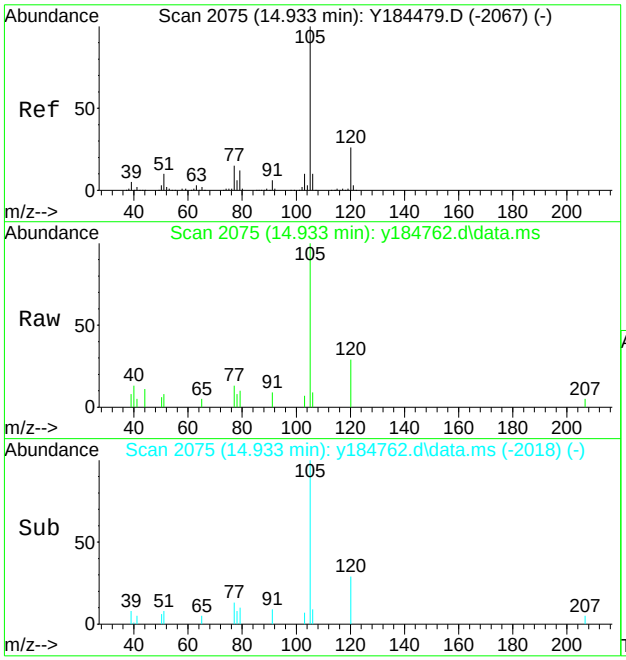


#91
o-xylene
Concen: 0.40 ug/L
RT: 14.593 min Scan# 2010
Delta R.T. -0.000 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion: 91 Resp: 2569

Ion	Ratio	Lower	Upper
91	100		
106	51.7	18.0	78.0

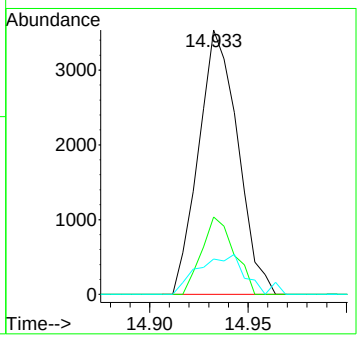




#95
isopropylbenzene
Concen: 0.63 ug/L
RT: 14.933 min Scan# 2075
Delta R.T. -0.000 min
Lab File: y184762.d
Acq: 26 Apr 2019 11:53 am

Tgt Ion:105 Resp: 4894

Ion	Ratio	Lower	Upper
105	100		
120	29.3	6.9	46.9
77	13.4	0.0	35.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44288.d
Acq On : 24 Apr 2019 2:12 pm
Operator : roberts
Sample : jc86406-10 Inst : MS3V
Misc : MS34034,V3V1778,5.1,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:48:37 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

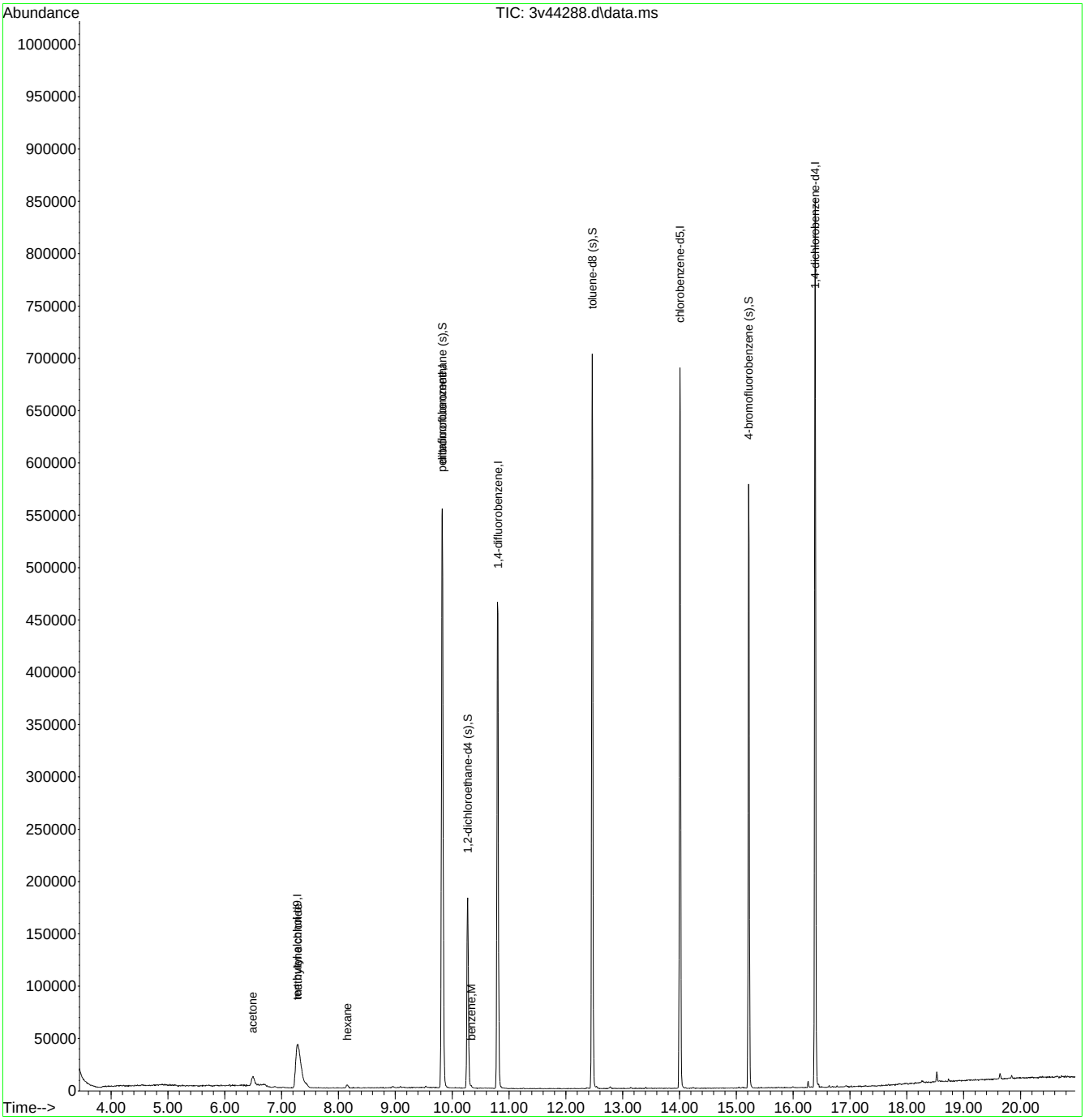
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	140009	500.00	ug/L	-0.03
5) pentafluorobenzene	9.823	168	247132	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.803	114	356130	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	326460	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	183978	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	131782	50.72	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.44%			
53) 1,2-dichloroethane-d4 (s)	10.274	65	130544	51.76	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.52%			
75) toluene-d8 (s)	12.465	98	409824	50.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.02%			
98) 4-bromofluorobenzene (s)	15.218	95	169985	52.33	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.66%			
Target Compounds						Qvalue
20) acetone	6.488	58	5864	23.77	ug/L	91
24) methylene chloride	7.285	84	2937	0.67	ug/L	93
28) hexane	8.150	57	1480	0.41	ug/L	86
55) benzene	10.337	78	1543	0.14	ug/L	89

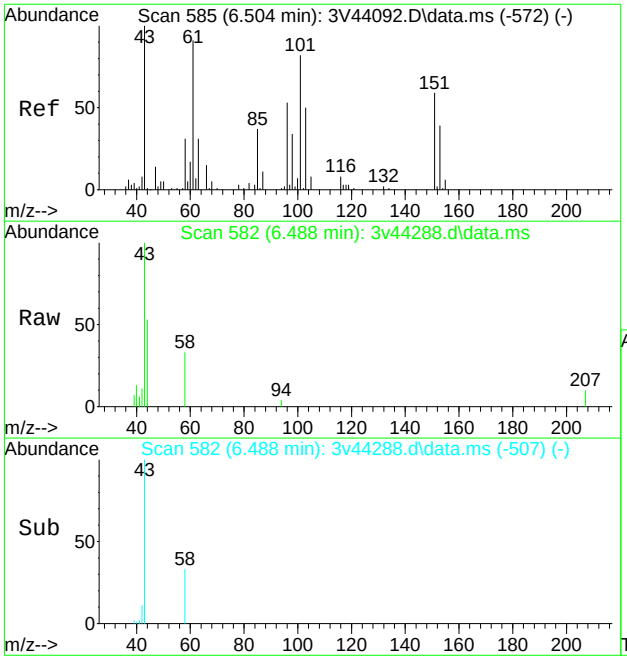
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44288.d
Acq On : 24 Apr 2019 2:12 pm
Operator : roberts
Sample : jc86406-10 Inst : MS3V
Misc : MS34034,V3V1778,5.1,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:48:37 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

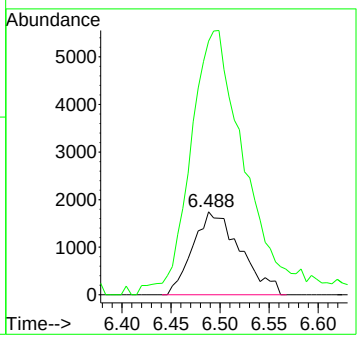


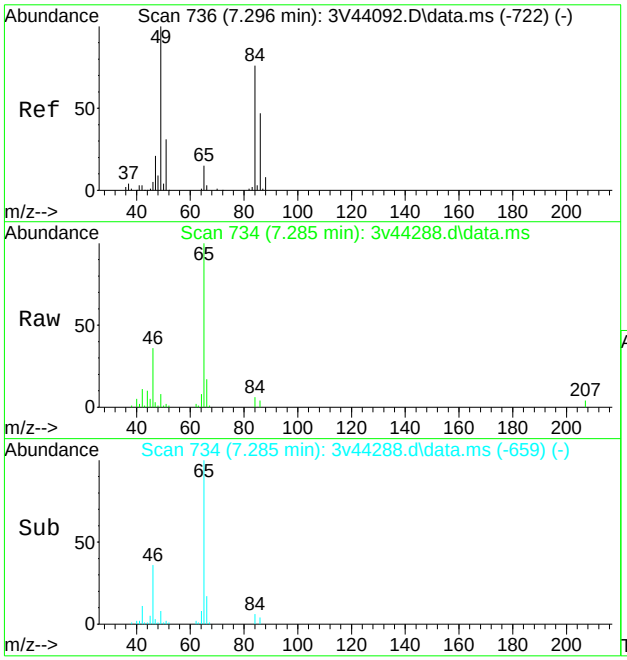


#20
acetone
Concen: 23.77 ug/L
RT: 6.488 min Scan# 582
Delta R.T. -0.005 min
Lab File: 3v44288.d
Acq: 24 Apr 2019 2:12 pm

Tgt Ion: 58 Resp: 5864

Ion	Ratio	Lower	Upper
58	100		
43	291.2	279.5	339.5

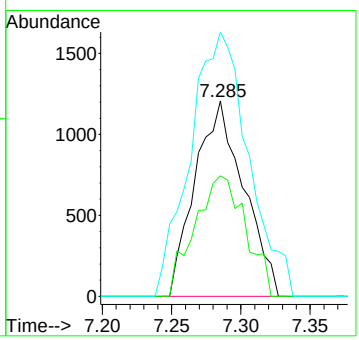


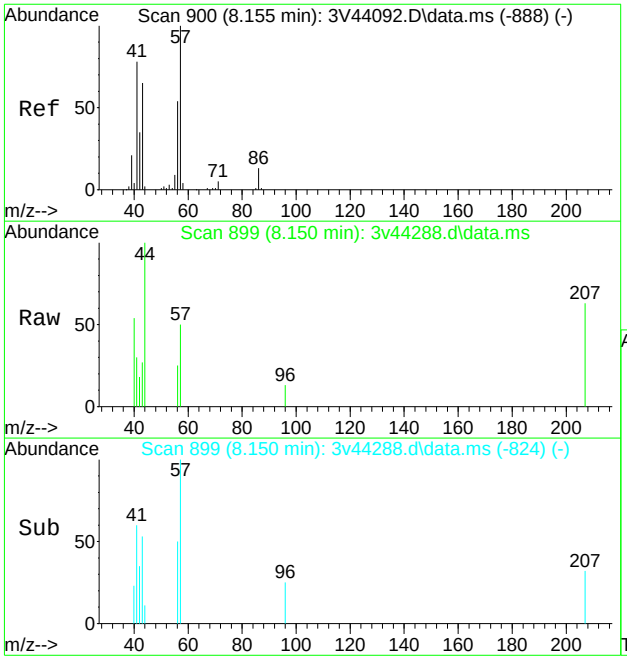


#24
methylene chloride
Concen: 0.67 ug/L
RT: 7.285 min Scan# 734
Delta R.T. -0.005 min
Lab File: 3v44288.d
Acq: 24 Apr 2019 2:12 pm

Tgt Ion: 84 Resp: 2937

Ion	Ratio	Lower	Upper
84	100		
86	61.7	33.8	93.8
49	120.3	101.0	161.0

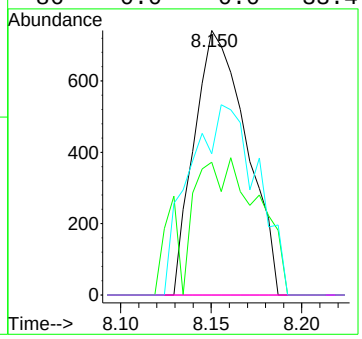


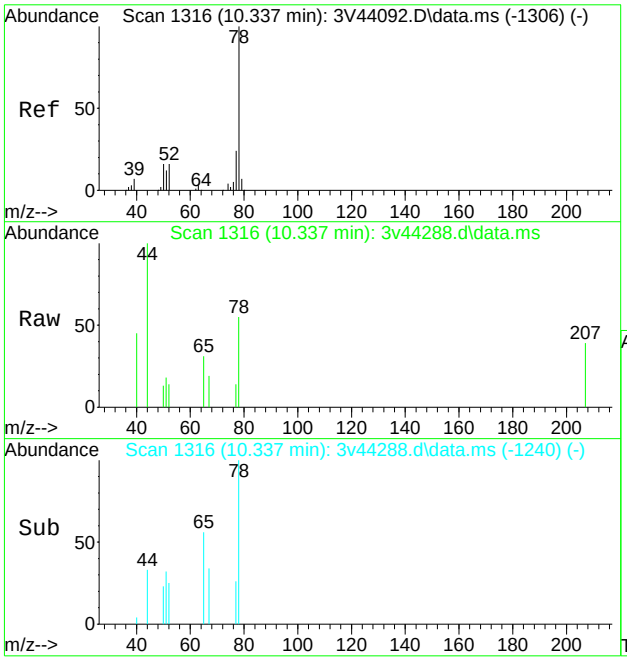


#28
hexane
Concen: 0.41 ug/L
RT: 8.150 min Scan# 899
Delta R.T. -0.005 min
Lab File: 3v44288.d
Acq: 24 Apr 2019 2:12 pm

Tgt Ion: 57 Resp: 1480

Ion	Ratio	Lower	Upper
57	100		
56	50.1	36.7	76.7
43	53.4	45.5	85.5
86	0.0	0.0	33.4

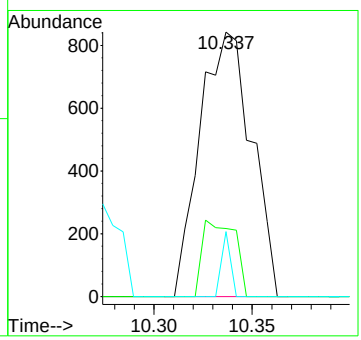




#55
benzene
Concen: 0.14 ug/L
RT: 10.337 min Scan# 1316
Delta R.T. 0.000 min
Lab File: 3v44288.d
Acq: 24 Apr 2019 2:12 pm

Tgt Ion: 78 Resp: 1543

Ion	Ratio	Lower	Upper
78	100		
77	25.7	0.0	53.5
52	24.6	0.0	45.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44295.d
Acq On : 24 Apr 2019 5:13 pm
Operator : roberts
Sample : jc86406-11 Inst : MS3V
Misc : MS34034,V3V1778,5.2,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:58:25 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

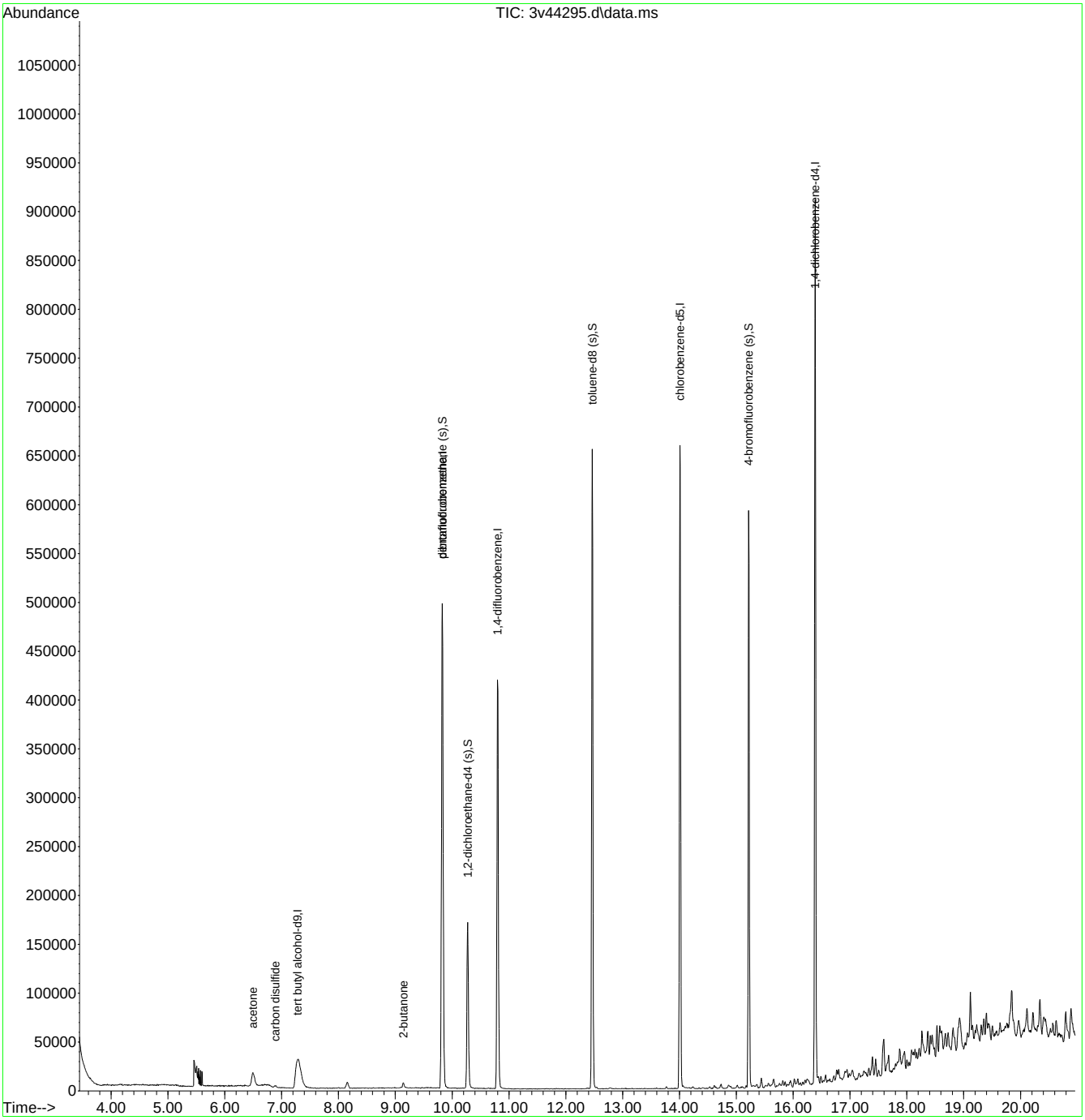
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.280	65	105733	500.00	ug/L	-0.02
5) pentafluorobenzene	9.828	168	216570	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.798	114	320398	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	313946	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	194998	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	123762	54.35	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 108.70%			
53) 1,2-dichloroethane-d4 (s)	10.274	65	119609	52.71	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 105.42%			
75) toluene-d8 (s)	12.465	98	377694	48.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.82%			
98) 4-bromofluorobenzene (s)	15.218	95	170124	49.41	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.82%			
Target Compounds						Qvalue
20) acetone	6.494	58	9608	49.20	ug/L	86
23) carbon disulfide	6.887	76	4179	0.39	ug/L	79
31) 2-butanone	9.141	72	1898	9.61	ug/L #	76

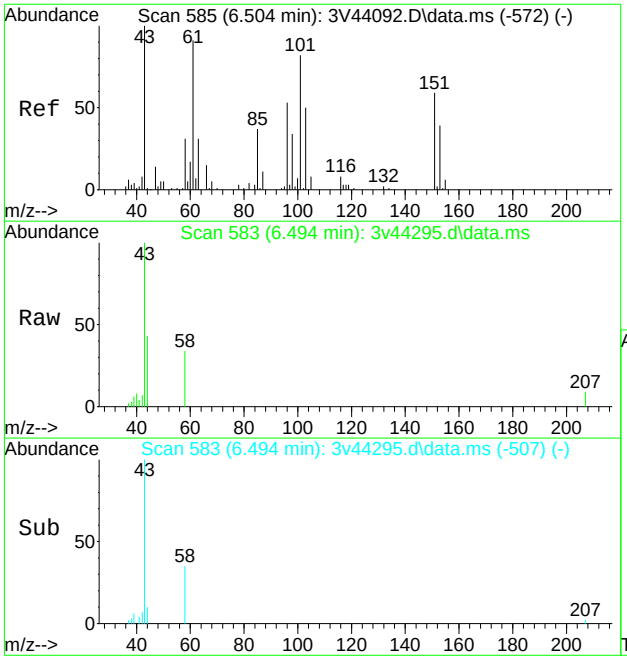
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44295.d
Acq On : 24 Apr 2019 5:13 pm
Operator : roberts
Sample : jc86406-11 Inst : MS3V
Misc : MS34034,V3V1778,5.2,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:58:25 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

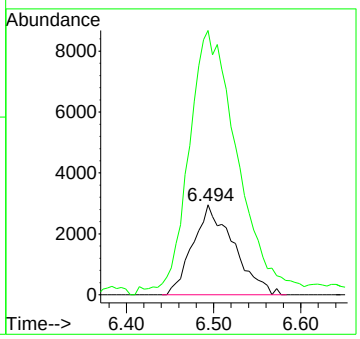


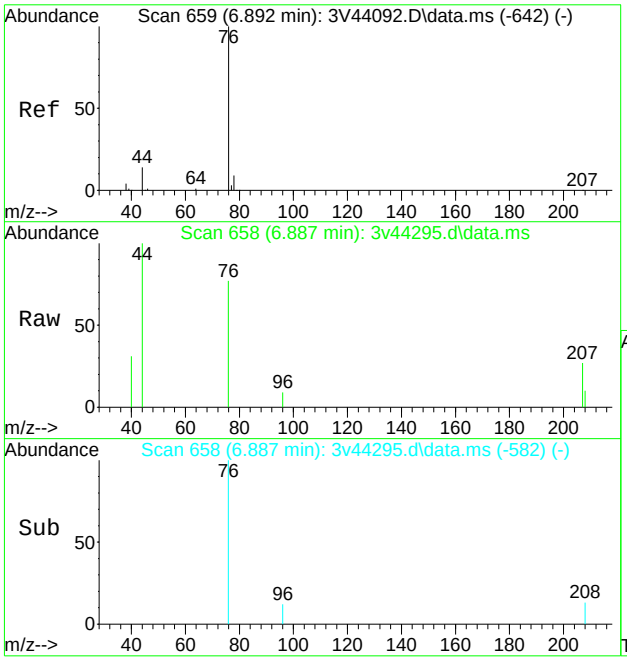


#20
acetone
Concen: 49.20 ug/L
RT: 6.494 min Scan# 583
Delta R.T. 0.000 min
Lab File: 3v44295.d
Acq: 24 Apr 2019 5:13 pm

Tgt Ion: 58 Resp: 9608

Ion	Ratio	Lower	Upper
58	100		
43	281.1	279.5	339.5

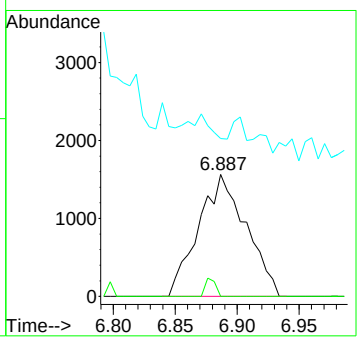


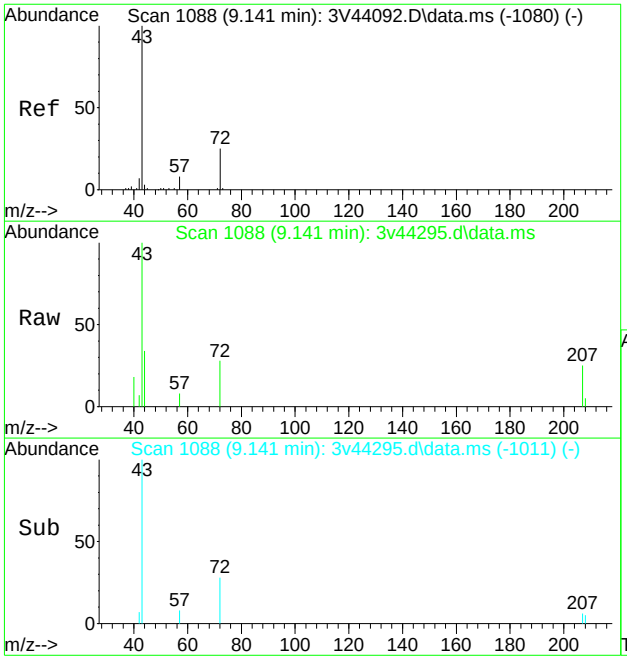


#23
carbon disulfide
Concen: 0.39 ug/L
RT: 6.887 min Scan# 658
Delta R.T. 0.000 min
Lab File: 3v44295.d
Acq: 24 Apr 2019 5:13 pm

Tgt Ion: 76 Resp: 4179

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.3
44	6.1	0.0	43.4

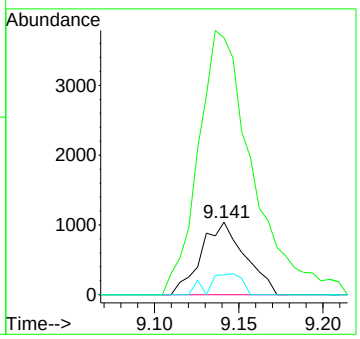




#31
2-butanone
Concen: 9.61 ug/L
RT: 9.141 min Scan# 1088
Delta R.T. 0.005 min
Lab File: 3v44295.d
Acq: 24 Apr 2019 5:13 pm

Tgt Ion: 72 Resp: 1898

Ion	Ratio	Lower	Upper
72	100		
43	353.3	384.9	444.9#
57	27.4	1.1	61.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264078.d
Acq On : 26 Apr 2019 3:01 pm
Operator : juntaep
Sample : JC86406-12 Inst : MSD
Misc : ms34034,vd10644,3.2,,10,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:09 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

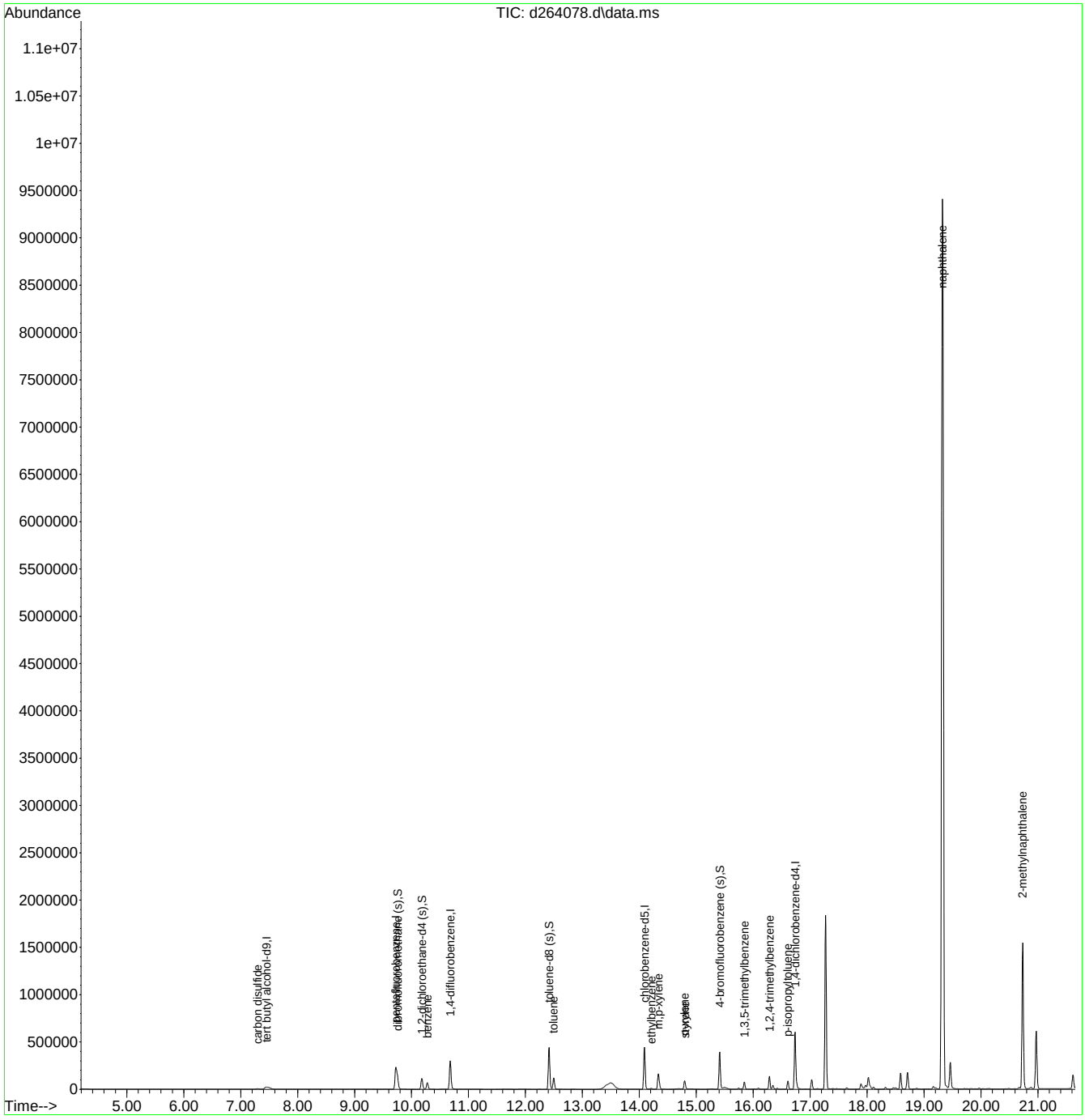
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.452	65	92171	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	177544	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	268431	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	270317	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.735	152	172161	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.753	113	81589	48.71	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.42%			
55) 1,2-dichloroethane-d4 (s)	10.182	65	90275	44.86	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.72%			
76) toluene-d8 (s)	12.415	98	320388	48.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.22%			
100) 4-bromofluorobenzene (s)	15.412	95	146809	46.02	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.04%			
Target Compounds						Qvalue
23) carbon disulfide	7.295	76	15896	2.23	ug/L	95
58) benzene	10.276	78	71875	8.82	ug/L	95
77) toluene	12.494	92	58326	11.28	ug/L	97
90) ethylbenzene	14.209	91	8453	0.82	ug/L	98
91) m,p-xylene	14.335	106	61179	15.67	ug/L	99
92) o-xylene	14.795	91	44970	5.24	ug/L	93
93) styrene	14.806	104	15708	2.36	ug/L	96
108) 1,3,5-trimethylbenzene	15.846	105	46992	5.16	ug/L	99
110) 1,2,4-trimethylbenzene	16.286	105	82331	9.06	ug/L	99
112) p-isopropyltoluene	16.605	119	5872	0.68	ug/L	64
124) naphthalene	19.324	128	9109933	1224.01	ug/L	83
126) 2-methylnaphthalene	20.731	142	887520	576.98	ug/L	99

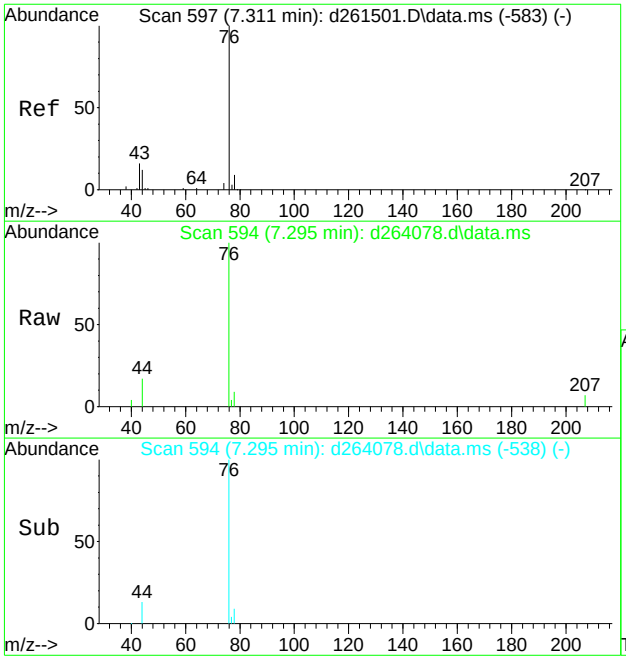
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264078.d
Acq On : 26 Apr 2019 3:01 pm
Operator : juntaep
Sample : JC86406-12 Inst : MSD
Misc : ms34034,vd10644,3.2,,10,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:09 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

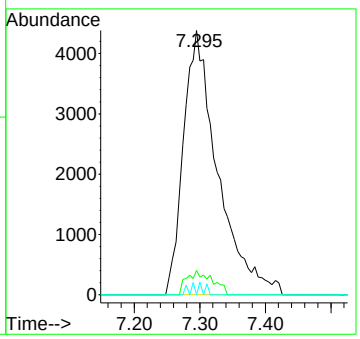


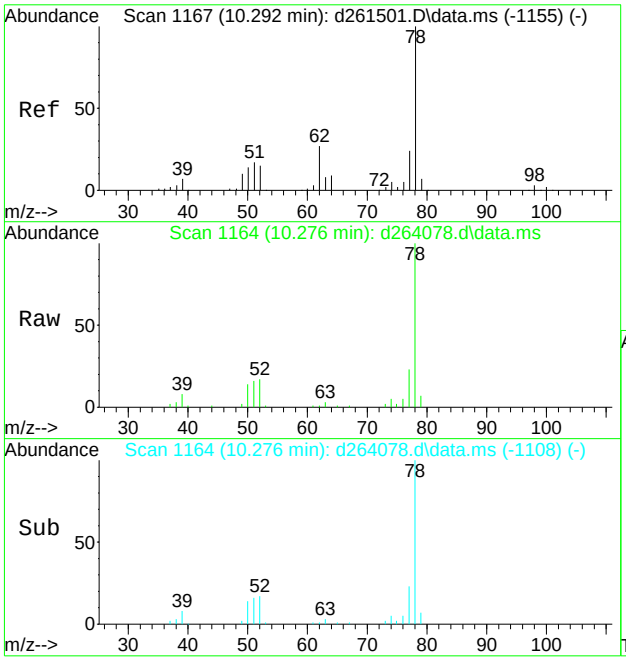


#23
carbon disulfide
Concen: 2.23 ug/L
RT: 7.295 min Scan# 594
Delta R.T. -0.005 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion: 76 Resp: 15896

Ion	Ratio	Lower	Upper
76	100		
78	9.3	0.0	39.5
38	0.0	0.0	34.3

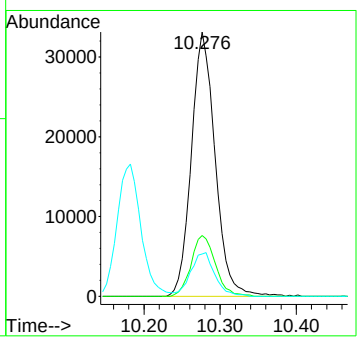


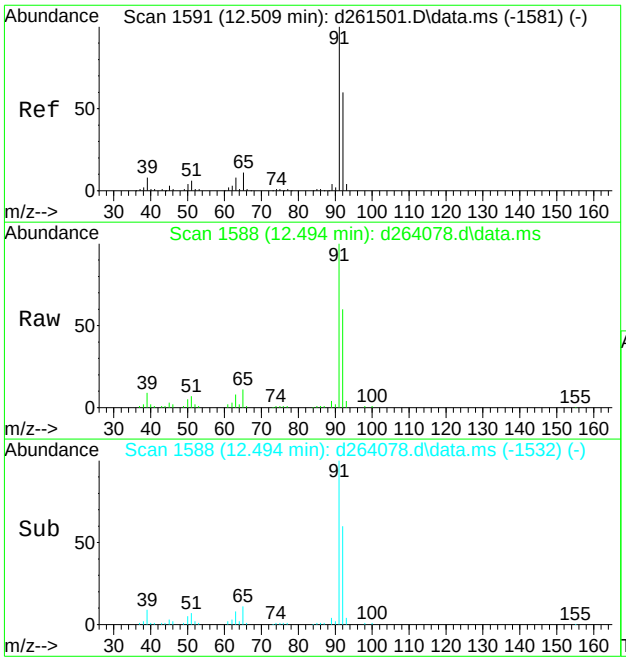


#58
benzene
Concen: 8.82 ug/L
RT: 10.276 min Scan# 1164
Delta R.T. -0.005 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion: 78 Resp: 71875

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	53.8
51	16.1	0.0	50.1

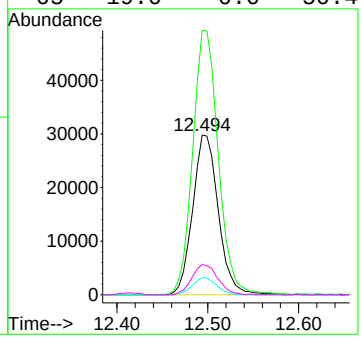


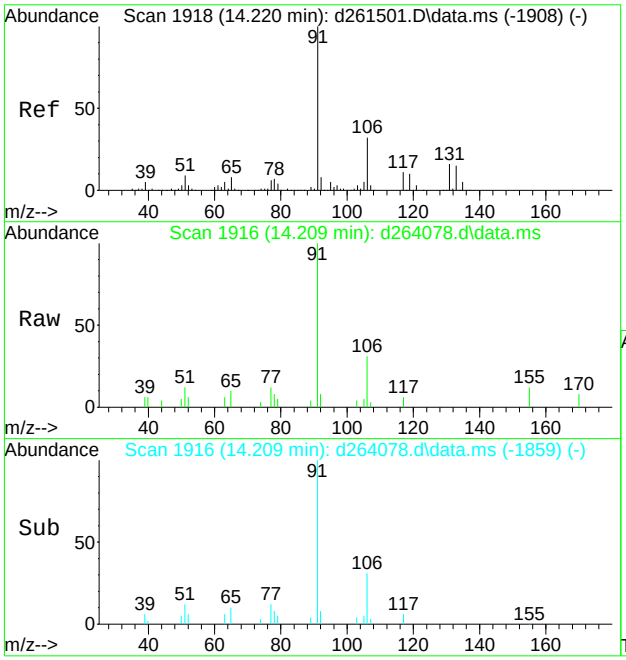


#77
toluene
Concen: 11.28 ug/L
RT: 12.494 min Scan# 1588
Delta R.T. -0.005 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion: 92 Resp: 58326

Ion	Ratio	Lower	Upper
92	100		
91	165.5	149.2	189.2
51	11.0	0.0	42.2
65	19.0	0.0	50.4

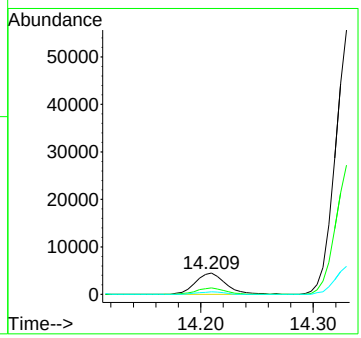


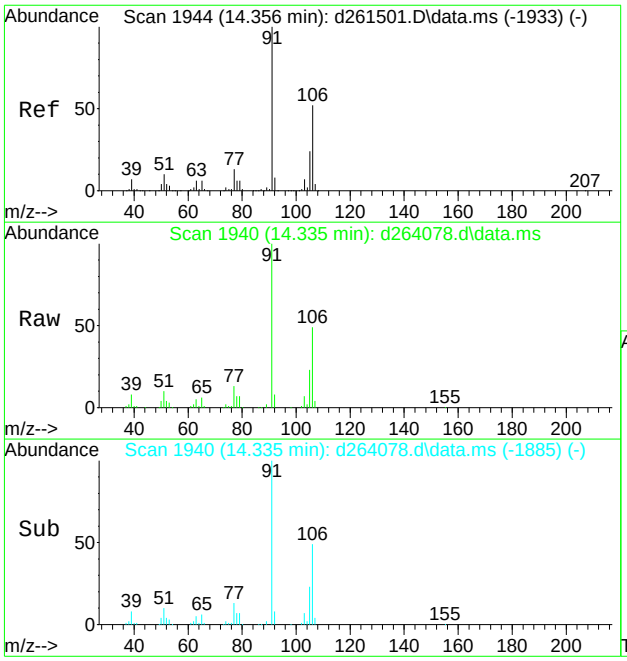


#90
ethylbenzene
Concen: 0.82 ug/L
RT: 14.209 min Scan# 1916
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion: 91 Resp: 8453

Ion	Ratio	Lower	Upper
91	100		
106	30.8	1.2	61.2
51	11.7	0.0	40.0

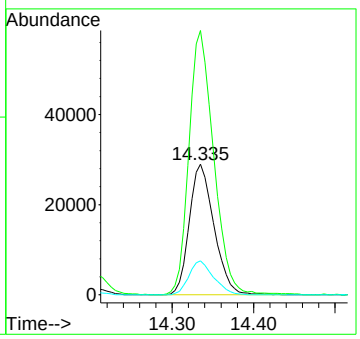


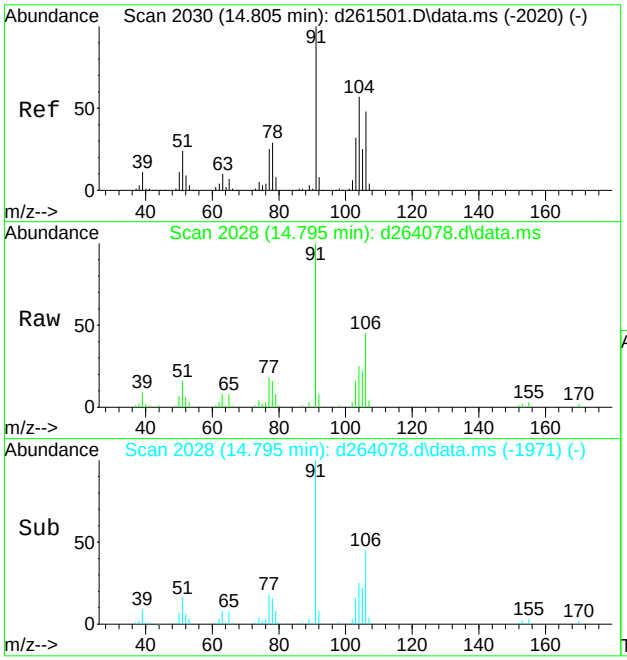


#91
m,p-xylene
Concen: 15.67 ug/L
RT: 14.335 min Scan# 1940
Delta R.T. -0.010 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:106 Resp: 61179

Ion	Ratio	Lower	Upper
106	100		
91	202.5	173.0	233.0
77	26.1	0.0	57.4

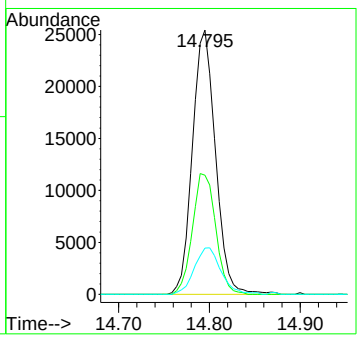


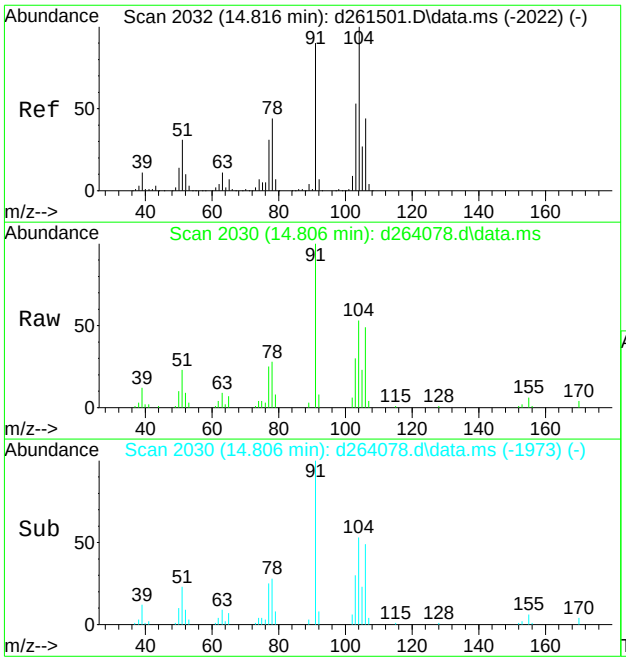


#92
o-xylene
Concen: 5.24 ug/L
RT: 14.795 min Scan# 2028
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion: 91 Resp: 44970

Ion	Ratio	Lower	Upper
91	100		
106	45.0	16.5	76.5
77	17.5	0.0	55.2

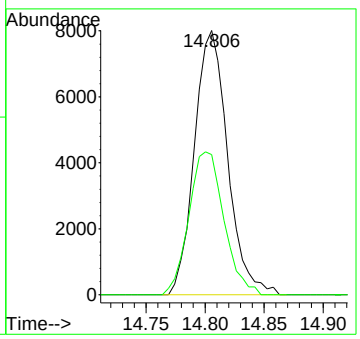


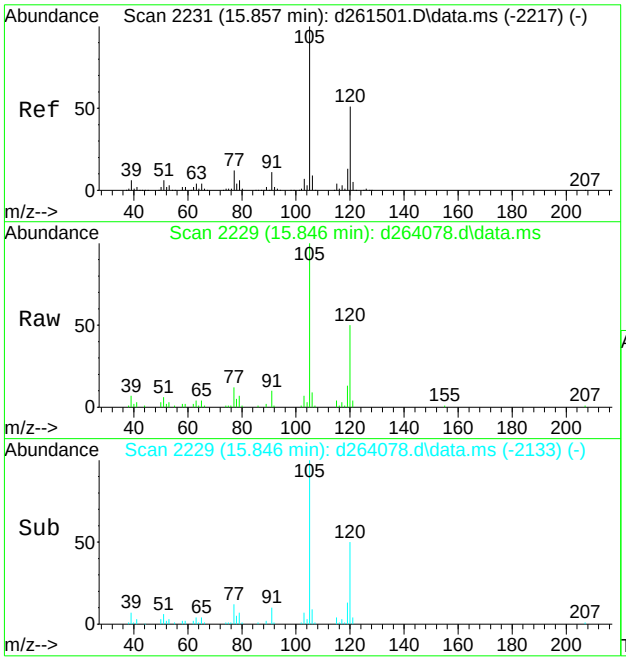


#93
styrene
Concen: 2.36 ug/L
RT: 14.806 min Scan# 2030
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:104 Resp: 15708

Ion	Ratio	Lower	Upper
104	100		
78	53.0	19.9	79.9

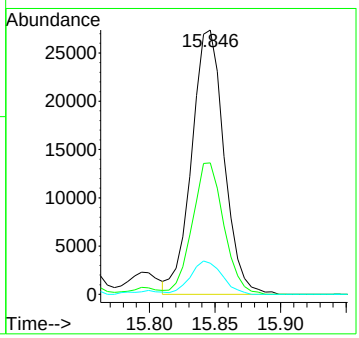


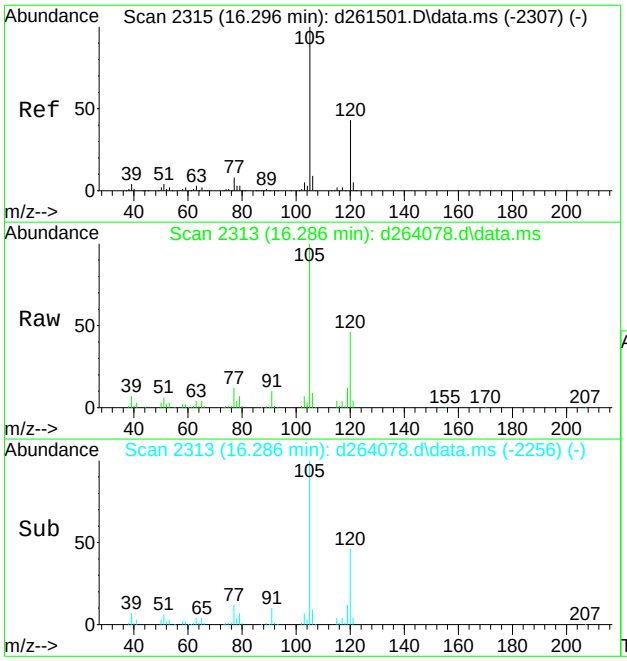


#108
1,3,5-trimethylbenzene
Concen: 5.16 ug/L
RT: 15.846 min Scan# 2229
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:105 Resp: 46992

Ion	Ratio	Lower	Upper
105	100		
120	49.8	19.7	79.7
77	11.8	0.0	42.9

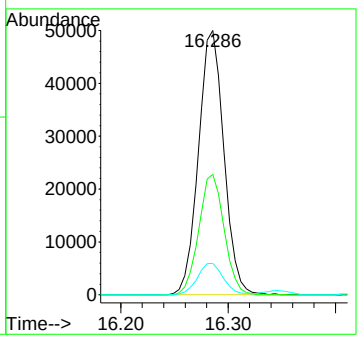


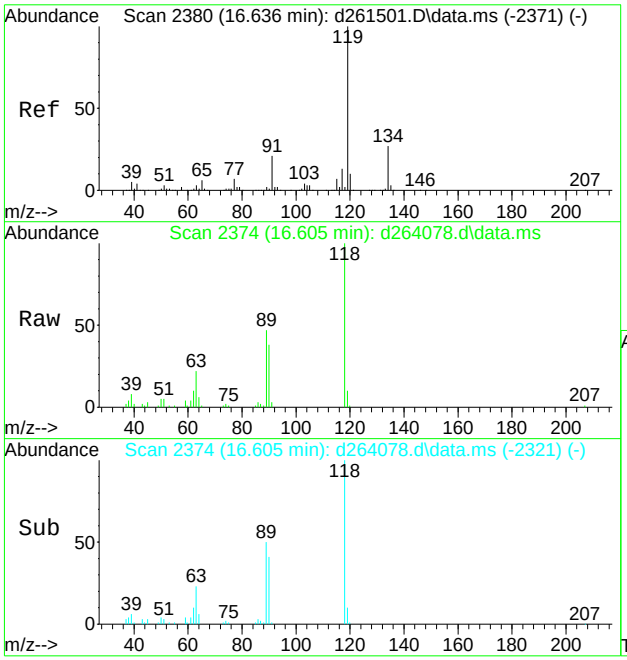


#110
1,2,4-trimethylbenzene
Concen: 9.06 ug/L
RT: 16.286 min Scan# 2313
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:105 Resp: 82331

Ion	Ratio	Lower	Upper
105	100		
120	45.6	16.4	76.4
77	11.8	0.0	42.6

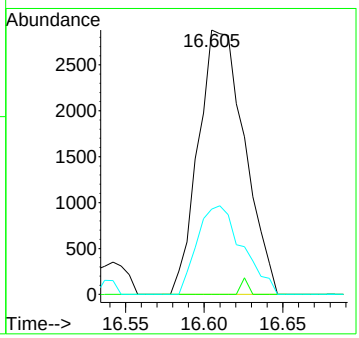


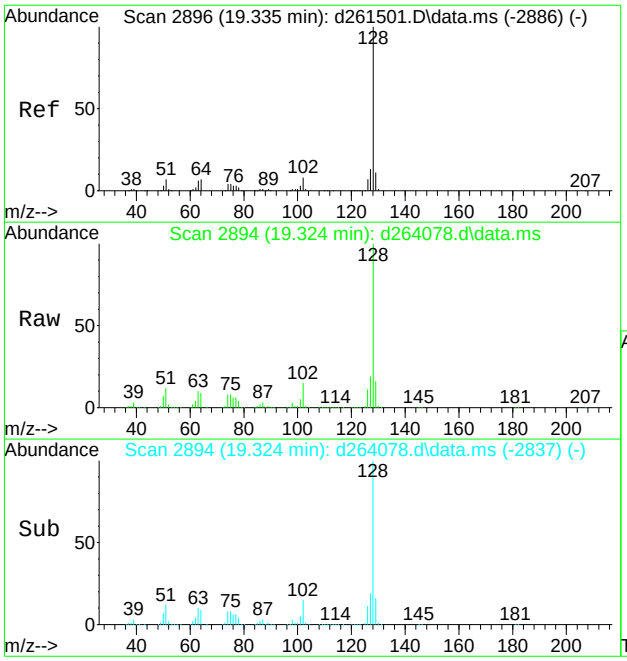


#112
p-isopropyltoluene
Concen: 0.68 ug/L
RT: 16.605 min Scan# 2374
Delta R.T. -0.021 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:119 Resp: 5872

Ion	Ratio	Lower	Upper
119	100		
134	0.0	0.0	57.5
91	32.3	0.0	54.1

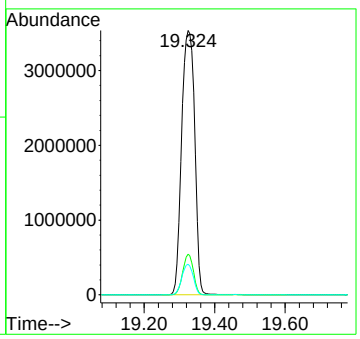


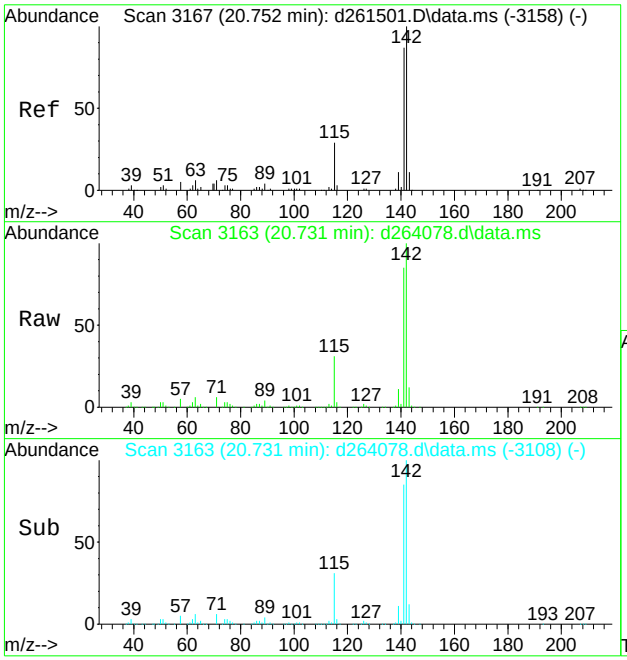


#124
naphthalene
Concen: 1224.01 ug/L
RT: 19.324 min Scan# 2894
Delta R.T. 0.000 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:128 Resp: 9109933

Ion	Ratio	Lower	Upper
128	100		
102	15.4	0.0	38.5
51	11.5	0.0	36.8

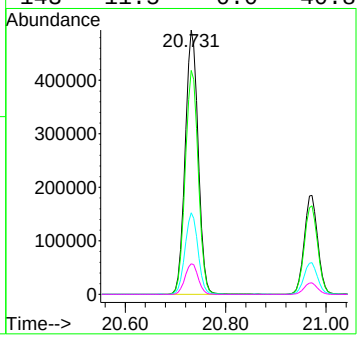




#126
2-methylnaphthalene
Concen: 576.98 ug/L
RT: 20.731 min Scan# 3163
Delta R.T. -0.010 min
Lab File: d264078.d
Acq: 26 Apr 2019 3:01 pm

Tgt Ion:142 Resp: 887520

Ion	Ratio	Lower	Upper
142	100		
141	84.7	64.5	104.5
115	30.8	1.9	61.9
143	11.5	0.0	40.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184769.d
Acq On : 26 Apr 2019 3:13 pm
Operator : EddieH
Sample : JC86406-13 Inst : MSY
Misc : MS34034,VY8016,4.9,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:35:52 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

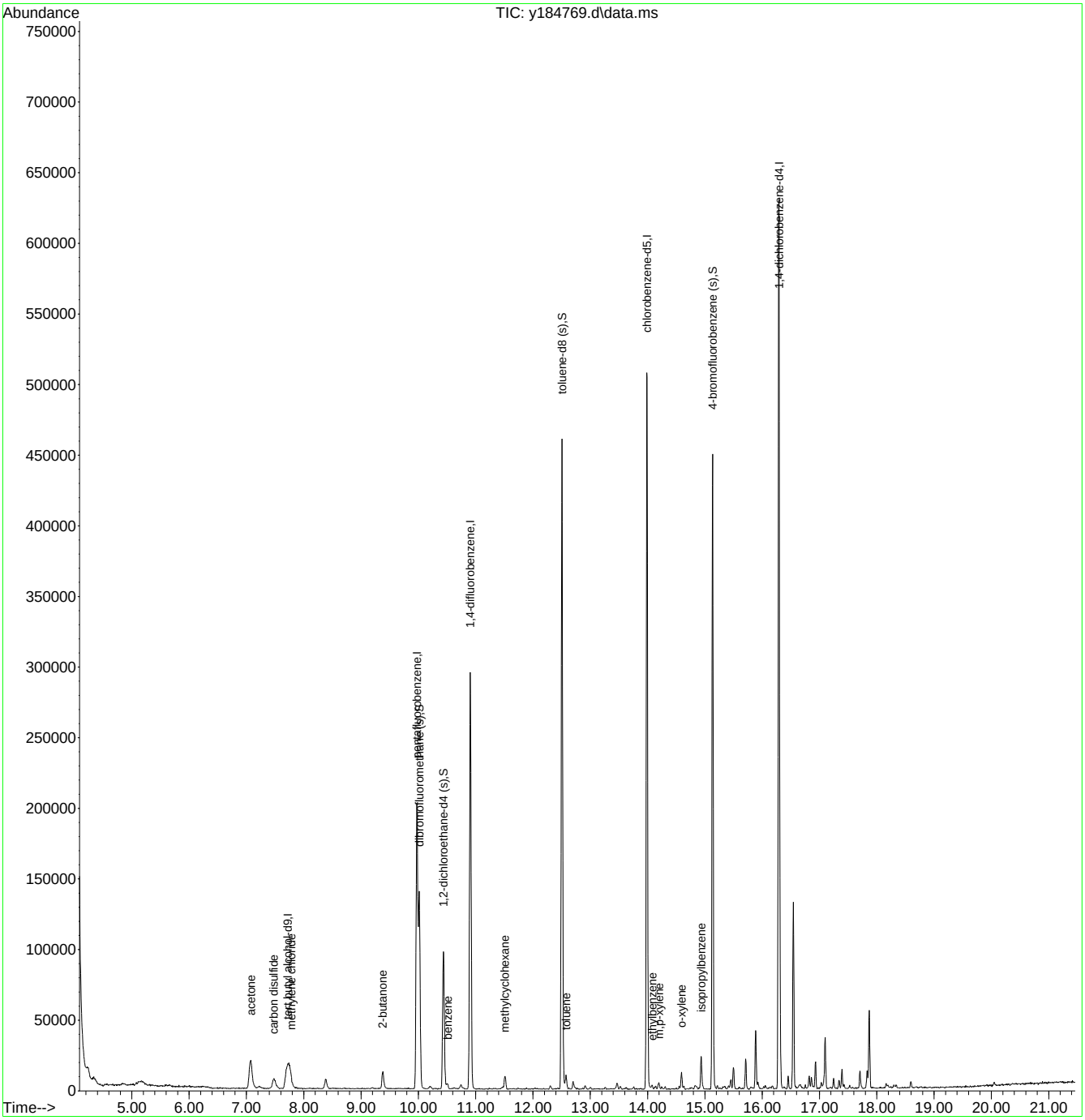
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.720	65	59145	500.00	ug/L		-0.02
5) pentafluorobenzene	9.974	168	164455	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.905	114	263892	50.00	ug/L		0.00
74) chlorobenzene-d5	13.991	117	270807	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.293	152	157620	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.016	113	89427	59.95	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 119.90%				
53) 1,2-dichloroethane-d4 (s)	10.435	65	73653	49.96	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.92%				
75) toluene-d8 (s)	12.506	98	297053	43.34	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 86.68%				
98) 4-bromofluorobenzene (s)	15.137	95	127315	48.71	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.42%				
Target Compounds							Qvalue
20) acetone	7.077	43	49765	123.52	ug/L		93
23) carbon disulfide	7.474	76	17887	3.24	ug/L		94
24) methylene chloride	7.778	84	1518	0.69	ug/L	#	81
31) 2-butanone	9.373	72	4814	36.35	ug/L	#	19
57) benzene	10.513	78	3732	0.49	ug/L		92
67) methylcyclohexane	11.507	83	4122	1.31	ug/L		90
76) toluene	12.579	92	4483	0.86	ug/L		96
89) ethylbenzene	14.080	91	2343	0.24	ug/L		91
90) m,p-xylene	14.200	106	1672	0.44	ug/L	#	60
91) o-xylene	14.593	91	6084	0.74	ug/L		94
95) isopropylbenzene	14.938	105	14167	1.44	ug/L		95

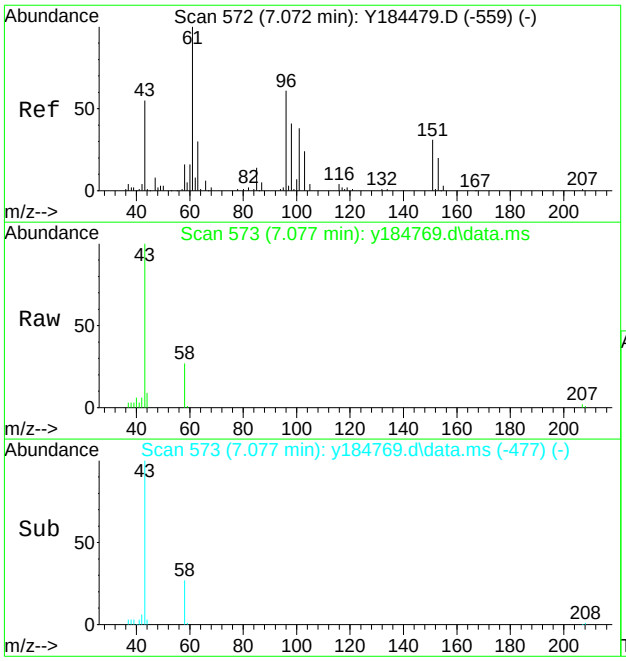
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184769.d
Acq On : 26 Apr 2019 3:13 pm
Operator : EddieH
Sample : JC86406-13 Inst : MSY
Misc : MS34034,VY8016,4.9,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:35:52 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

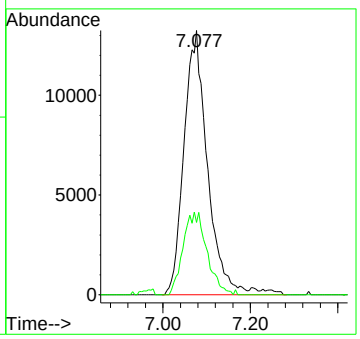


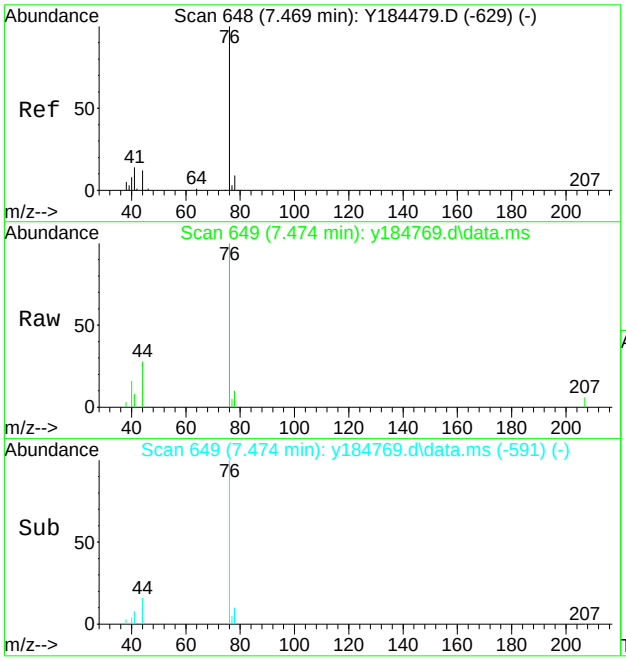


#20
acetone
Concen: 123.52 ug/L
RT: 7.077 min Scan# 573
Delta R.T. -0.000 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 43 Resp: 49765

Ion	Ratio	Lower	Upper
43	100		
58	27.4	1.4	61.4

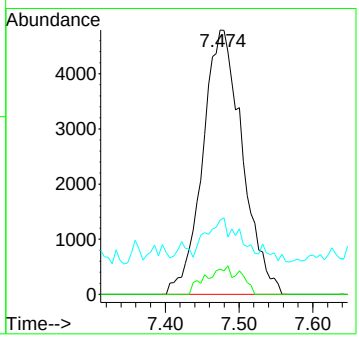


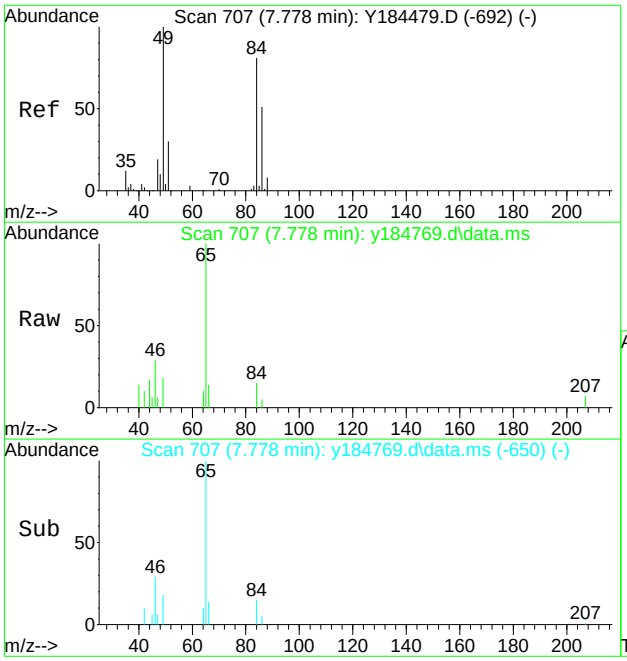


#23
carbon disulfide
Concen: 3.24 ug/L
RT: 7.474 min Scan# 649
Delta R.T. 0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 76 Resp: 17887

Ion	Ratio	Lower	Upper
76	100		
78	9.5	0.0	38.7
44	15.6	0.0	42.6

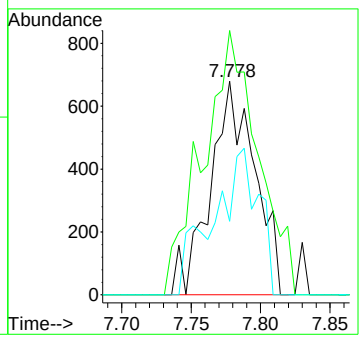


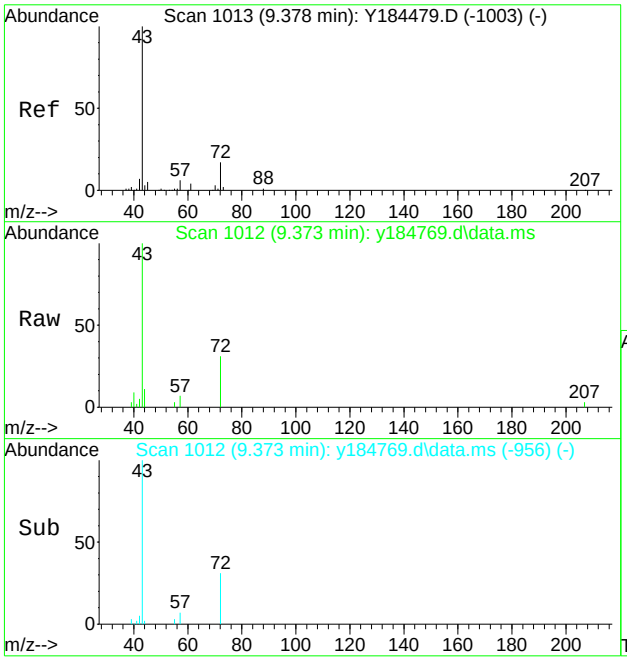


#24
methylene chloride
Concen: 0.69 ug/L
RT: 7.778 min Scan# 707
Delta R.T. -0.000 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 84 Resp: 1518

Ion	Ratio	Lower	Upper
84	100		
49	123.9	104.2	164.2
86	34.5	35.3	95.3#

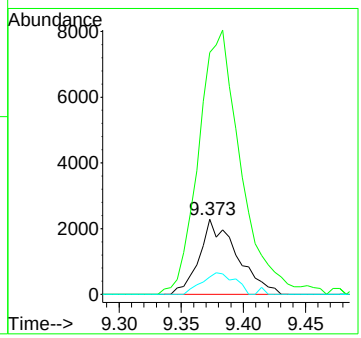


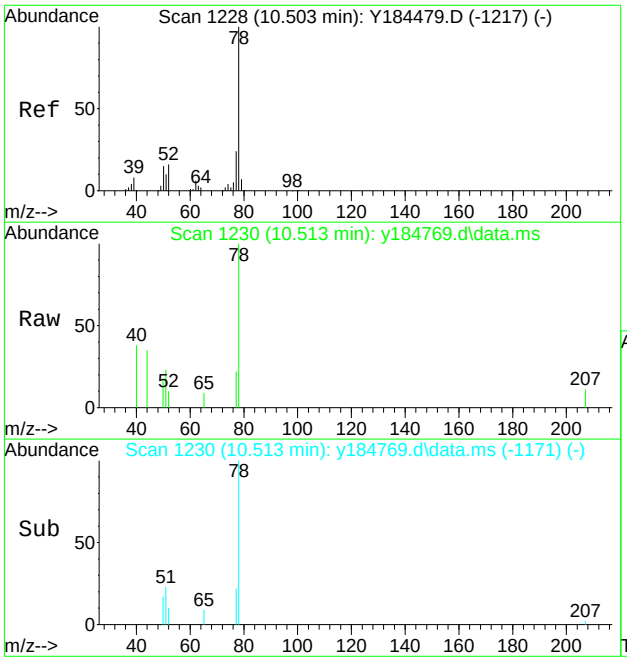


#31
2-butanone
Concen: 36.35 ug/L
RT: 9.373 min Scan# 1012
Delta R.T. -0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 72 Resp: 4814

Ion	Ratio	Lower	Upper
72	100		
43	314.9	537.8	597.8#
57	23.1	1.1	61.1

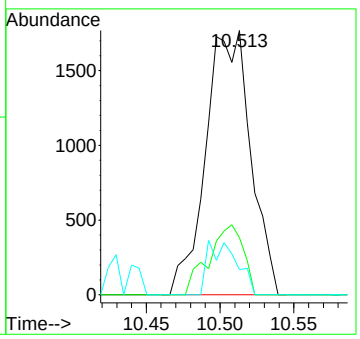


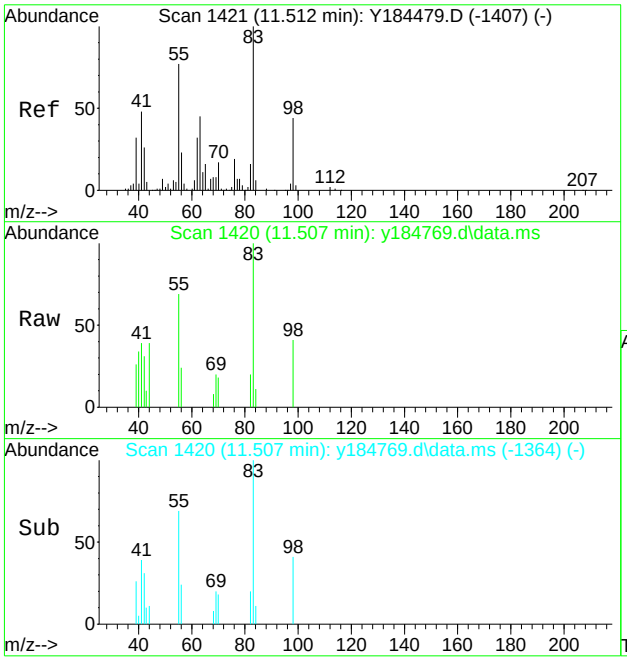


#57
benzene
Concen: 0.49 ug/L
RT: 10.513 min Scan# 1230
Delta R.T. 0.010 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 78 Resp: 3732

Ion	Ratio	Lower	Upper
78	100		
77	21.6	0.0	53.1
52	9.5	0.0	45.8

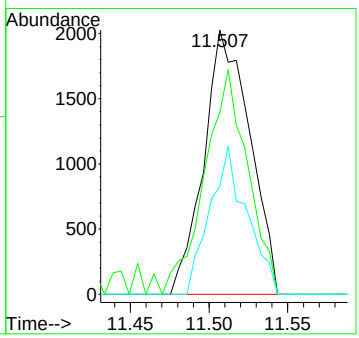


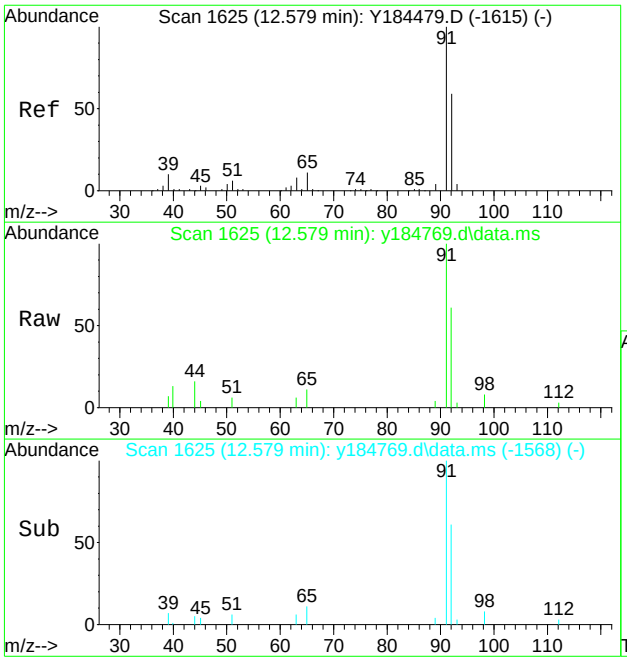


#67
methylcyclohexane
Concen: 1.31 ug/L
RT: 11.507 min Scan# 1420
Delta R.T. -0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 83 Resp: 4122

Ion	Ratio	Lower	Upper
83	100		
55	68.6	49.0	109.0
98	40.8	15.7	75.7

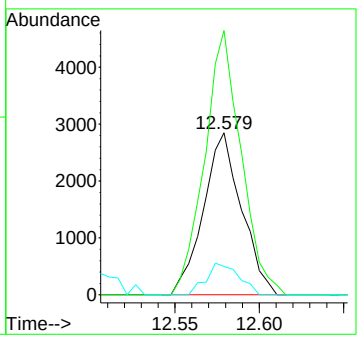


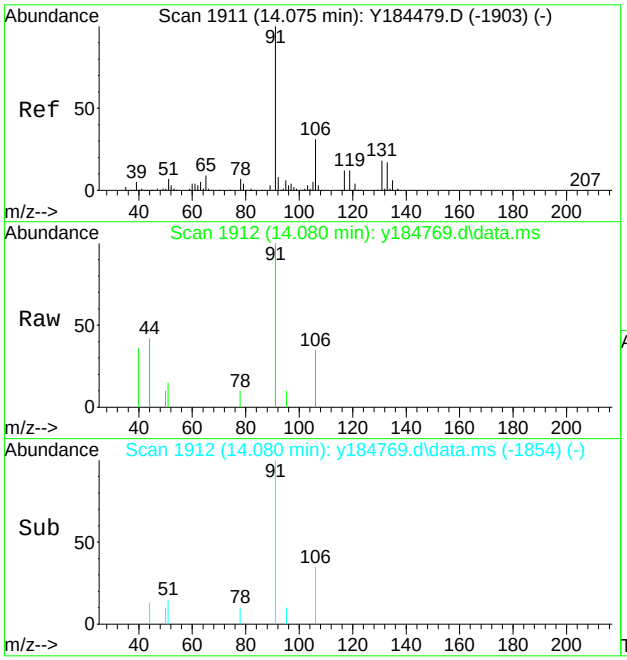


#76
toluene
Concen: 0.86 ug/L
RT: 12.579 min Scan# 1625
Delta R.T. -0.000 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 92 Resp: 4483

Ion	Ratio	Lower	Upper
92	100		
91	163.1	148.7	188.7
65	17.6	0.0	38.2

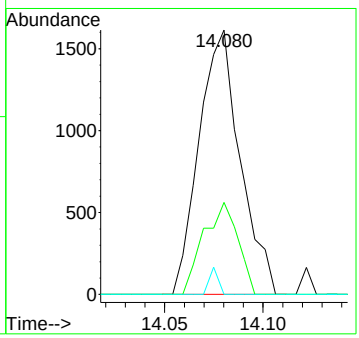


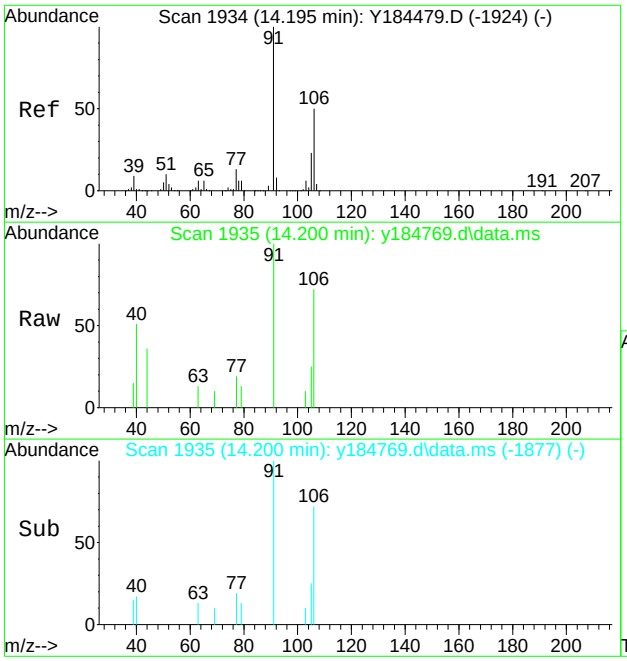


#89
ethylbenzene
Concen: 0.24 ug/L
RT: 14.080 min Scan# 1912
Delta R.T. 0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 91 Resp: 2343

Ion	Ratio	Lower	Upper
91	100		
106	34.8	1.9	61.9
77	0.0	0.0	38.5

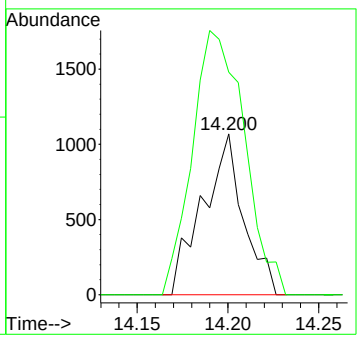


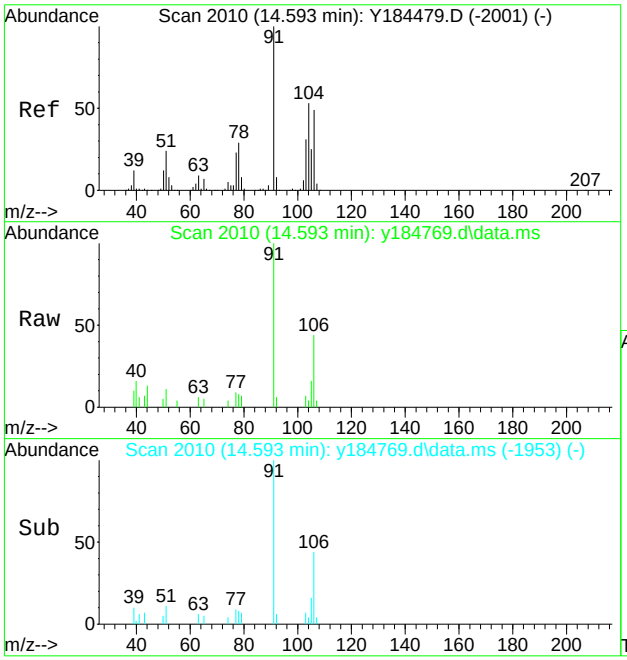


#90
m,p-xylene
Concen: 0.44 ug/L
RT: 14.200 min Scan# 1935
Delta R.T. 0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion:106 Resp: 1672

Ion	Ratio	Lower	Upper
106	100		
91	138.4	168.8	228.8#

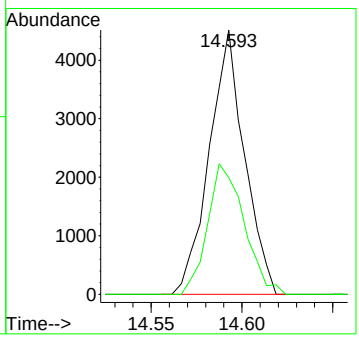


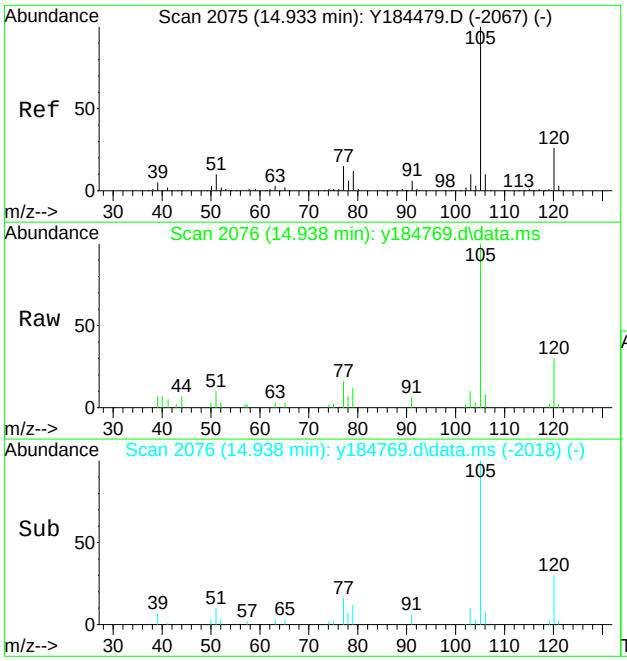


#91
o-xylene
Concen: 0.74 ug/L
RT: 14.593 min Scan# 2010
Delta R.T. -0.000 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion: 91 Resp: 6084

Ion	Ratio	Lower	Upper
91	100		
106	44.1	18.0	78.0

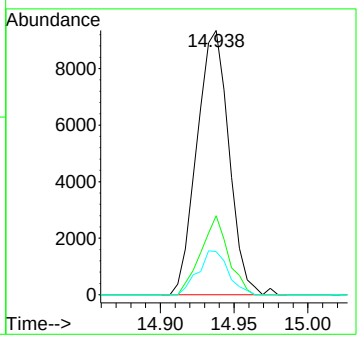




#95
isopropylbenzene
Concen: 1.44 ug/L
RT: 14.938 min Scan# 2076
Delta R.T. 0.005 min
Lab File: y184769.d
Acq: 26 Apr 2019 3:13 pm

Tgt Ion:105 Resp: 14167

Ion	Ratio	Lower	Upper
105	100		
120	30.0	6.9	46.9
77	16.4	0.0	35.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225723.d
Acq On : 25 Apr 2019 7:37 pm
Operator : thienn
Sample : jc86406-14 Inst : GCMSI
Misc : MS34034,VI9093,3,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:47:39 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

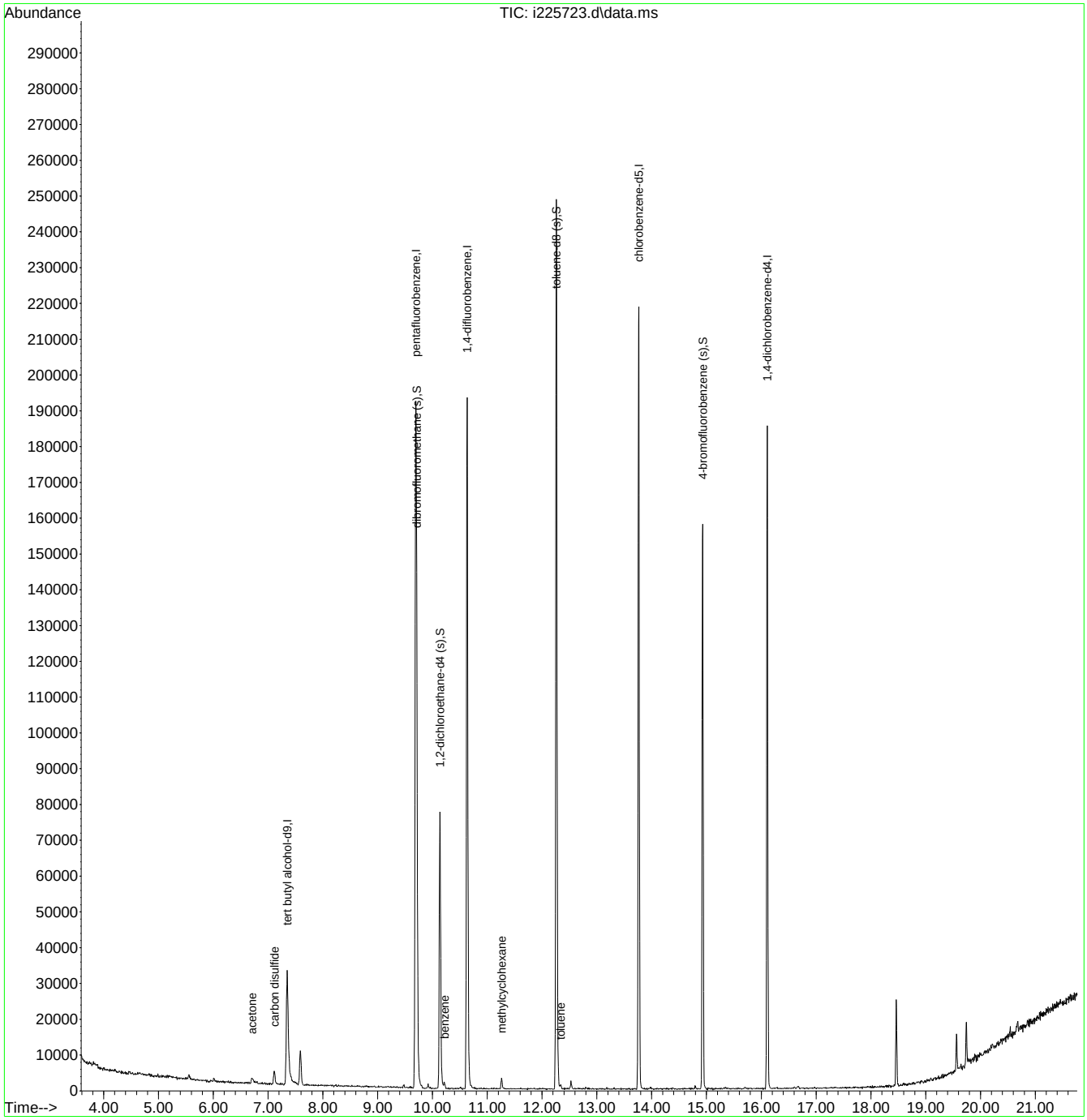
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.348	65	47928	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	117874	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	149608	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.765	117	109959	50.00	ug/L	-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	44532	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	50484	54.50	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 109.00%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	55519	59.45	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 118.90%			
74) toluene-d8 (s)	12.259	98	153469	54.44	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.88%			
97) 4-bromofluorobenzene (s)	14.932	95	42786	63.00	ug/L	-0.02
Spiked Amount 50.000	Range 79 - 127		Recovery = 126.00%			
Target Compounds						Qvalue
19) acetone	6.710	43	3977	20.02	ug/L	85
21) carbon disulfide	7.118	76	6156	2.61	ug/L	95
55) benzene	10.224	78	1325	0.45	ug/L	56
62) methylcyclohexane	11.260	83	1140	0.86	ug/L #	77
75) toluene	12.337	92	346	0.23	ug/L #	76

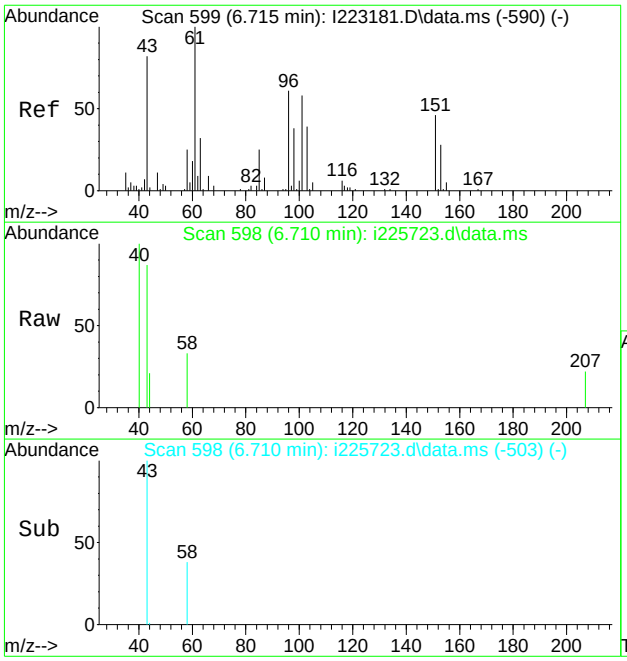
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225723.d
Acq On : 25 Apr 2019 7:37 pm
Operator : thienn
Sample : jc86406-14 Inst : GCMSI
Misc : MS34034,VI9093,3,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 10:47:39 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

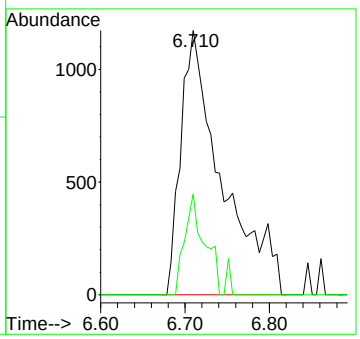


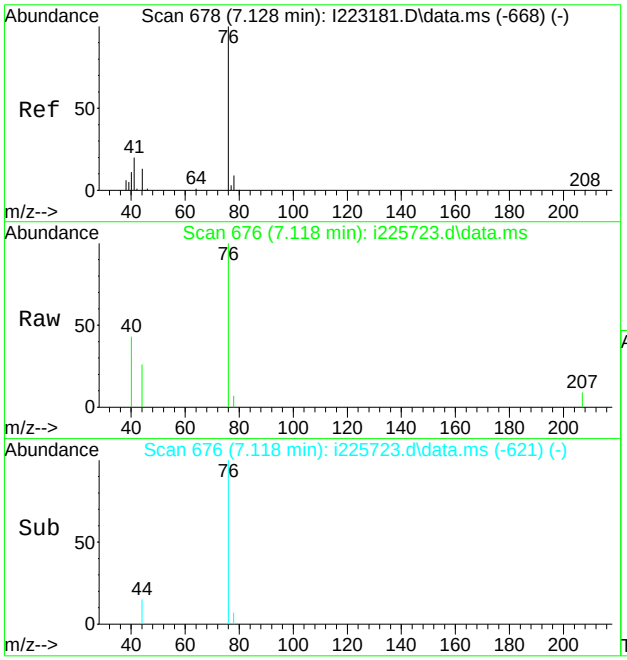


#19
acetone
Concen: 20.02 ug/L
RT: 6.710 min Scan# 598
Delta R.T. -0.005 min
Lab File: i225723.d
Acq: 25 Apr 2019 7:37 pm

Tgt Ion: 43 Resp: 3977

Ion	Ratio	Lower	Upper
43	100		
58	38.2	0.2	60.2

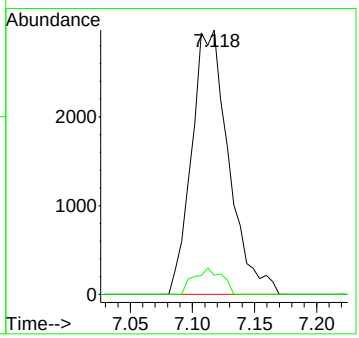


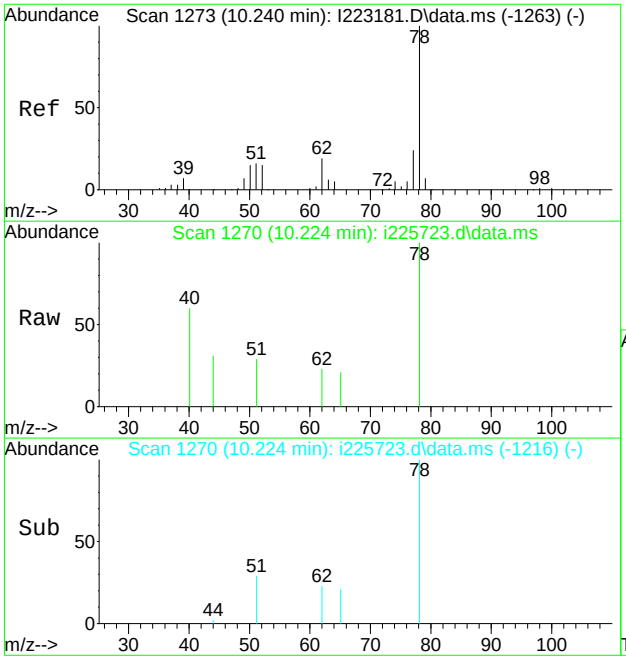


#21
carbon disulfide
Concen: 2.61 ug/L
RT: 7.118 min Scan# 676
Delta R.T. -0.011 min
Lab File: i225723.d
Acq: 25 Apr 2019 7:37 pm

Tgt Ion: 76 Resp: 6156

Ion	Ratio	Lower	Upper
76	100		
78	7.2	0.0	29.0

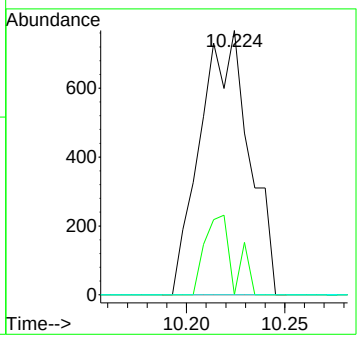


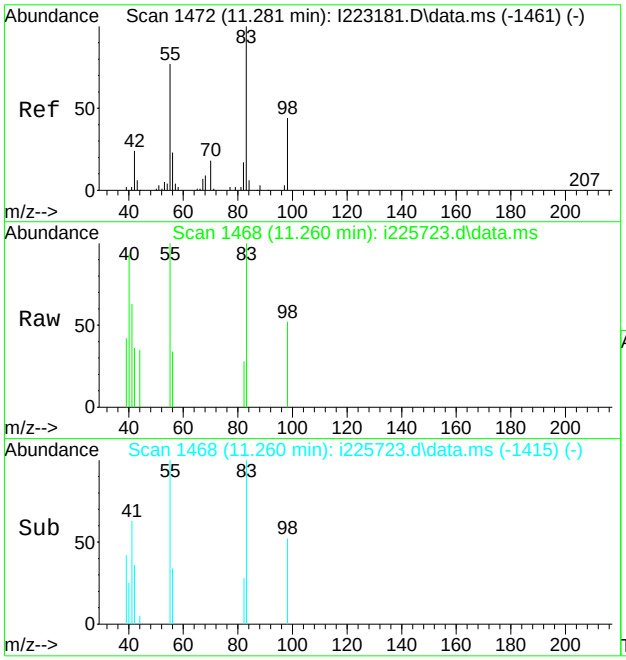


#55
benzene
Concen: 0.45 ug/L
RT: 10.224 min Scan# 1270
Delta R.T. -0.016 min
Lab File: i225723.d
Acq: 25 Apr 2019 7:37 pm

Tgt Ion: 78 Resp: 1325

Ion	Ratio	Lower	Upper
78	100		
77	0.0	0.0	54.0
52	0.0	0.0	45.4

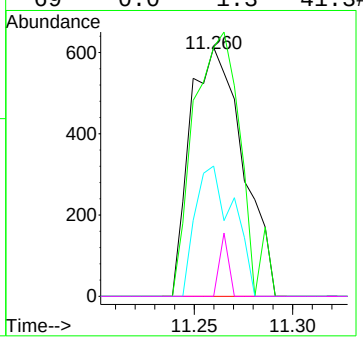


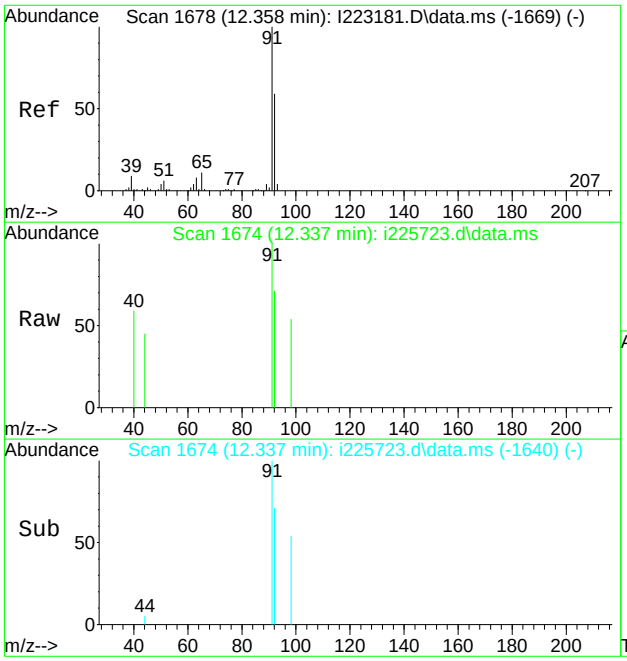


#62
methylcyclohexane
Concen: 0.86 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225723.d
Acq: 25 Apr 2019 7:37 pm

Tgt Ion: 83 Resp: 1140

Ion	Ratio	Lower	Upper
83	100		
55	100.0	59.8	99.8#
98	52.4	24.4	64.4
69	0.0	1.3	41.3#

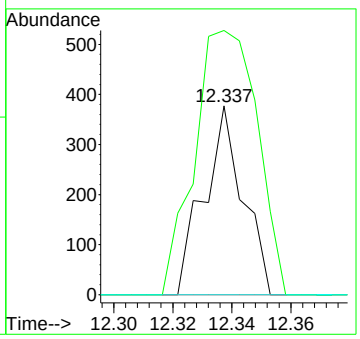




#75
toluene
Concen: 0.23 ug/L
RT: 12.337 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i225723.d
Acq: 25 Apr 2019 7:37 pm

Tgt Ion: 92 Resp: 346

Ion	Ratio	Lower	Upper
92	100		
91	140.1	149.6	189.6#
65	0.0	0.0	38.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44294.d
Acq On : 24 Apr 2019 4:47 pm
Operator : roberts
Sample : jc86406-14 Inst : MS3V
Misc : MS34034,V3V1778,2.9,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:57:26 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

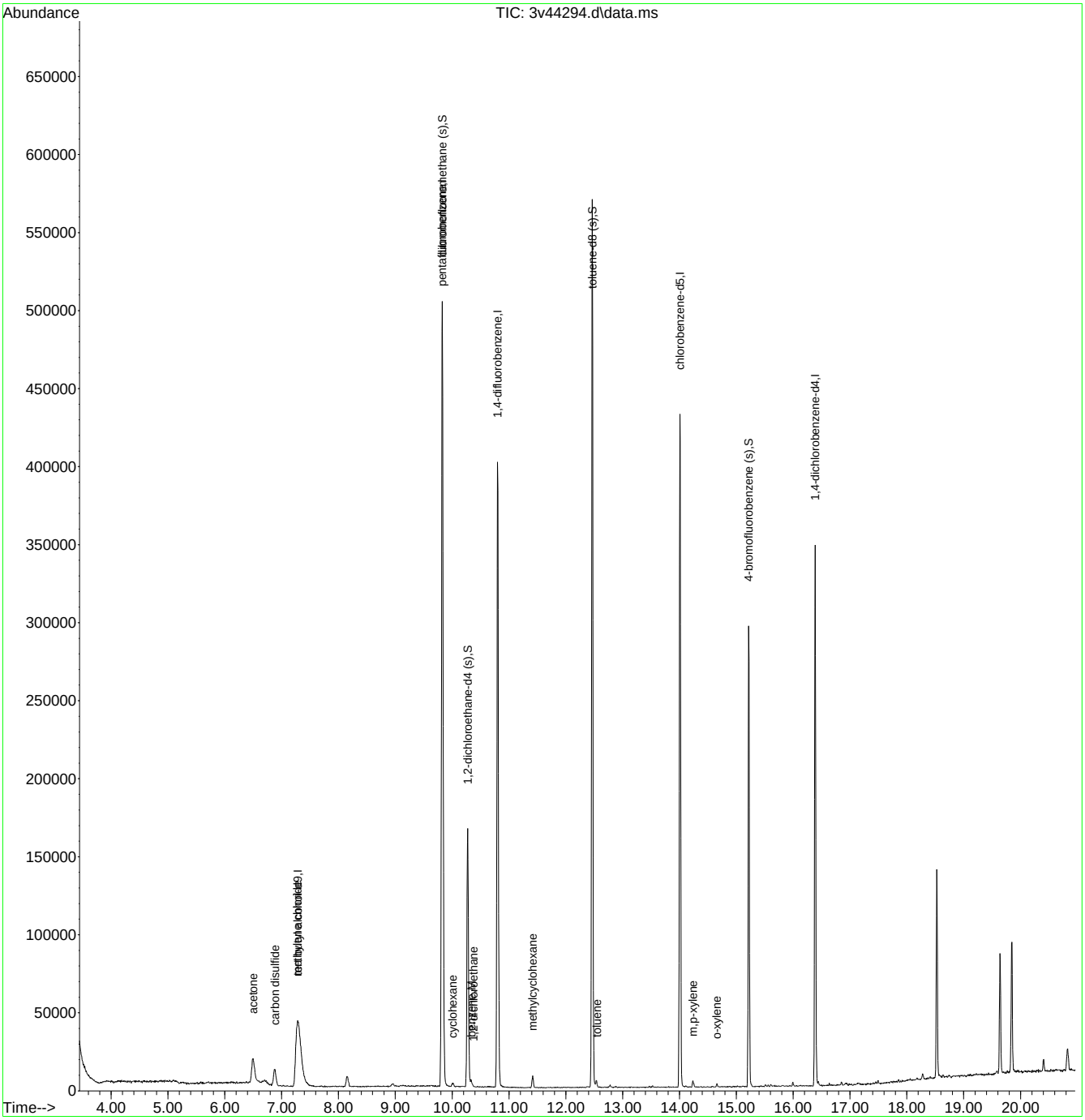
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.285	65	140680	500.00	ug/L		-0.02
5) pentafluorobenzene	9.823	168	219264	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	302904	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	209355	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	74268	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	120052	52.08	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.16%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	116332	54.23	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 108.46%				
75) toluene-d8 (s)	12.465	98	327556	62.95	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 125.90%#				
98) 4-bromofluorobenzene (s)	15.218	95	86744	66.15	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 132.30%#				
Target Compounds							Qvalue
20) acetone	6.499	58	10781	55.12	ug/L		94
23) carbon disulfide	6.881	76	25504	2.33	ug/L		96
24) methylene chloride	7.280	84	2943	0.75	ug/L		95
47) cyclohexane	10.012	84	862	0.22	ug/L	#	39
55) benzene	10.342	78	3602	0.38	ug/L		95
59) 1,2-dichloroethane	10.373	62	699	0.20	ug/L		79
67) methylcyclohexane	11.417	83	2817	0.70	ug/L		93
76) toluene	12.544	92	1556	0.39	ug/L		90
90) m,p-xylene	14.237	106	1452	0.51	ug/L		95
91) o-xylene	14.657	106	593	0.20	ug/L		99

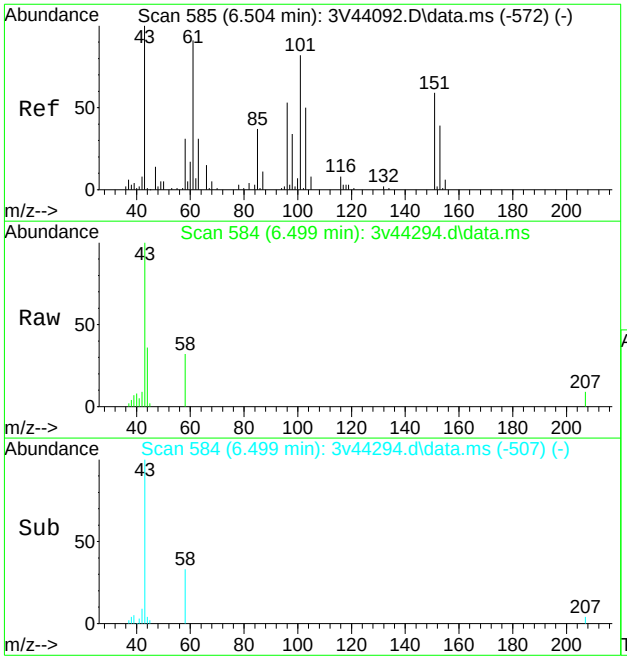
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44294.d
Acq On : 24 Apr 2019 4:47 pm
Operator : roberts
Sample : jc86406-14 Inst : MS3V
Misc : MS34034,V3V1778,2.9,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:57:26 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

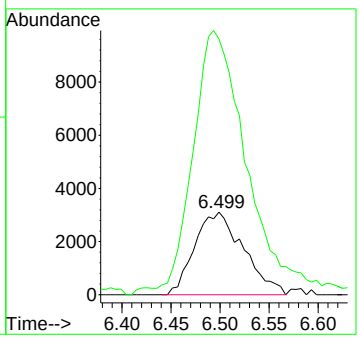


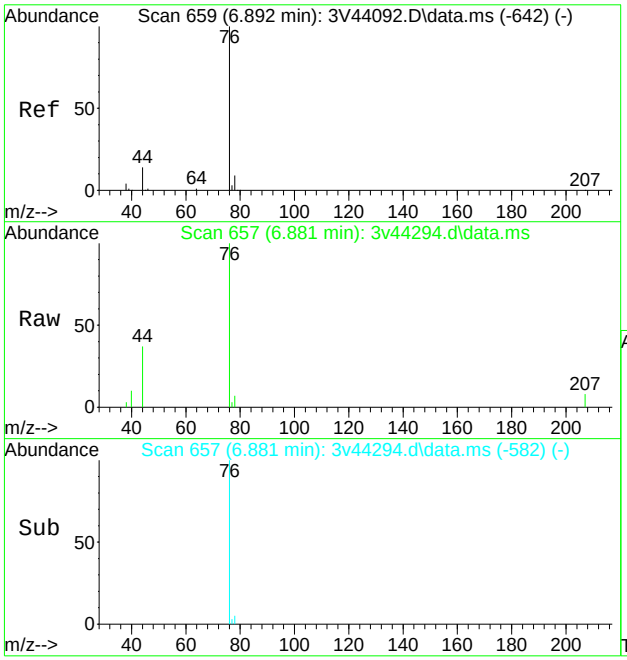


#20
acetone
Concen: 55.12 ug/L
RT: 6.499 min Scan# 584
Delta R.T. 0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 58 Resp: 10781

Ion	Ratio	Lower	Upper
58	100		
43	297.3	279.5	339.5

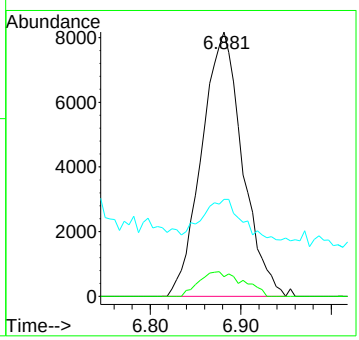


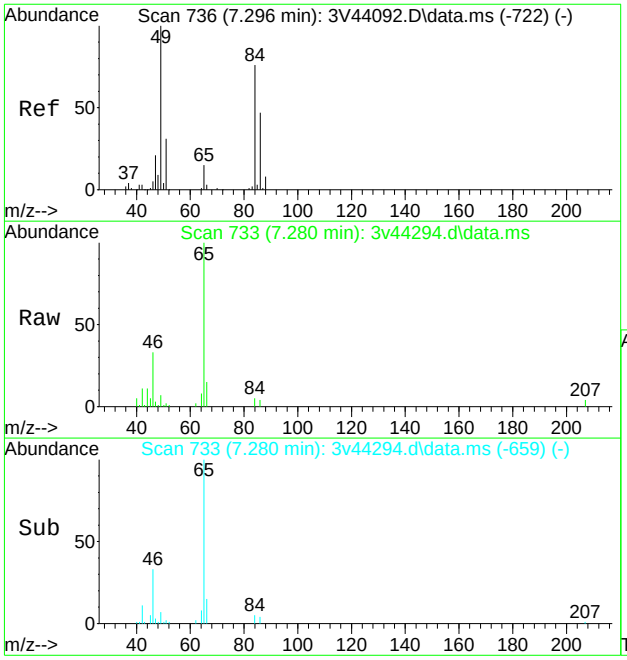


#23
carbon disulfide
Concen: 2.33 ug/L
RT: 6.881 min Scan# 657
Delta R.T. -0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 76 Resp: 25504

Ion	Ratio	Lower	Upper
76	100		
78	7.5	0.0	39.3
44	14.6	0.0	43.4

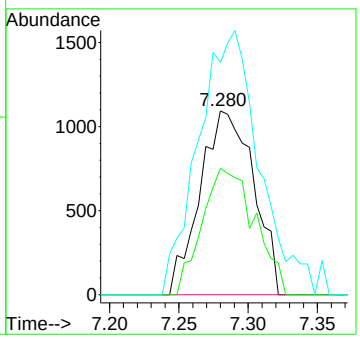


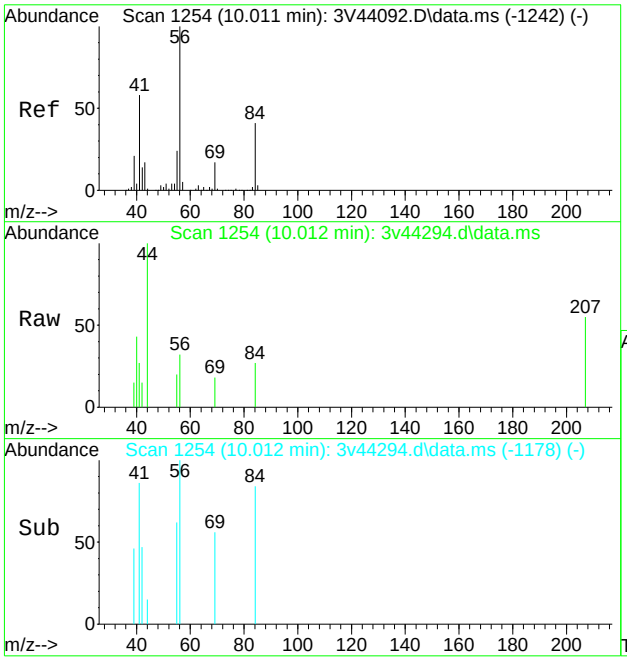


#24
methylene chloride
Concen: 0.75 ug/L
RT: 7.280 min Scan# 733
Delta R.T. -0.010 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 84 Resp: 2943

Ion	Ratio	Lower	Upper
84	100		
86	68.6	33.8	93.8
49	126.3	101.0	161.0

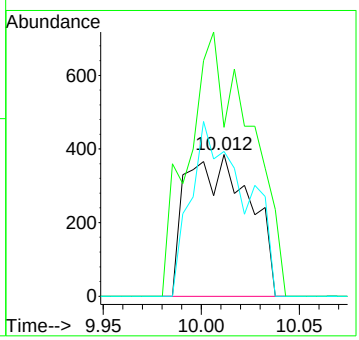


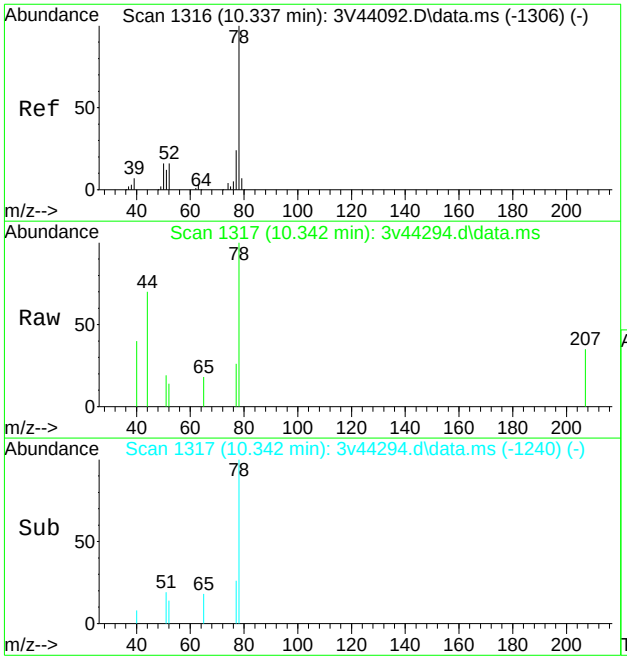


#47
cyclohexane
Concen: 0.22 ug/L
RT: 10.012 min Scan# 1254
Delta R.T. 0.000 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 84 Resp: 862

Ion	Ratio	Lower	Upper
84	100		
56	119.2	231.2	271.2#
41	102.1	126.7	166.7#

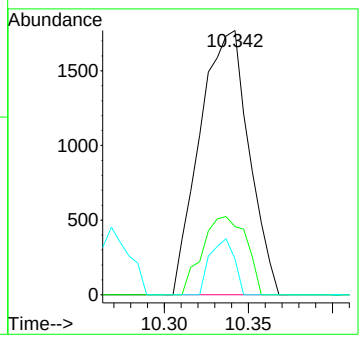


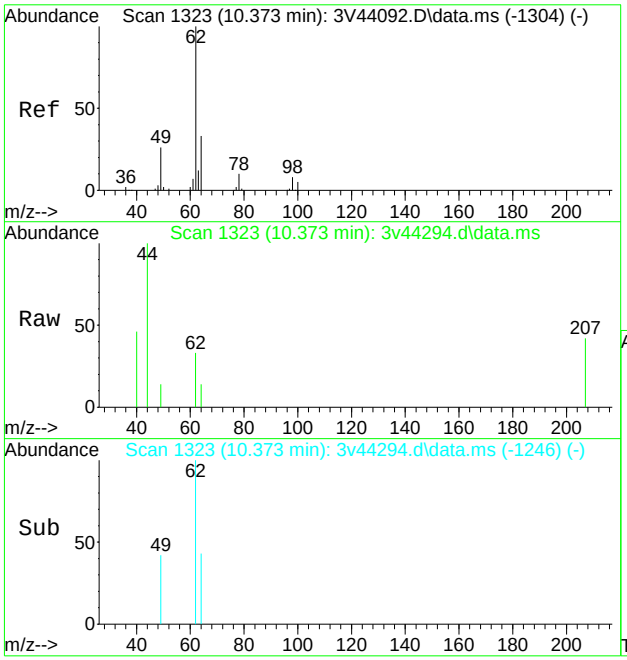


#55
benzene
Concen: 0.38 ug/L
RT: 10.342 min Scan# 1317
Delta R.T. 0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 78 Resp: 3602

Ion	Ratio	Lower	Upper
78	100		
77	25.7	0.0	53.5
52	13.6	0.0	45.6

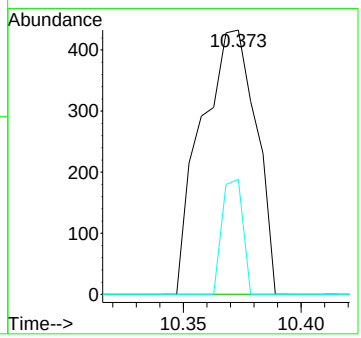


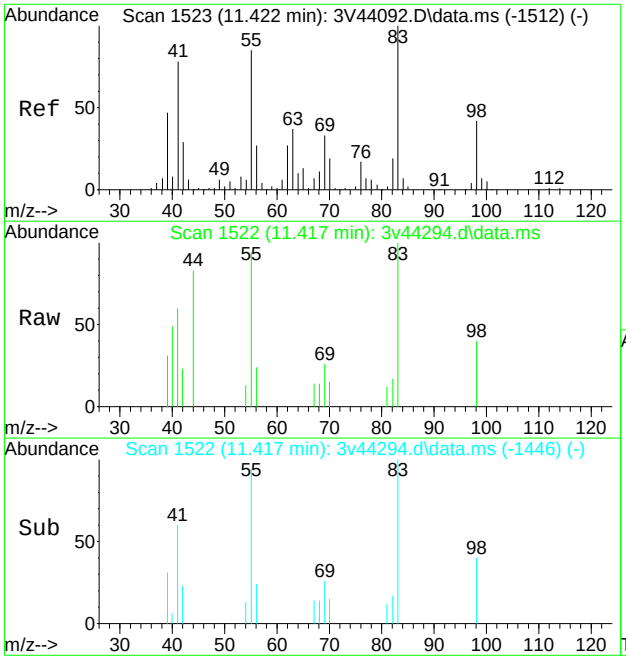


#59
1,2-dichloroethane
Concen: 0.20 ug/L
RT: 10.373 min Scan# 1323
Delta R.T. 0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 62 Resp: 699

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	37.5
64	43.4	1.8	61.8

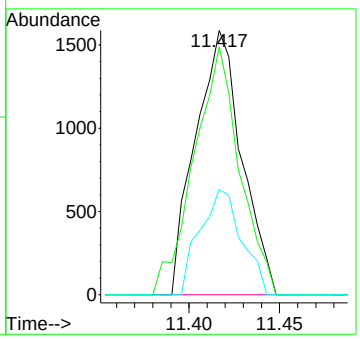


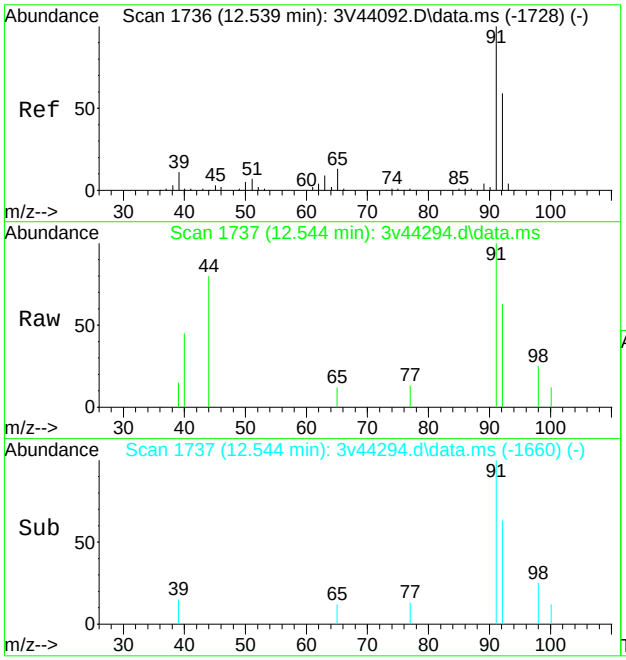


#67
methylcyclohexane
Concen: 0.70 ug/L
RT: 11.417 min Scan# 1522
Delta R.T. 0.000 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 83 Resp: 2817

Ion	Ratio	Lower	Upper
83	100		
55	93.8	55.3	115.3
98	39.9	10.9	70.9

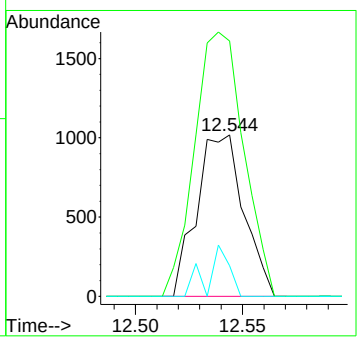


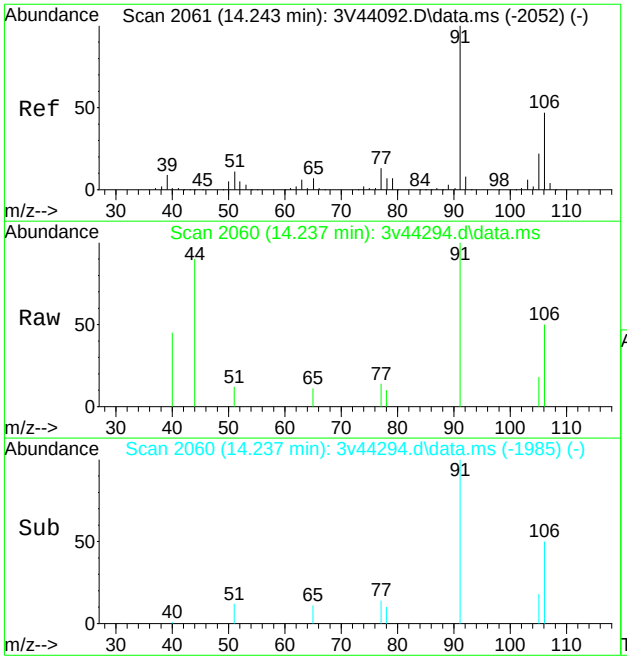


#76
toluene
Concen: 0.39 ug/L
RT: 12.544 min Scan# 1737
Delta R.T. 0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion: 92 Resp: 1556

Ion	Ratio	Lower	Upper
92	100		
91	158.2	153.7	193.7
65	19.0	1.1	41.1

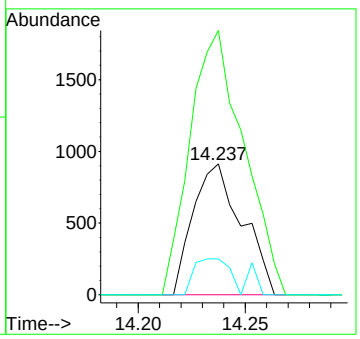


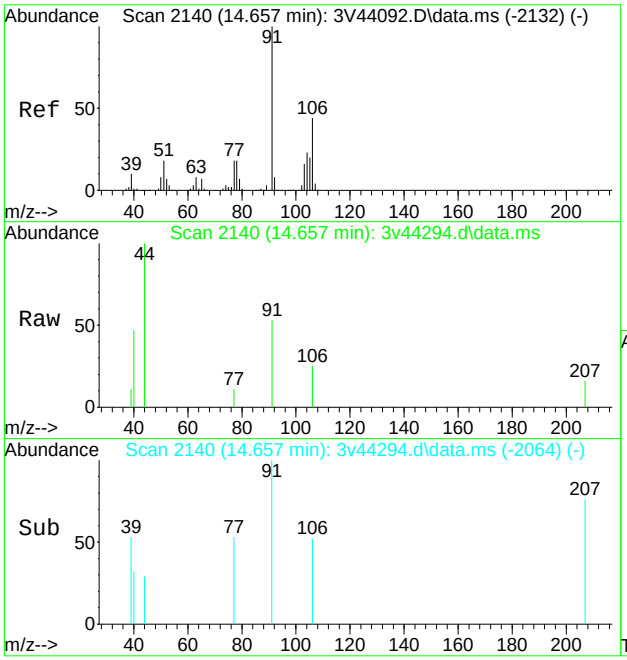


#90
m,p-xylene
Concen: 0.51 ug/L
RT: 14.237 min Scan# 2060
Delta R.T. -0.005 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion:106 Resp: 1452

Ion	Ratio	Lower	Upper
106	100		
91	201.8	179.7	239.7
77	27.5	8.3	48.3

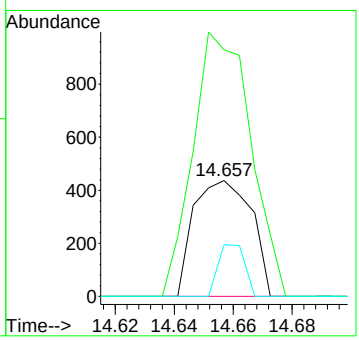




#91
o-xylene
Concen: 0.20 ug/L
RT: 14.657 min Scan# 2140
Delta R.T. 0.000 min
Lab File: 3v44294.d
Acq: 24 Apr 2019 4:47 pm

Tgt Ion:106 Resp: 593

Ion	Ratio	Lower	Upper
106	100		
91	213.3	184.3	244.3
77	44.7	25.2	65.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264075.d
Acq On : 26 Apr 2019 1:34 pm
Operator : juntaep
Sample : JC86406-14 Inst : MSD
Misc : ms34034,vd10644,3.6,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:35:24 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

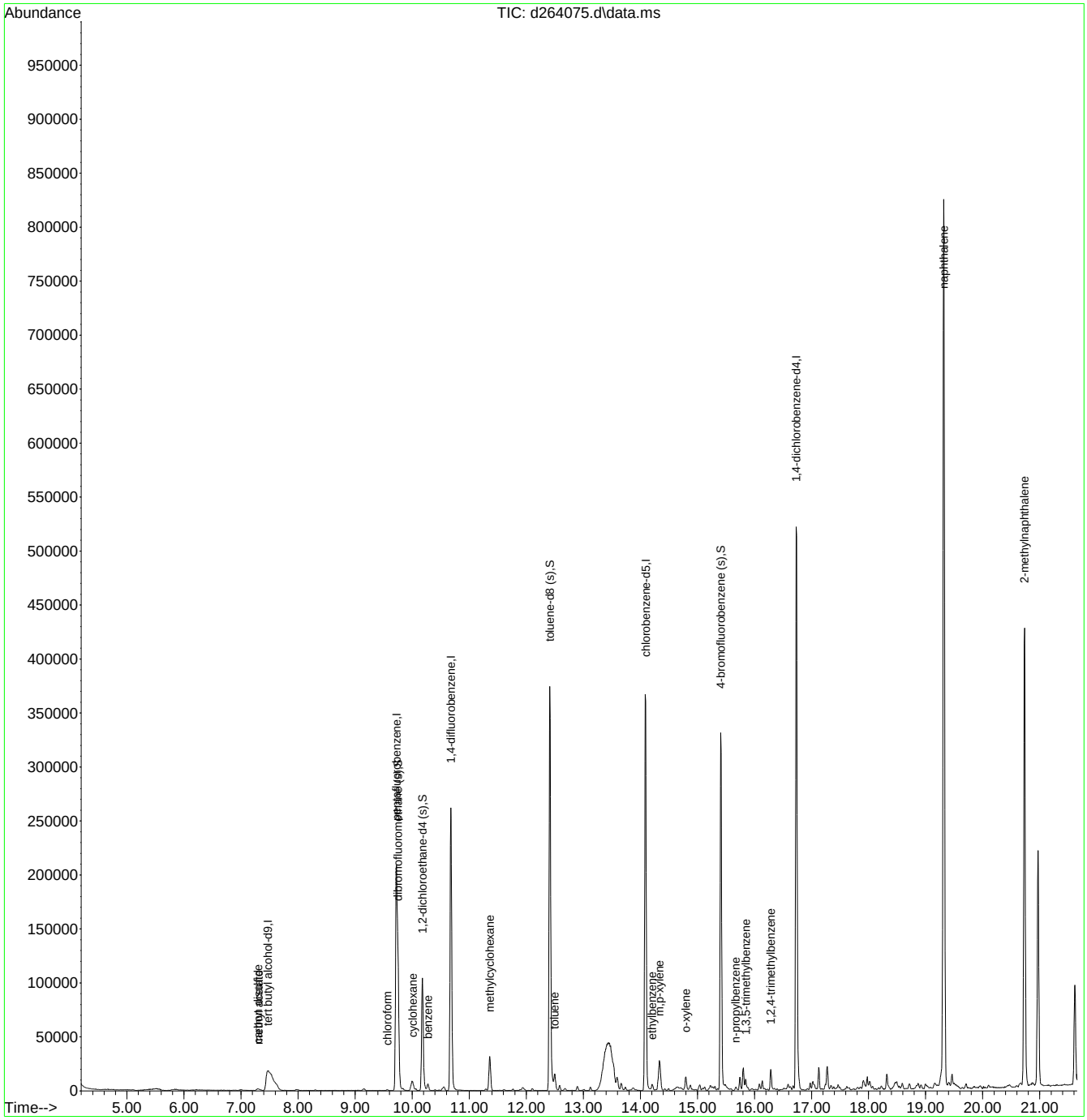
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.470	65	90625	500.00	ug/L	0.00
5) pentafluorobenzene	9.724	168	155508	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.676	114	233489	50.00	ug/L	0.00
75) chlorobenzene-d5	14.091	117	227121	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.733	152	150770	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.750	113	71889	49.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.00%			
55) 1,2-dichloroethane-d4 (s)	10.179	65	78142	44.64	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.28%			
76) toluene-d8 (s)	12.412	98	270384	48.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.64%			
100) 4-bromofluorobenzene (s)	15.409	95	124104	44.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 88.84%			
Target Compounds						Qvalue
23) carbon disulfide	7.297	76	3992	0.64	ug/L	78
25) methyl acetate	7.308	43	962	0.90	ug/L	62
44) chloroform	9.562	83	826	0.26	ug/L	84
48) cyclohexane	10.007	84	4246	1.30	ug/L	95
58) benzene	10.273	78	5937	0.84	ug/L	97
66) methylcyclohexane	11.361	83	14355	4.78	ug/L	100
77) toluene	12.496	92	6024	1.39	ug/L	95
90) ethylbenzene	14.206	91	5359	0.62	ug/L	97
91) m,p-xylene	14.332	106	10715	3.27	ug/L	98
92) o-xylene	14.797	91	7486	1.04	ug/L	89
105) n-propylbenzene	15.671	91	3109	0.30	ug/L	98
108) 1,3,5-trimethylbenzene	15.849	105	5910	0.74	ug/L	92
110) 1,2,4-trimethylbenzene	16.283	105	12066	1.52	ug/L	97
124) naphthalene	19.316	128	790201	122.87	ug/L	98
126) 2-methylnaphthalene	20.734	142	242147	179.76	ug/L	99

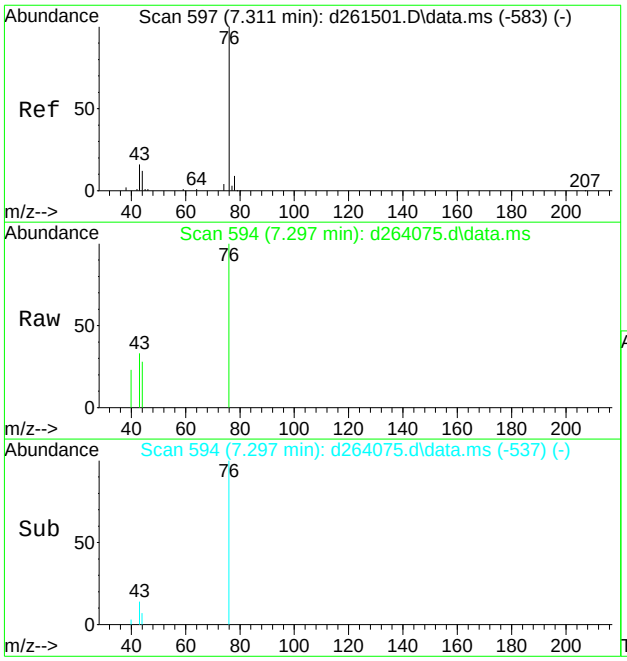
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264075.d
Acq On : 26 Apr 2019 1:34 pm
Operator : juntaep
Sample : JC86406-14 Inst : MSD
Misc : ms34034,vd10644,3.6,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:35:24 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

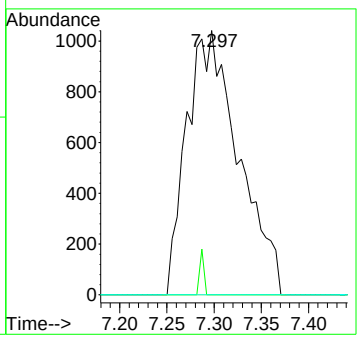


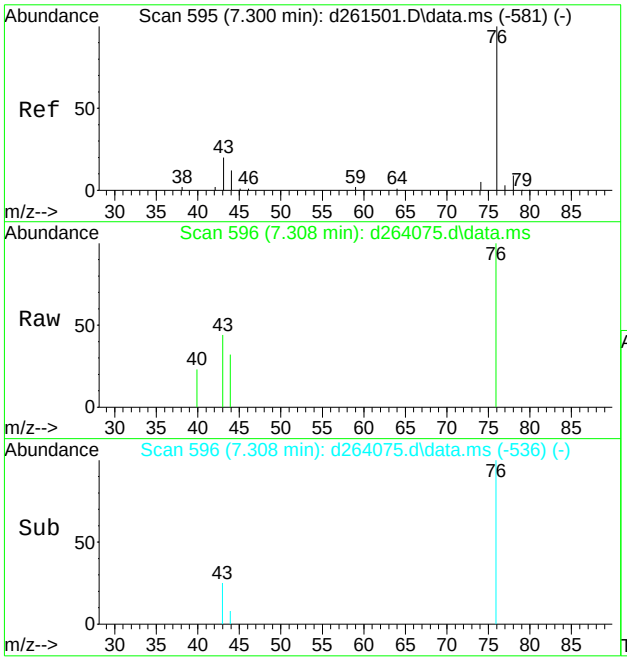


#23
carbon disulfide
Concen: 0.64 ug/L
RT: 7.297 min Scan# 594
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 76 Resp: 3992

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.5
38	0.0	0.0	34.3

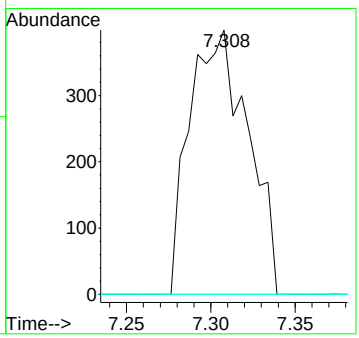


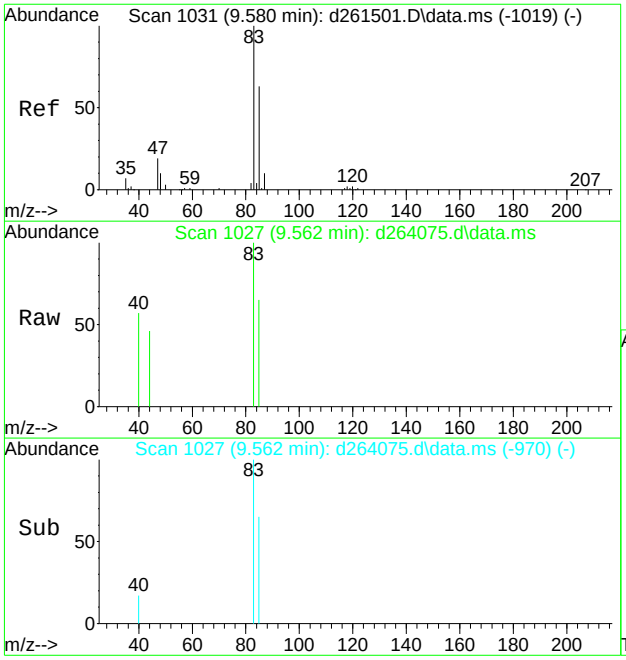


#25
methyl acetate
Concen: 0.90 ug/L
RT: 7.308 min Scan# 596
Delta R.T. 0.013 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 43 Resp: 962

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	50.5
59	0.0	0.0	37.9

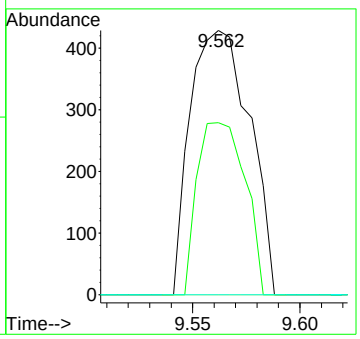


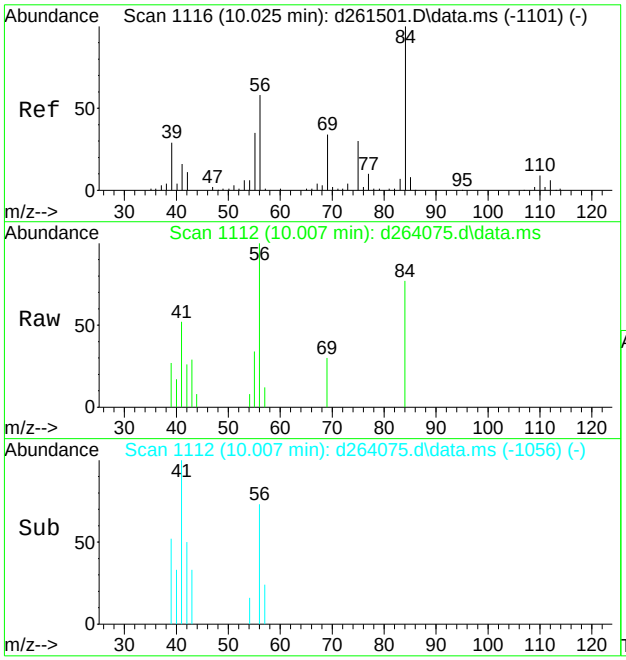


#44
chloroform
Concen: 0.26 ug/L
RT: 9.562 min Scan# 1027
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 83 Resp: 826

Ion	Ratio	Lower	Upper
83	100		
85	65.0	36.2	96.2
47	0.0	0.0	56.4

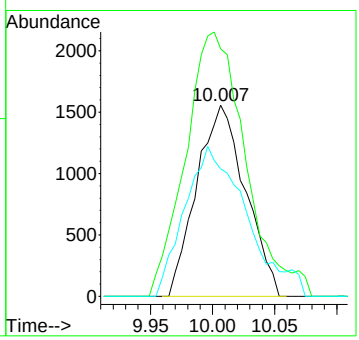


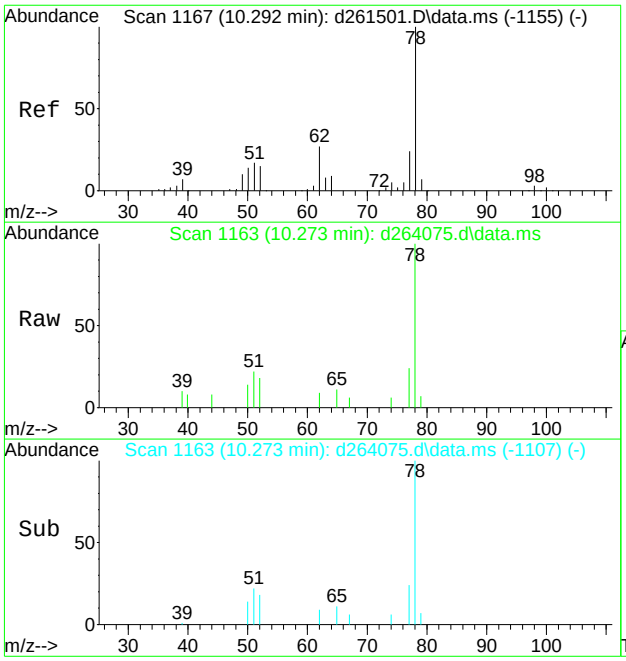


#48
cyclohexane
Concen: 1.30 ug/L
RT: 10.007 min Scan# 1112
Delta R.T. -0.008 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 84 Resp: 4246

Ion	Ratio	Lower	Upper
84	100		
56	115.9	81.8	141.8
41	57.0	33.5	93.5

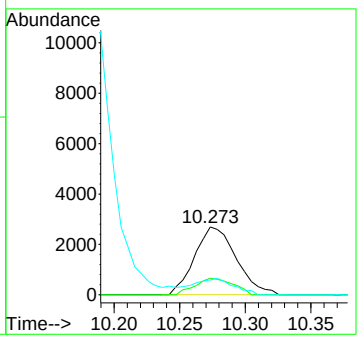


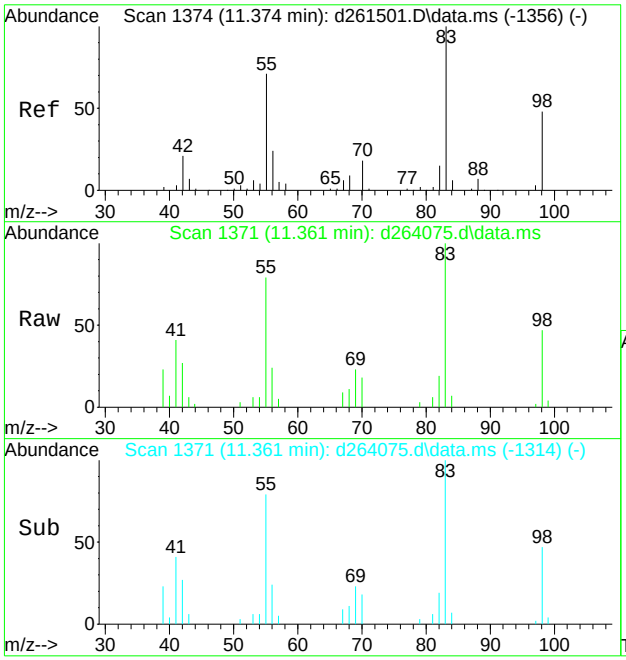


#58
benzene
Concen: 0.84 ug/L
RT: 10.273 min Scan# 1163
Delta R.T. -0.008 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 78 Resp: 5937

Ion	Ratio	Lower	Upper
78	100		
77	24.5	0.0	53.8
51	22.0	0.0	50.1

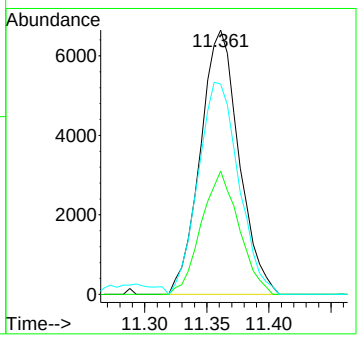


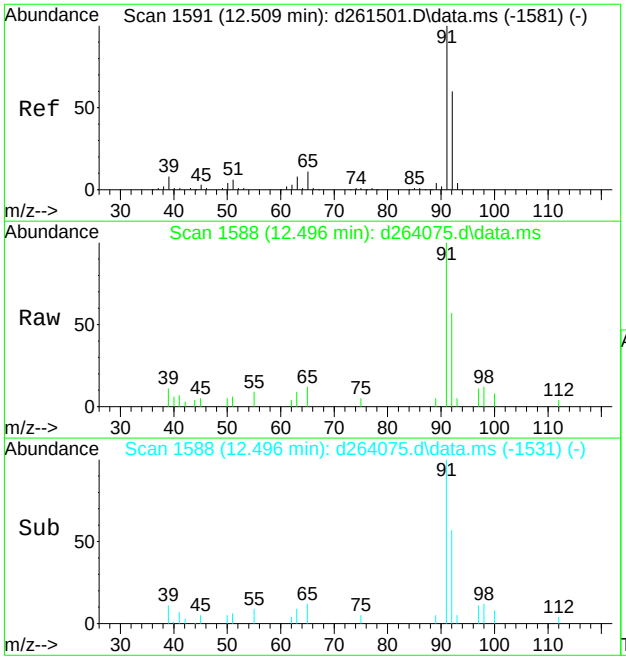


#66
methylcyclohexane
Concen: 4.78 ug/L
RT: 11.361 min Scan# 1371
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 83 Resp: 14355

Ion	Ratio	Lower	Upper
83	100		
98	46.7	27.3	67.3
55	79.5	59.4	99.4

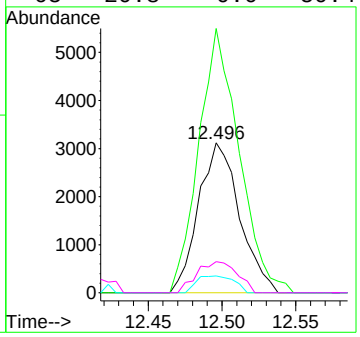


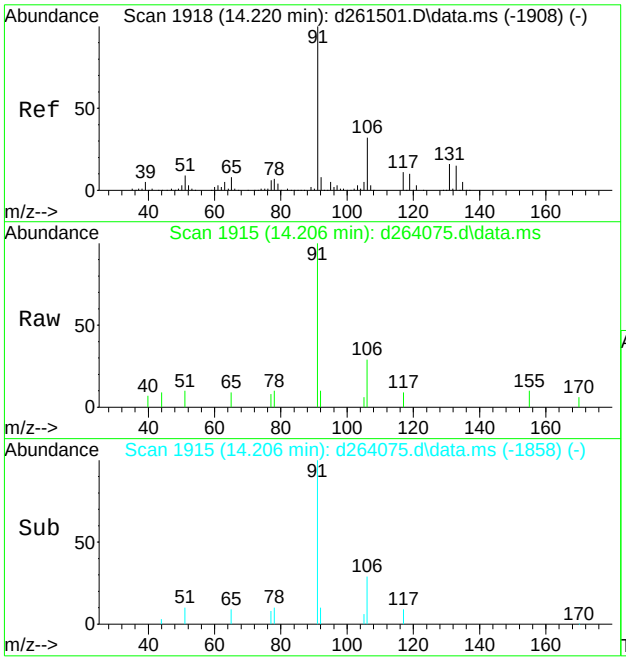


#77
toluene
Concen: 1.39 ug/L
RT: 12.496 min Scan# 1588
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 92 Resp: 6024

Ion	Ratio	Lower	Upper
92	100		
91	176.3	149.2	189.2
51	11.2	0.0	42.2
65	20.8	0.0	50.4

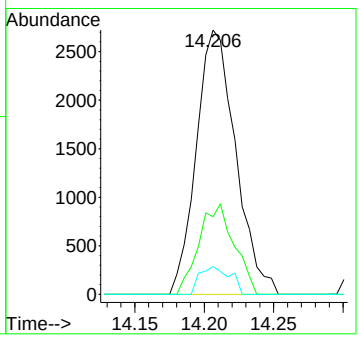


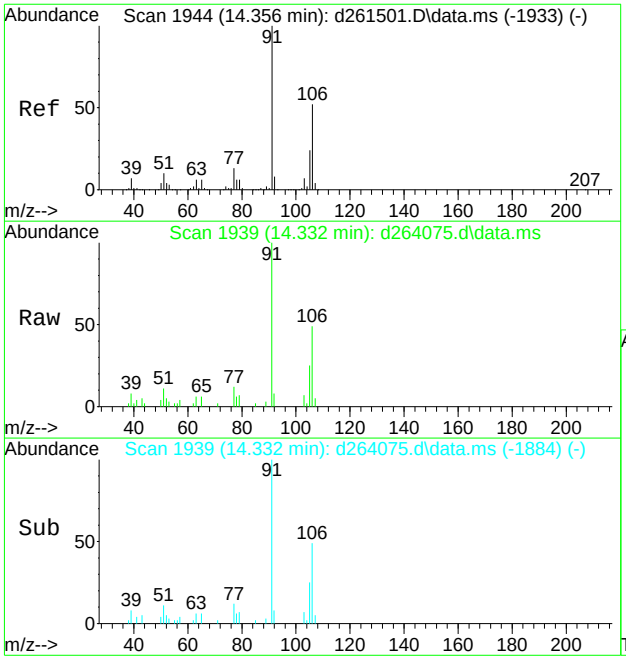


#90
ethylbenzene
Concen: 0.62 ug/L
RT: 14.206 min Scan# 1915
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 91 Resp: 5359

Ion	Ratio	Lower	Upper
91	100		
106	29.3	1.2	61.2
51	10.5	0.0	40.0

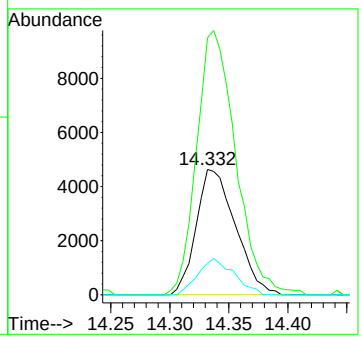


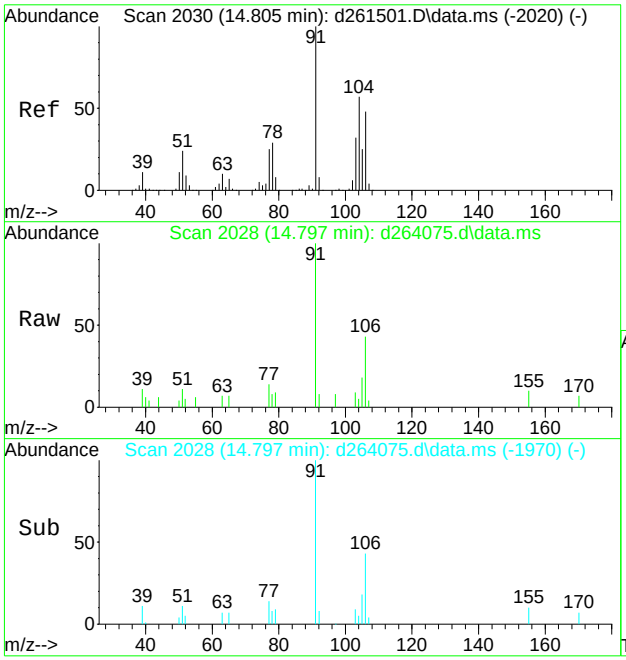


#91
m,p-xylene
Concen: 3.27 ug/L
RT: 14.332 min Scan# 1939
Delta R.T. -0.013 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion:106 Resp: 10715

Ion	Ratio	Lower	Upper
106	100		
91	205.2	173.0	233.0
77	25.2	0.0	57.4

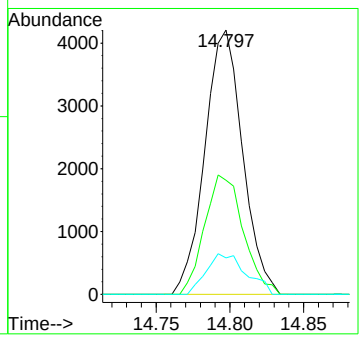


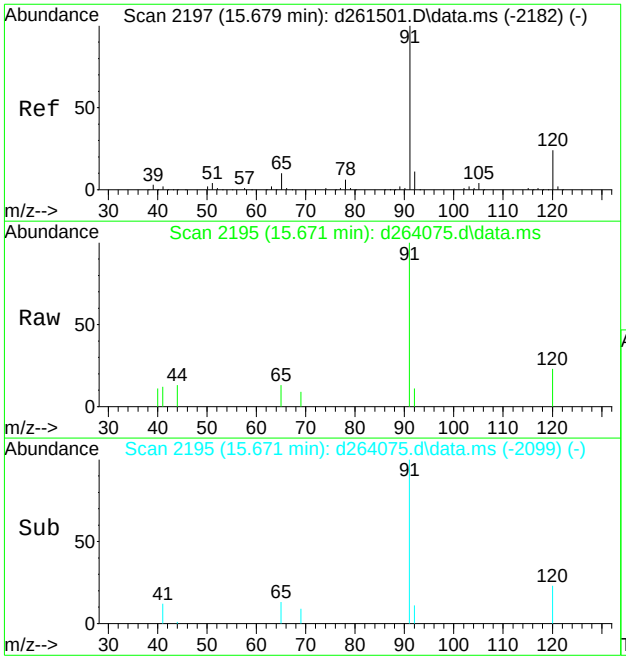


#92
o-xylene
Concen: 1.04 ug/L
RT: 14.797 min Scan# 2028
Delta R.T. 0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 91 Resp: 7486

Ion	Ratio	Lower	Upper
91	100		
106	43.1	16.5	76.5
77	13.8	0.0	55.2

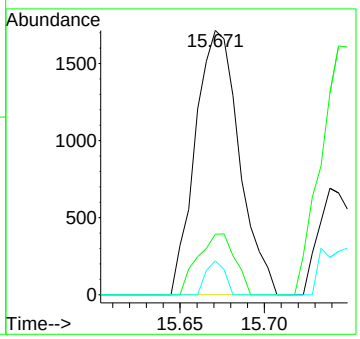


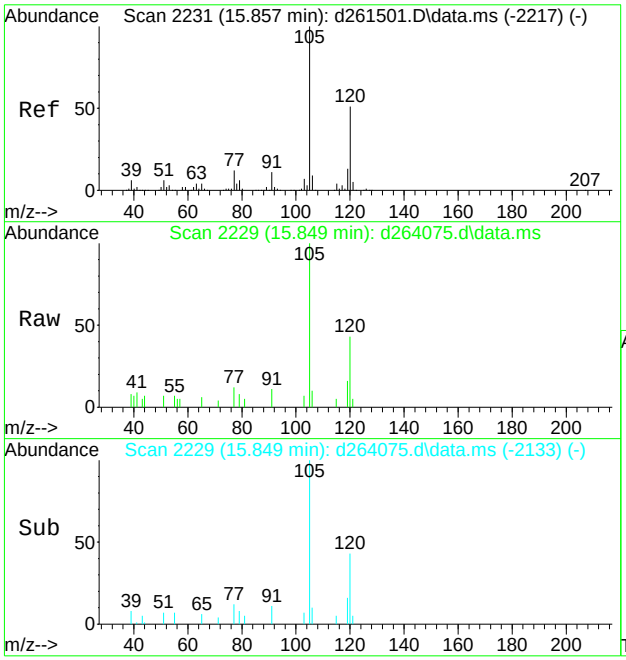


#105
n-propylbenzene
Concen: 0.30 ug/L
RT: 15.671 min Scan# 2195
Delta R.T. 0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion: 91 Resp: 3109

Ion	Ratio	Lower	Upper
91	100		
120	23.0	0.0	53.5
65	12.8	0.0	40.9

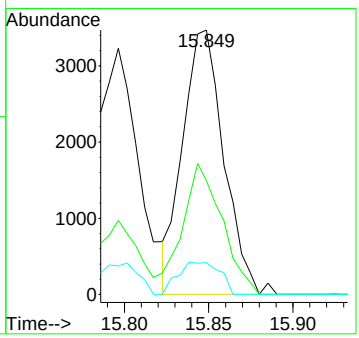


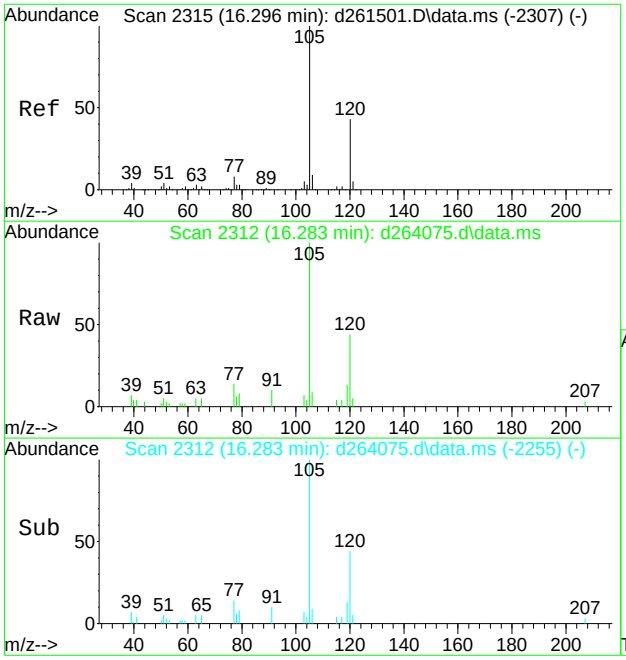


#108
1,3,5-trimethylbenzene
Concen: 0.74 ug/L
RT: 15.849 min Scan# 2229
Delta R.T. 0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion:105 Resp: 5910

Ion	Ratio	Lower	Upper
105	100		
120	43.0	19.7	79.7
77	12.0	0.0	42.9

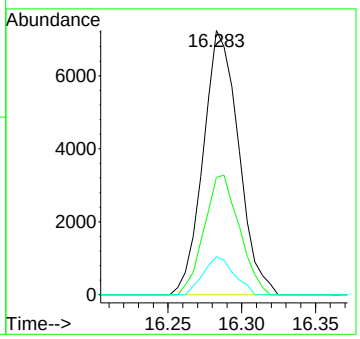


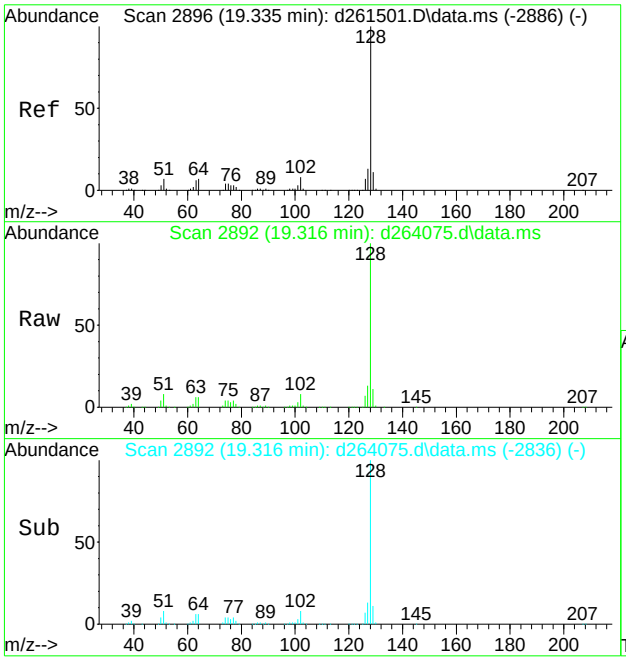


#110
1,2,4-trimethylbenzene
Concen: 1.52 ug/L
RT: 16.283 min Scan# 2312
Delta R.T. -0.003 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion:105 Resp: 12066

Ion	Ratio	Lower	Upper
105	100		
120	44.4	16.4	76.4
77	14.5	0.0	42.6

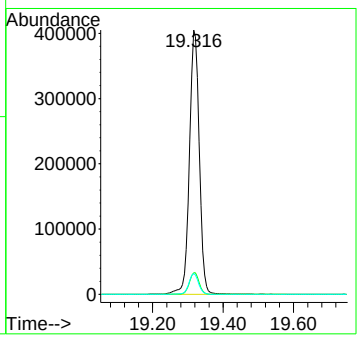


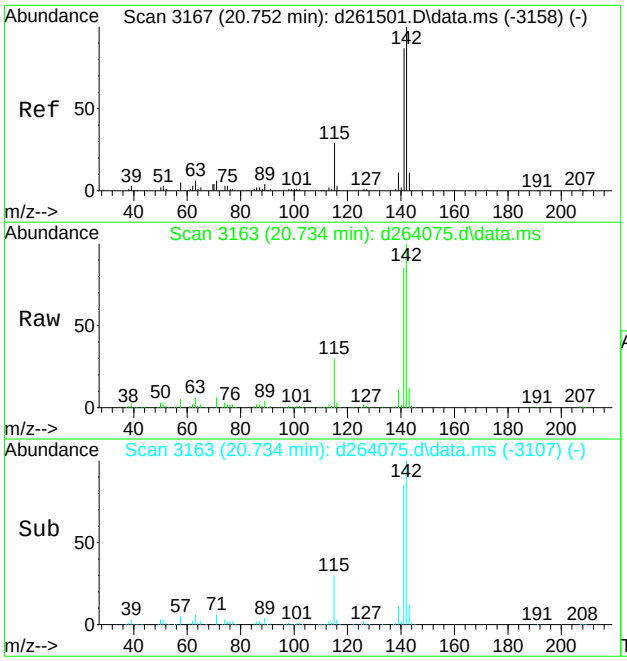


#124
naphthalene
Concen: 122.87 ug/L
RT: 19.316 min Scan# 2892
Delta R.T. -0.008 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion:128 Resp: 790201

Ion	Ratio	Lower	Upper
128	100		
102	8.2	0.0	38.5
51	7.9	0.0	36.8

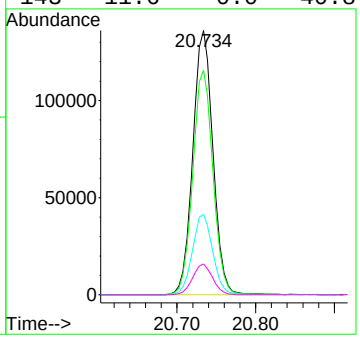




#126
2-methylnaphthalene
Concen: 179.76 ug/L
RT: 20.734 min Scan# 3163
Delta R.T. -0.008 min
Lab File: d264075.d
Acq: 26 Apr 2019 1:34 pm

Tgt Ion:142 Resp: 242147

Ion	Ratio	Lower	Upper
142	100		
141	85.0	64.5	104.5
115	30.5	1.9	61.9
143	11.6	0.0	40.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184768.d
Acq On : 26 Apr 2019 2:45 pm
Operator : EddieH
Sample : JC86406-15 Inst : MSY
Misc : MS34034,VY8016,3.8,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:34:00 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

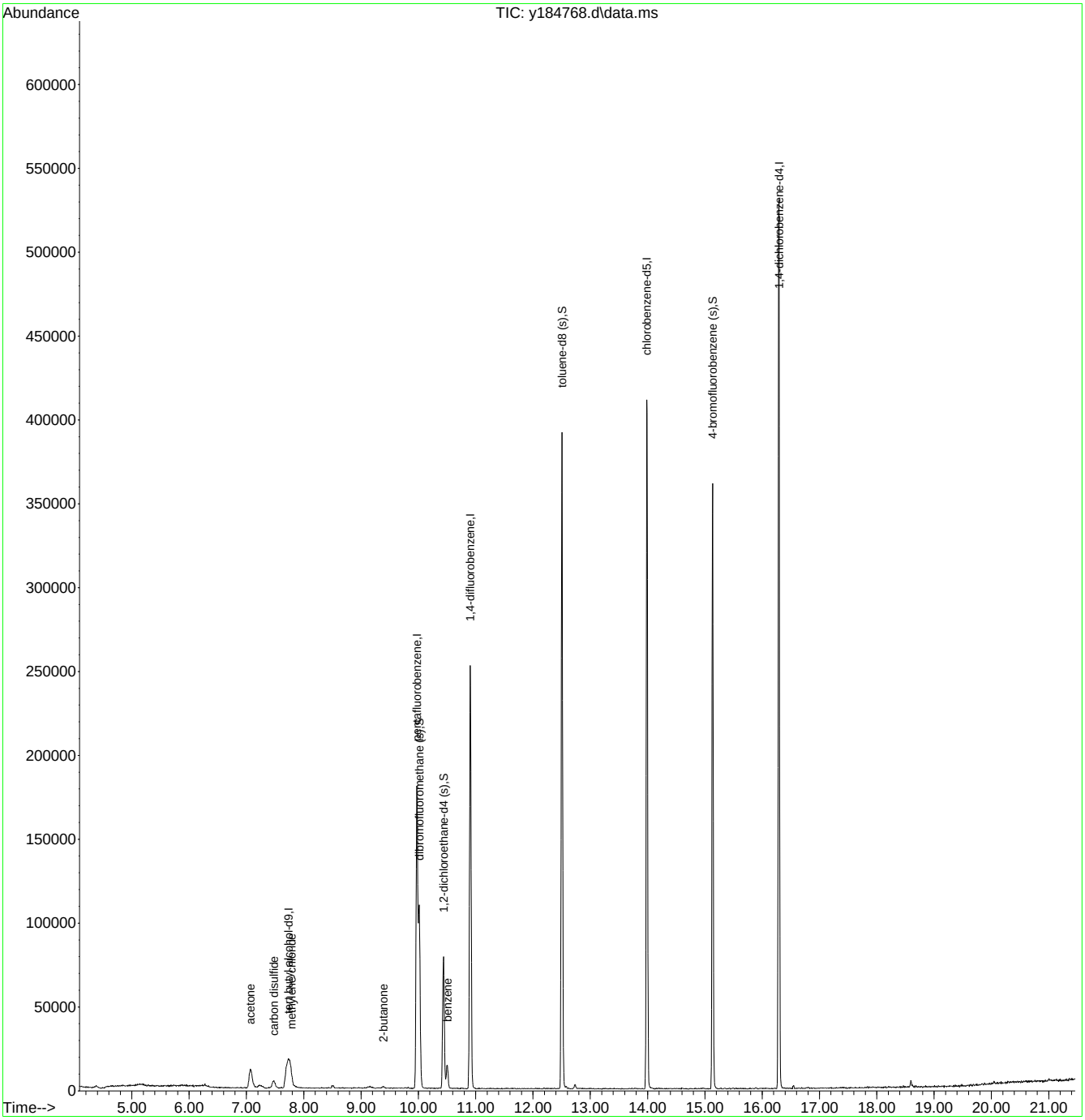
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.731	65	57873	500.00	ug/L	-0.01
5) pentafluorobenzene	9.974	168	146152	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	227782	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	222682	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.293	152	133662	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	70466	53.15	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.30%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	58513	45.98	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 91.96%			
75) toluene-d8 (s)	12.506	98	252470	44.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 89.60%			
98) 4-bromofluorobenzene (s)	15.137	95	103687	46.78	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.56%			
Target Compounds						Qvalue
20) acetone	7.072	43	30396	84.89	ug/L	93
23) carbon disulfide	7.480	76	12329	2.51	ug/L	92
24) methylene chloride	7.788	84	2502	1.28	ug/L	76
31) 2-butanone	9.389	72	194	1.65	ug/L #	1
57) benzene	10.508	78	14005	2.13	ug/L	96

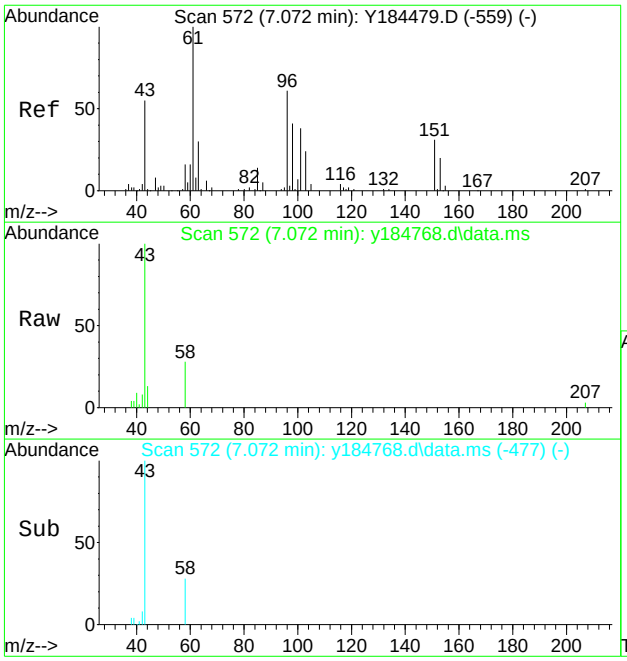
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184768.d
Acq On : 26 Apr 2019 2:45 pm
Operator : EddieH
Sample : JC86406-15 Inst : MSY
Misc : MS34034,VY8016,3.8,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:34:00 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

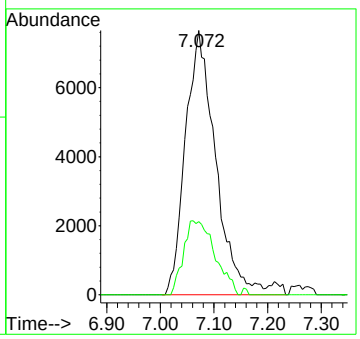


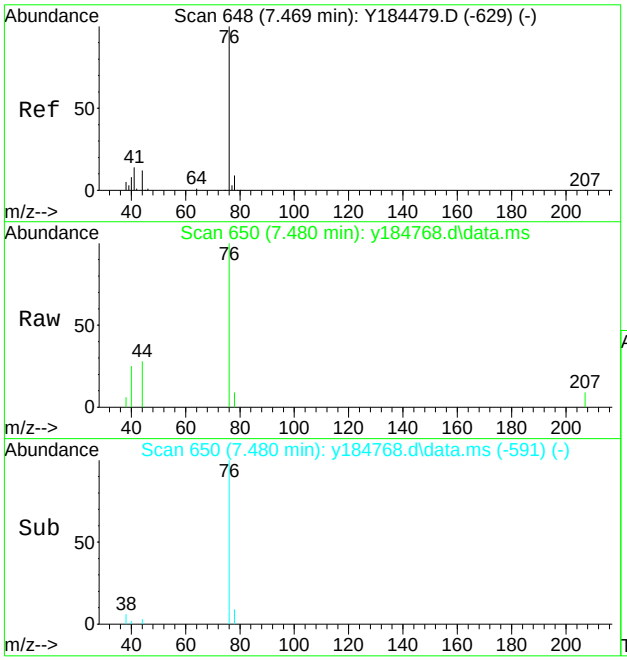


#20
acetone
Concen: 84.89 ug/L
RT: 7.072 min Scan# 572
Delta R.T. -0.005 min
Lab File: y184768.d
Acq: 26 Apr 2019 2:45 pm

Tgt Ion: 43 Resp: 30396

Ion	Ratio	Lower	Upper
43	100		
58	27.7	1.4	61.4

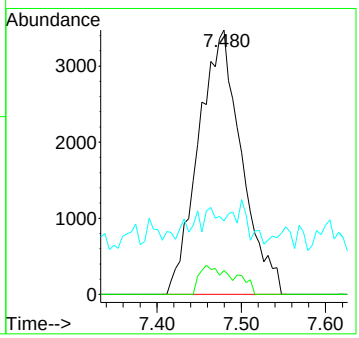


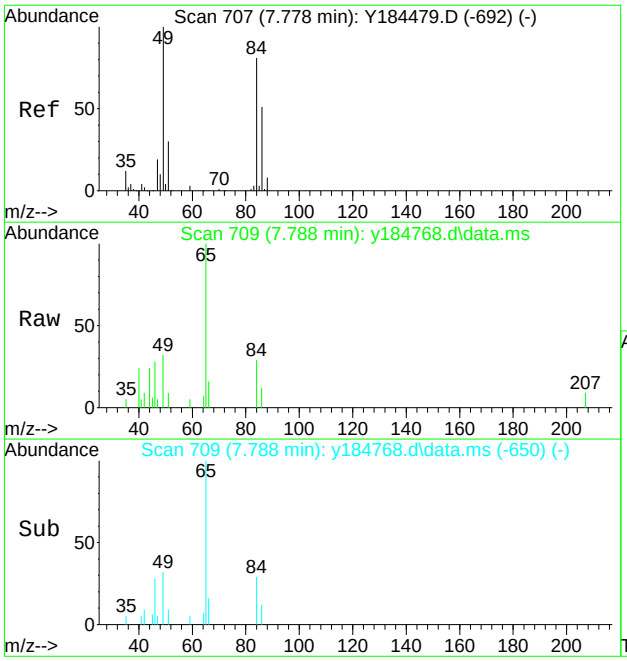


#23
carbon disulfide
Concen: 2.51 ug/L
RT: 7.480 min Scan# 650
Delta R.T. 0.010 min
Lab File: y184768.d
Acq: 26 Apr 2019 2:45 pm

Tgt Ion: 76 Resp: 12329

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	38.7
44	7.3	0.0	42.6

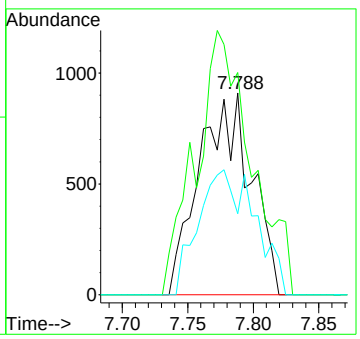


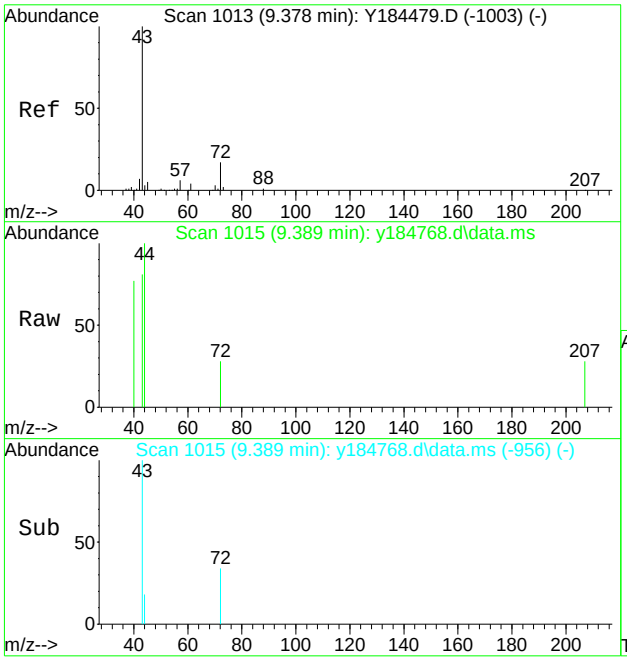


#24
methylene chloride
Concen: 1.28 ug/L
RT: 7.788 min Scan# 709
Delta R.T. 0.010 min
Lab File: y184768.d
Acq: 26 Apr 2019 2:45 pm

Tgt Ion: 84 Resp: 2502

Ion	Ratio	Lower	Upper
84	100		
49	110.2	104.2	164.2
86	40.2	35.3	95.3

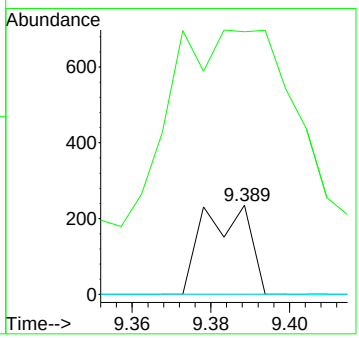


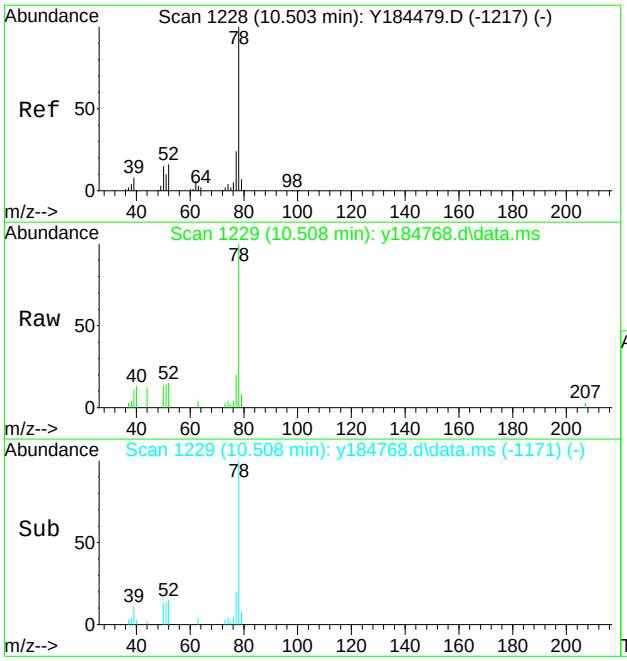


#31
2-butanone
Concen: 1.65 ug/L
RT: 9.389 min Scan# 1015
Delta R.T. 0.010 min
Lab File: y184768.d
Acq: 26 Apr 2019 2:45 pm

Tgt Ion: 72 Resp: 194

Ion	Ratio	Lower	Upper
72	100		
43	112.8	537.8	597.8#
57	0.0	1.1	61.1#

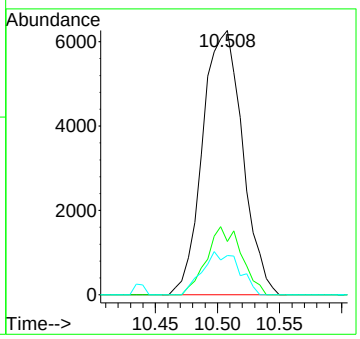




#57
benzene
Concen: 2.13 ug/L
RT: 10.508 min Scan# 1229
Delta R.T. 0.005 min
Lab File: y184768.d
Acq: 26 Apr 2019 2:45 pm

Tgt Ion: 78 Resp: 14005

Ion	Ratio	Lower	Upper
78	100		
77	20.1	0.0	53.1
52	14.9	0.0	45.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44287.d
Acq On : 24 Apr 2019 1:46 pm
Operator : roberts
Sample : MB Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:47:16 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

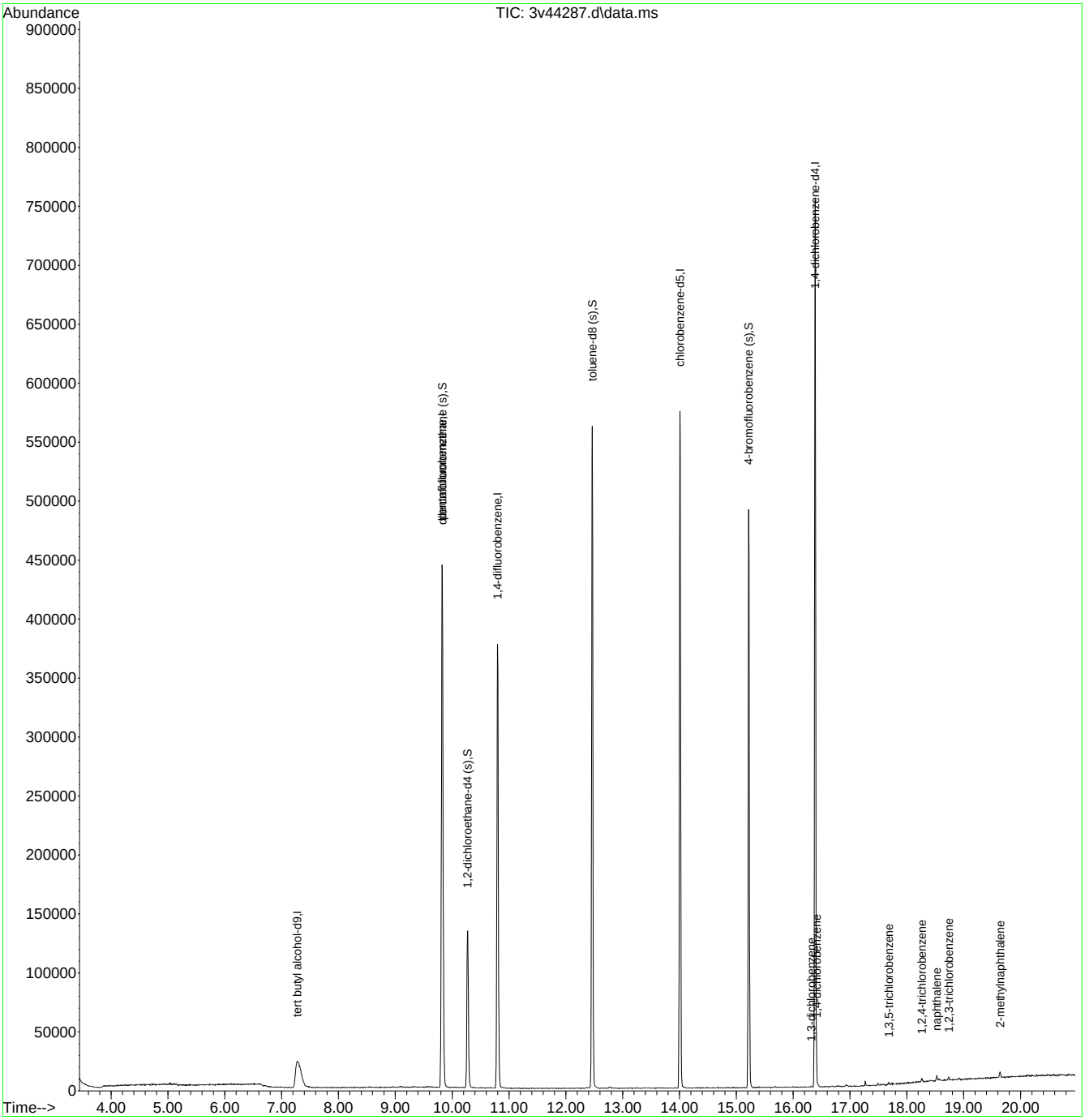
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.275	65	84146	500.00	ug/L	-0.03
5) pentafluorobenzene	9.823	168	199488	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.798	114	282834	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	273573	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	161332	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	104481	49.81	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.62%			
53) 1,2-dichloroethane-d4 (s)	10.269	65	96376	48.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.24%			
75) toluene-d8 (s)	12.465	98	329535	48.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.94%			
98) 4-bromofluorobenzene (s)	15.218	95	142984	50.20	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.40%			
Target Compounds						Qvalue
110) 1,3-dichlorobenzene	16.319	146	617	0.10	ug/L	97
112) 1,4-dichlorobenzene	16.413	146	797	0.13	ug/L	82
116) 1,3,5-trichlorobenzene	17.682	180	599	0.10	ug/L #	75
119) 1,2,4-trichlorobenzene	18.264	180	758	0.14	ug/L	94
121) naphthalene	18.526	128	3191	0.29	ug/L	97
122) 1,2,3-trichlorobenzene	18.736	180	872	0.15	ug/L	92
125) 2-methylnaphthalene	19.643	142	2729	2.83	ug/L	87

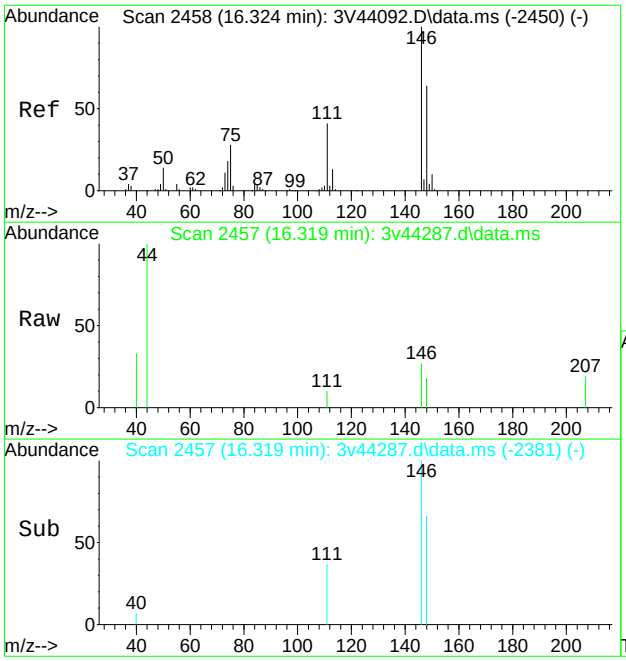
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\v3v1778\
Data File : 3v44287.d
Acq On : 24 Apr 2019 1:46 pm
Operator : roberts
Sample : MB Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 25 22:47:16 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

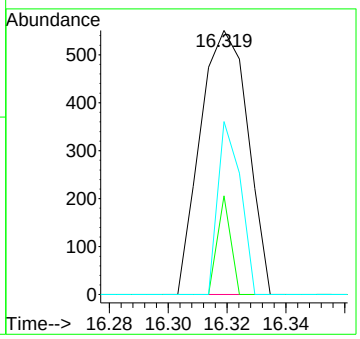


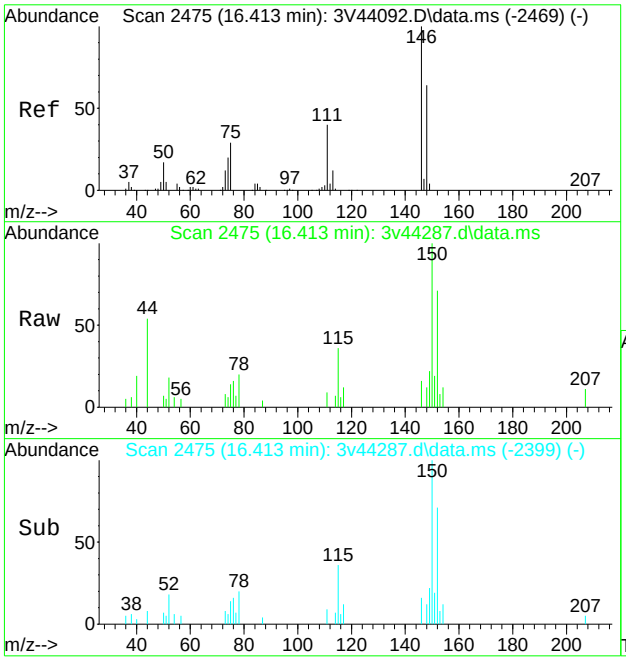


#110
1,3-dichlorobenzene
Concen: 0.10 ug/L
RT: 16.319 min Scan# 2457
Delta R.T. 0.000 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:146 Resp: 617

Ion	Ratio	Lower	Upper
146	100		
111	37.4	10.9	70.9
148	65.5	34.4	94.4

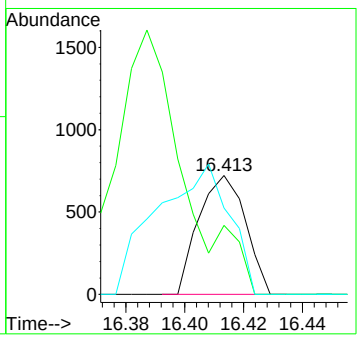


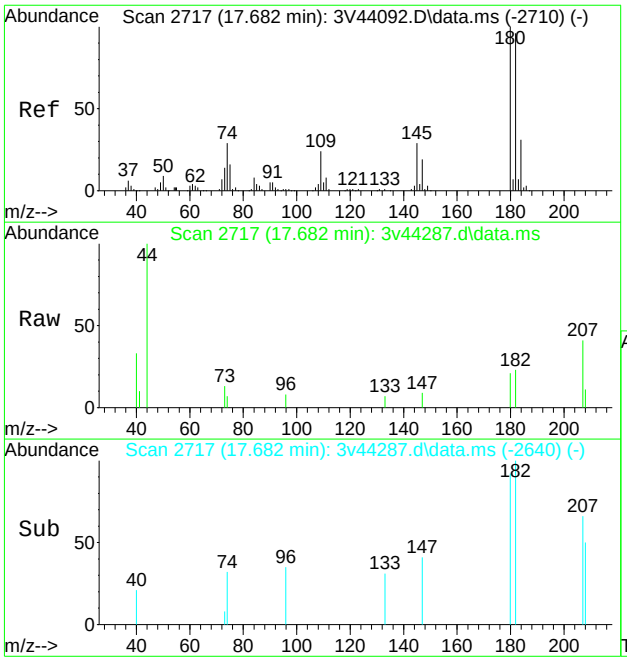


#112
1,4-dichlorobenzene
Concen: 0.13 ug/L
RT: 16.413 min Scan# 2475
Delta R.T. 0.000 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:146 Resp: 797

Ion	Ratio	Lower	Upper
146	100		
111	58.0	8.9	68.9
148	72.7	34.8	94.8

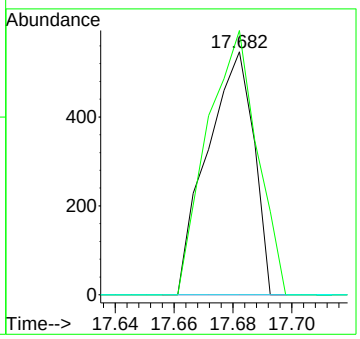


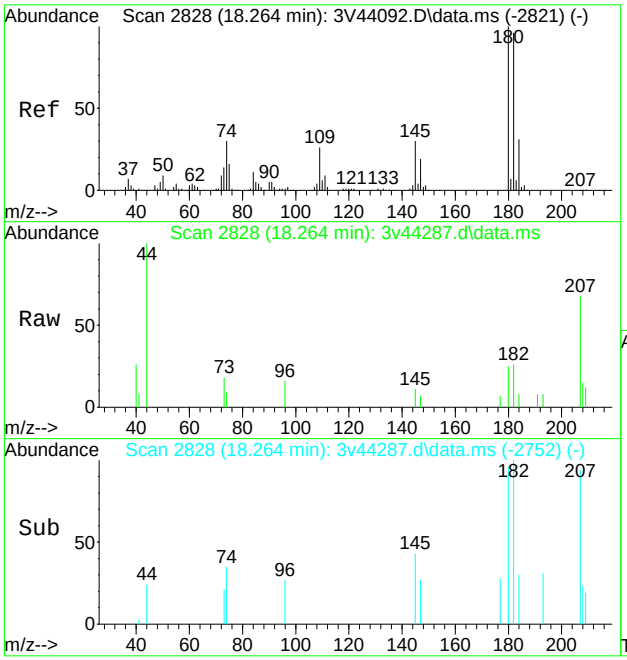


#116
1,3,5-trichlorobenzene
Concen: 0.10 ug/L
RT: 17.682 min Scan# 2717
Delta R.T. 0.005 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:180 Resp: 599

Ion	Ratio	Lower	Upper
180	100		
182	108.8	74.3	114.3
184	0.0	9.7	49.7#

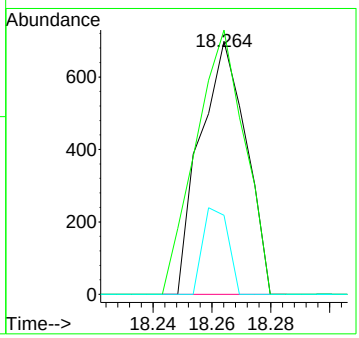


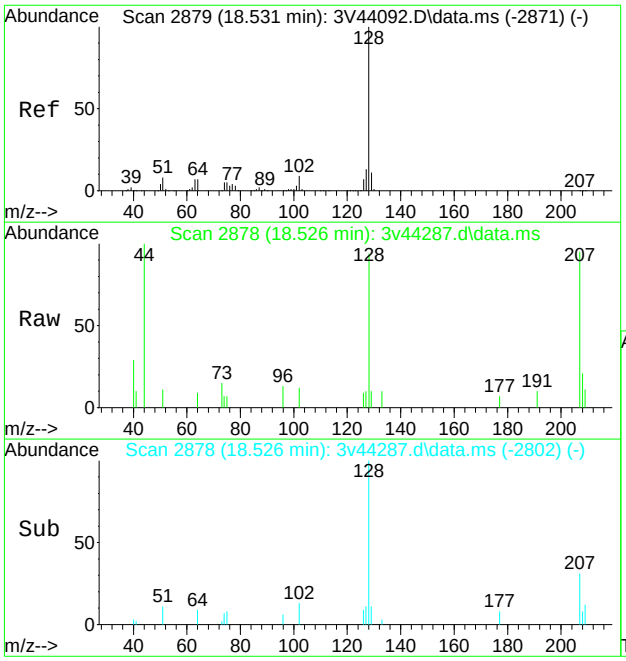


#119
1,2,4-trichlorobenzene
Concen: 0.14 ug/L
RT: 18.264 min Scan# 2828
Delta R.T. 0.000 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:180 Resp: 758

Ion	Ratio	Lower	Upper
180	100		
182	104.4	66.7	126.7
184	31.2	1.3	61.3

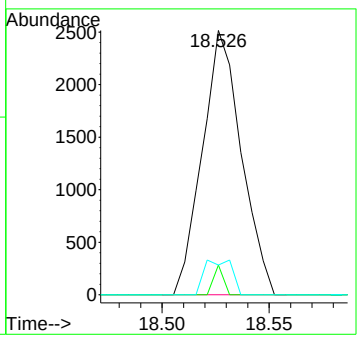


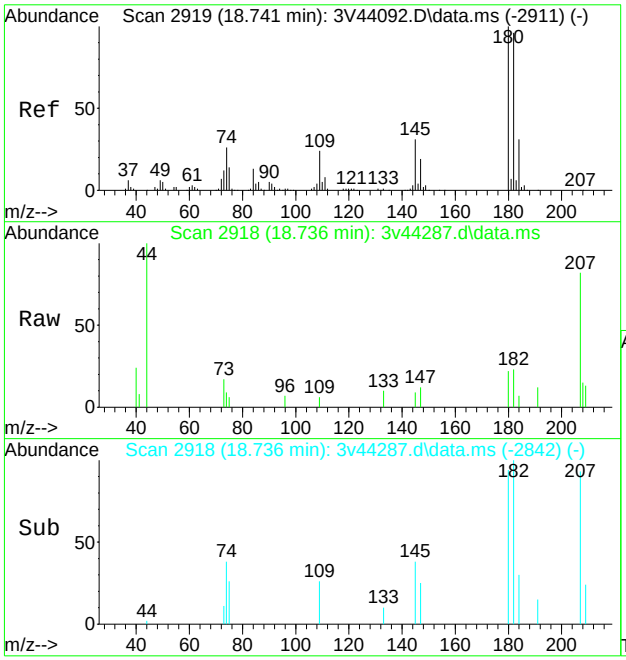


#121
naphthalene
Concen: 0.29 ug/L
RT: 18.526 min Scan# 2878
Delta R.T. 0.000 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:128 Resp: 3191

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	40.8
127	11.2	0.0	42.8

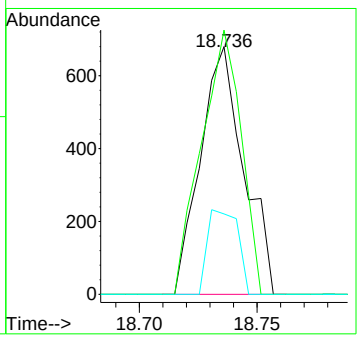


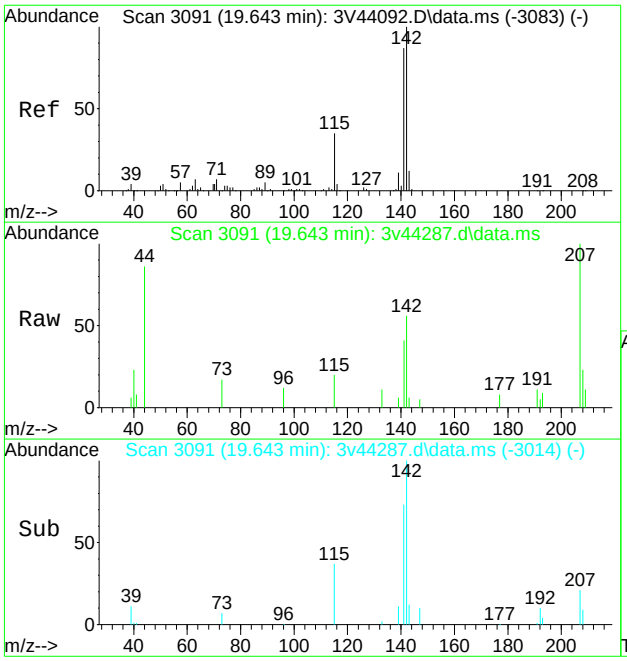


#122
1,2,3-trichlorobenzene
Concen: 0.15 ug/L
RT: 18.736 min Scan# 2918
Delta R.T. 0.000 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:180 Resp: 872

Ion	Ratio	Lower	Upper
180	100		
182	106.8	66.5	126.5
184	32.5	1.6	61.6

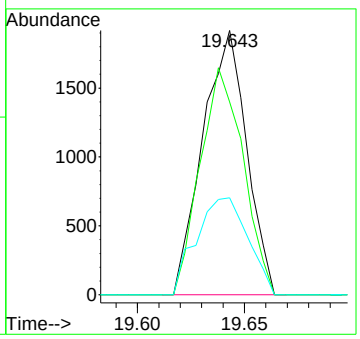




#125
2-methylnaphthalene
Concen: 2.83 ug/L
RT: 19.643 min Scan# 3091
Delta R.T. 0.005 min
Lab File: 3v44287.d
Acq: 24 Apr 2019 1:46 pm

Tgt Ion:142 Resp: 2729

Ion	Ratio	Lower	Upper
142	100		
141	73.0	58.7	118.7
115	36.7	4.4	64.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225704.d
Acq On : 25 Apr 2019 9:40 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:37:35 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

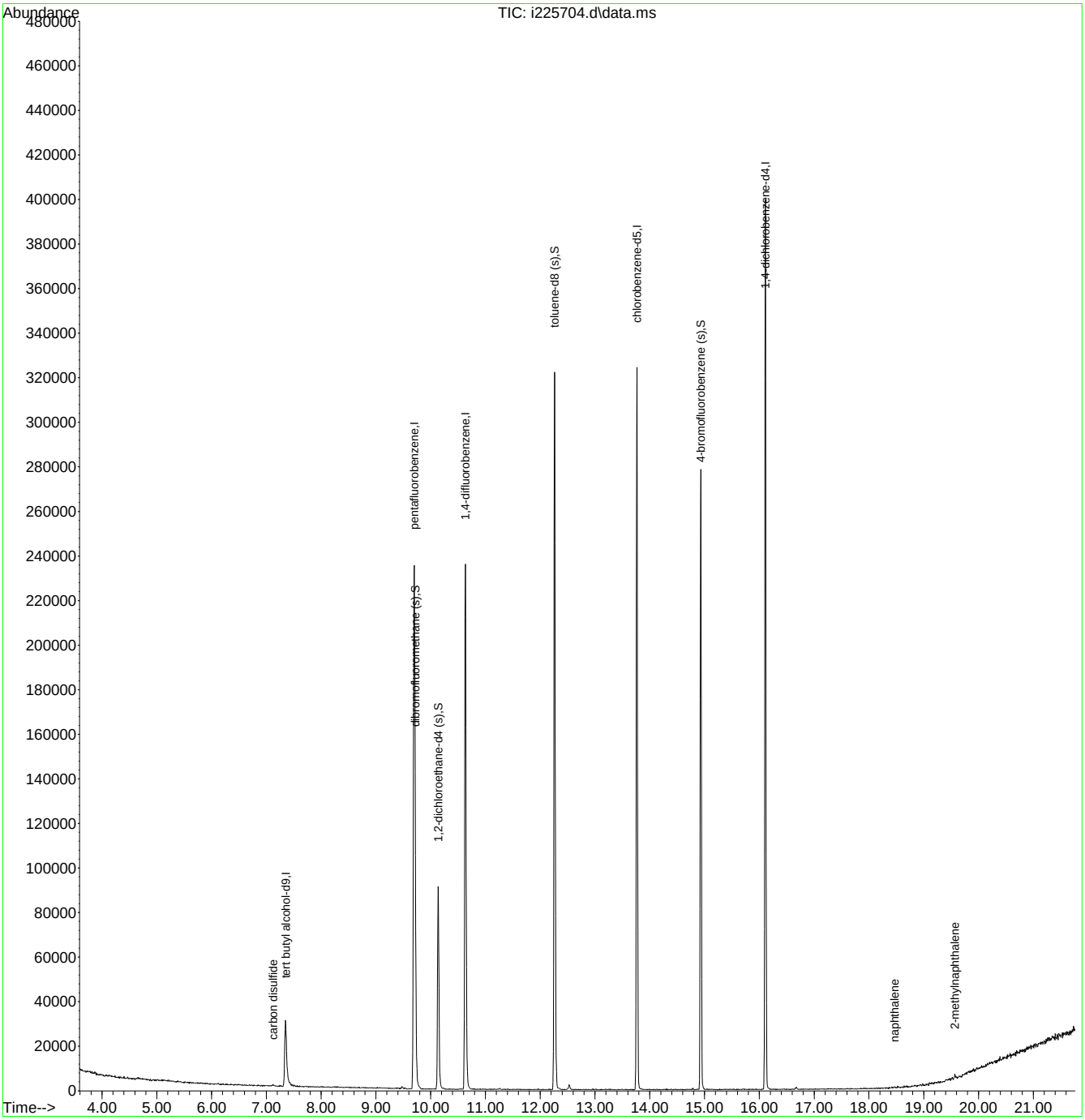
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	44943	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	144269	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	184617	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.765	117	162881	50.00	ug/L	-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	93203	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.717	113	59296	52.31	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.62%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	65430	56.78	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 113.56%			
74) toluene-d8 (s)	12.259	98	197309	47.25	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.50%			
97) 4-bromofluorobenzene (s)	14.926	95	74127	52.15	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.30%			
Target Compounds						Qvalue
21) carbon disulfide	7.123	76	540	0.19	ug/L	75
122) naphthalene	18.467	128	739	0.19	ug/L	69
124) 2-methylnaphthalene	19.566	142	540	0.40	ug/L	87

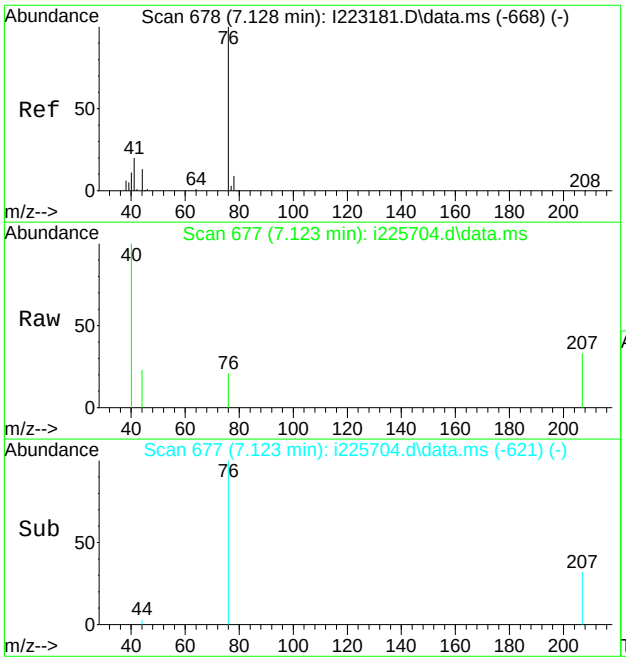
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225704.d
Acq On : 25 Apr 2019 9:40 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:37:35 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

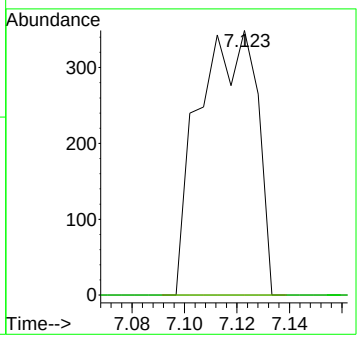


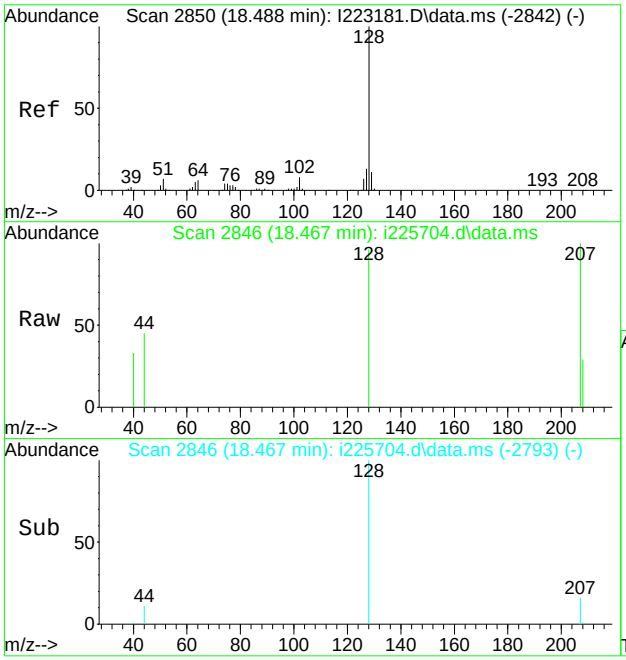


#21
carbon disulfide
Concen: 0.19 ug/L
RT: 7.123 min Scan# 677
Delta R.T. -0.005 min
Lab File: i225704.d
Acq: 25 Apr 2019 9:40 am

Tgt Ion: 76 Resp: 540

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	29.0

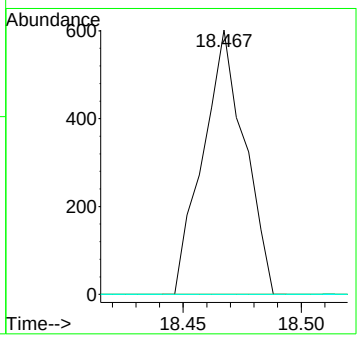


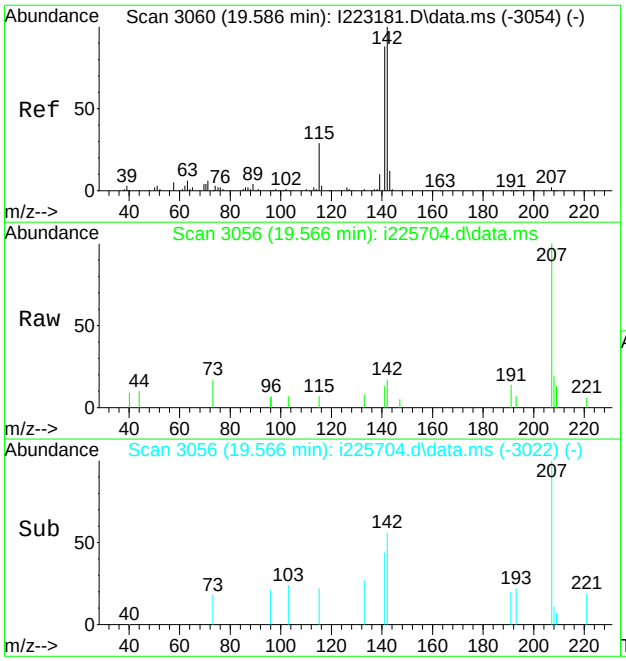


#122
naphthalene
Concen: 0.19 ug/L
RT: 18.467 min Scan# 2846
Delta R.T. -0.021 min
Lab File: i225704.d
Acq: 25 Apr 2019 9:40 am

Tgt Ion:128 Resp: 739

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	41.0
127	0.0	0.0	42.7

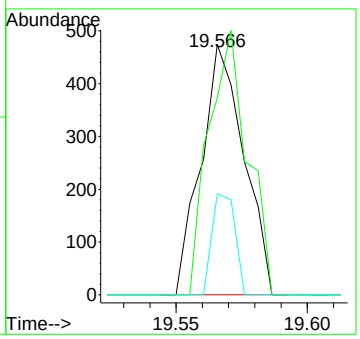




#124
2-methylnaphthalene
Concen: 0.40 ug/L
RT: 19.566 min Scan# 3056
Delta R.T. -0.021 min
Lab File: i225704.d
Acq: 25 Apr 2019 9:40 am

Tgt Ion:142 Resp: 540

Ion	Ratio	Lower	Upper
142	100		
141	78.7	68.2	108.2
115	40.5	9.2	49.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264046.d
Acq On : 25 Apr 2019 10:07 am
Operator : thienn
Sample : MB Inst : MSD
Misc : ms34050,vd10643,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:22:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

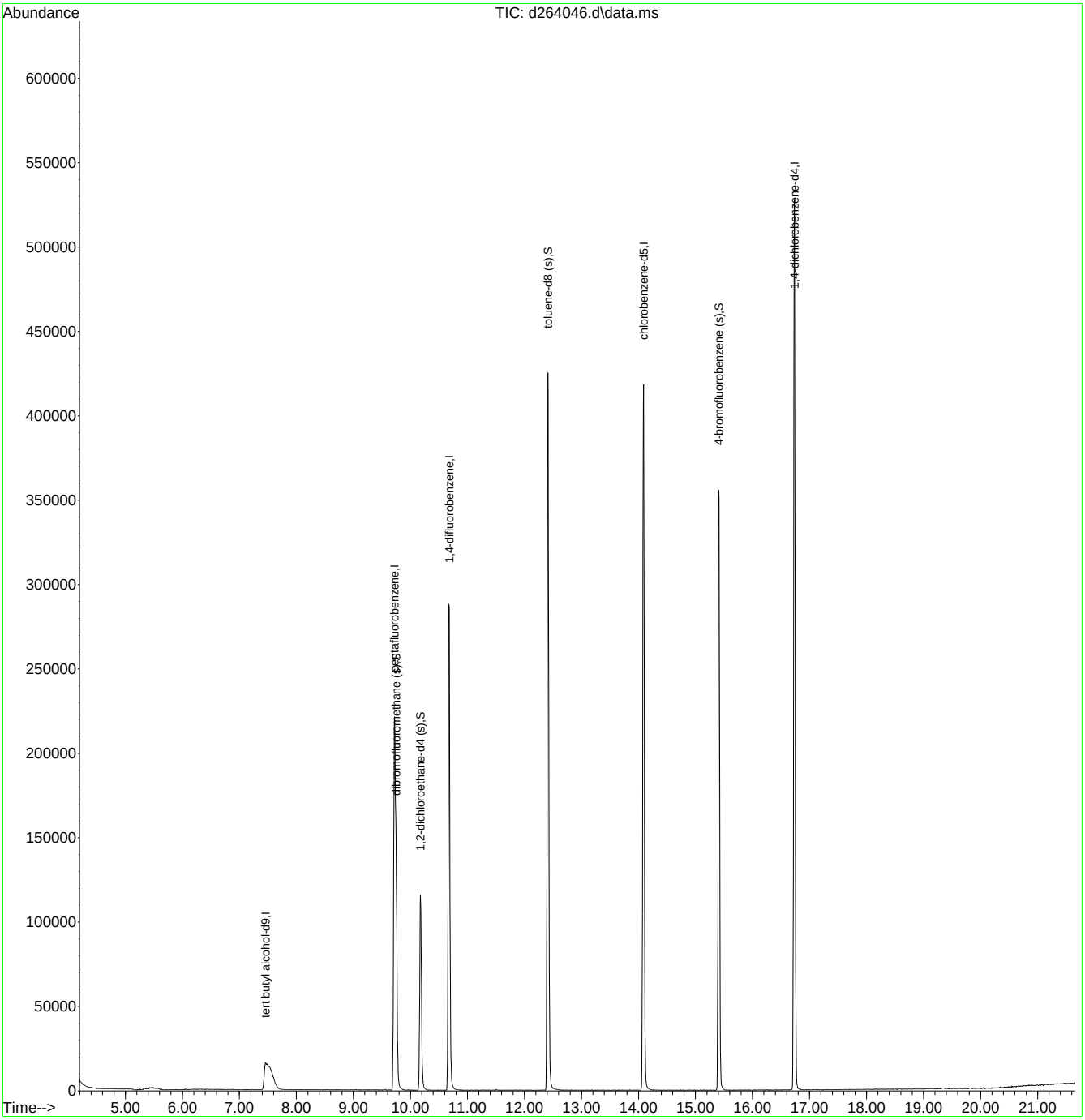
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.457	65	87623	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	164208	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	256340	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	257035	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	151156	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	77694	50.15	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.30%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	88874	46.25	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 92.50%			
76) toluene-d8 (s)	12.410	98	305320	48.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.42%			
100) 4-bromofluorobenzene (s)	15.407	95	134502	48.02	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.04%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264046.d
Acq On : 25 Apr 2019 10:07 am
Operator : thienn
Sample : MB Inst : MSD
Misc : ms34050,vd10643,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:22:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264069.d
Acq On : 26 Apr 2019 10:22 am
Operator : juntaep
Sample : mb Inst : MSD
Misc : ms34135,vd10644,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 00:56:06 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

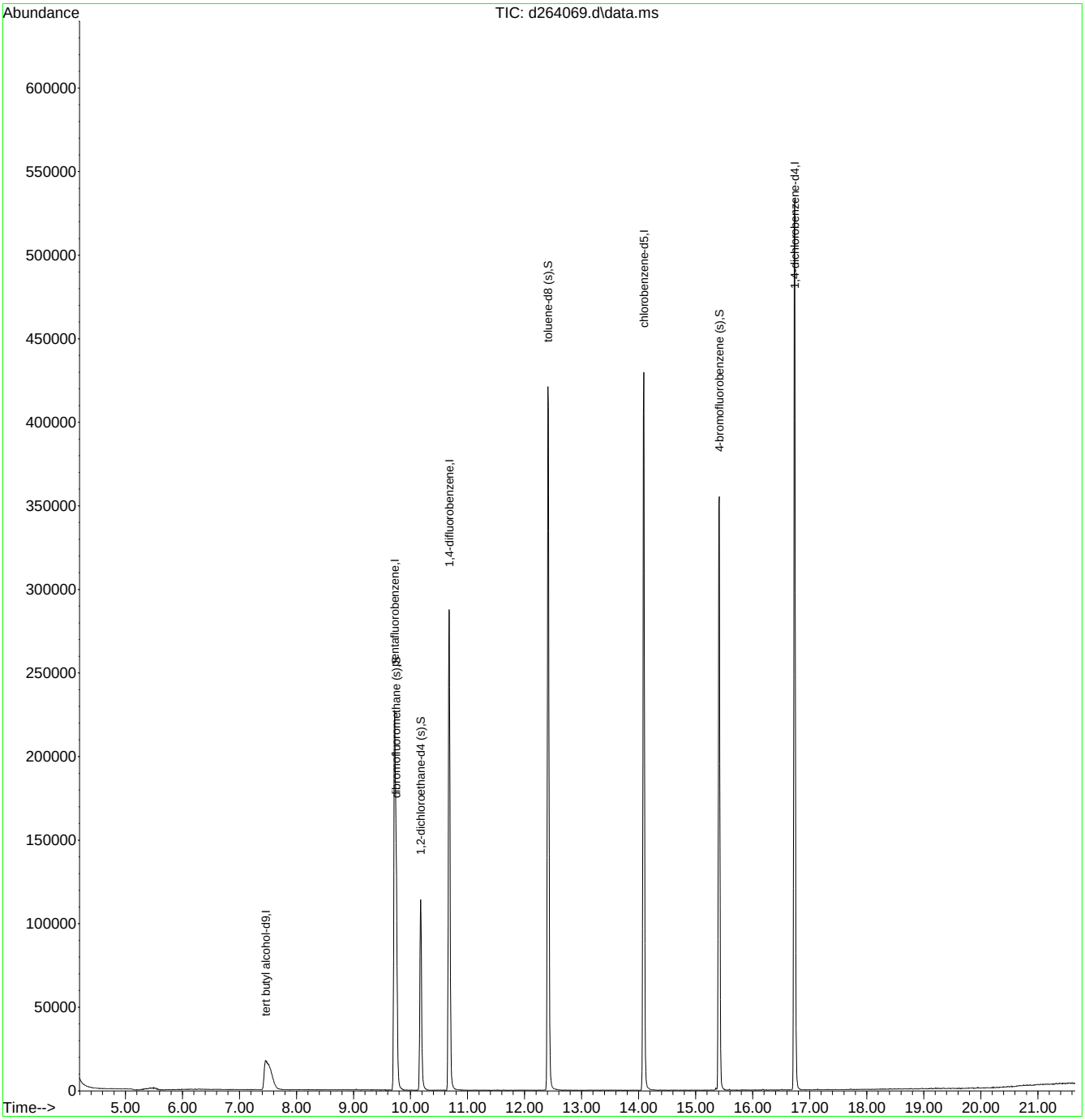
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.463	65	88269	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	169081	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	261346	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	261567	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	152283	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	77800	48.77	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.54%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	87480	44.65	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.30%			
76) toluene-d8 (s)	12.411	98	308997	48.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.90%			
100) 4-bromofluorobenzene (s)	15.413	95	135920	48.17	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.34%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264069.d
Acq On : 26 Apr 2019 10:22 am
Operator : juntaep
Sample : mb Inst : MSD
Misc : ms34135,vd10644,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 00:56:06 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184759.d
Acq On : 26 Apr 2019 10:23 am
Operator : EddieH
Sample : mb Inst : MSY
Misc : MS34202,VY8016,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:19:42 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

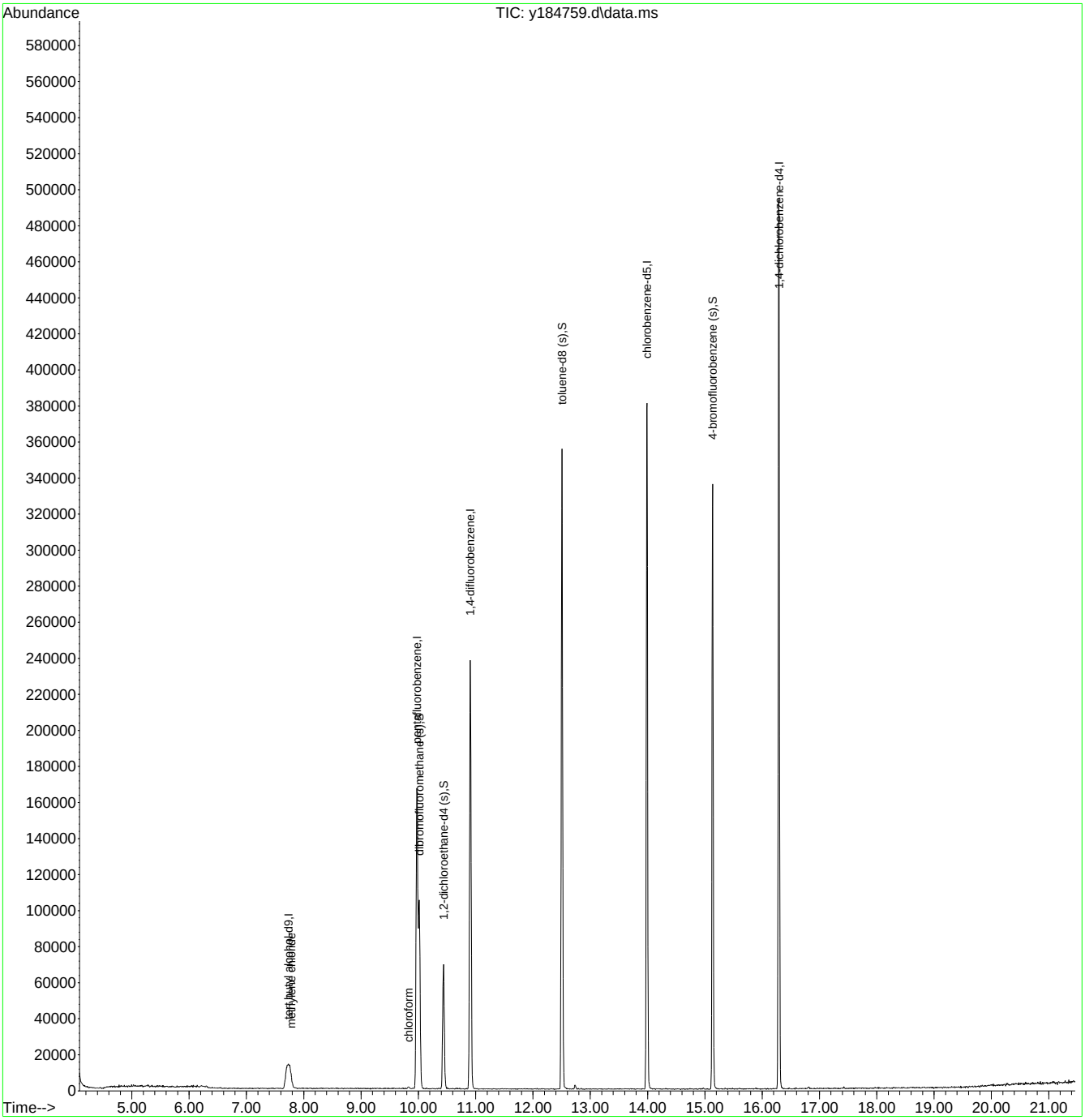
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.730	65	45740	500.00	ug/L	-0.01
5) pentafluorobenzene	9.974	168	136947	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	209595	50.00	ug/L	0.00
74) chlorobenzene-d5	13.991	117	204844	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.292	152	121625	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	65992	53.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.24%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	51415	43.91	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 87.82%			
75) toluene-d8 (s)	12.506	98	229889	44.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.70%			
98) 4-bromofluorobenzene (s)	15.137	95	95553	47.38	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.76%			
Target Compounds						Qvalue
24) methylene chloride	7.778	84	1417	0.78	ug/L	90
42) chloroform	9.828	83	892	0.32	ug/L	73

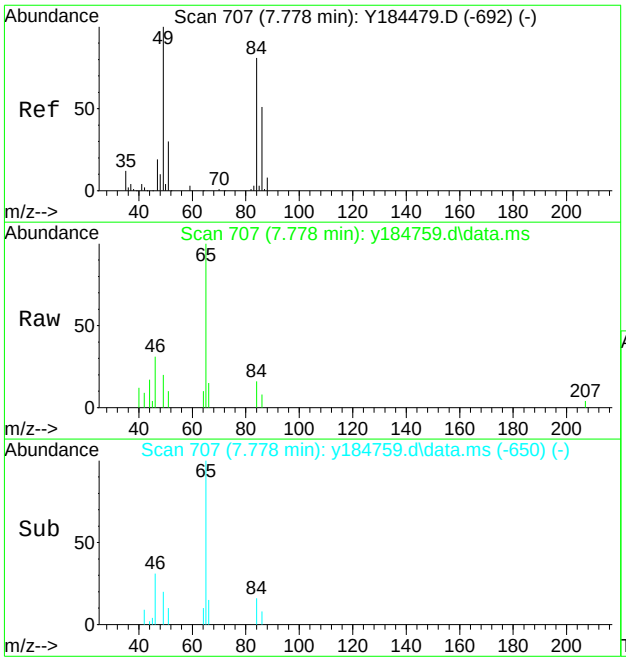
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184759.d
Acq On : 26 Apr 2019 10:23 am
Operator : EddieH
Sample : mb Inst : MSY
Misc : MS34202,VY8016,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:19:42 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

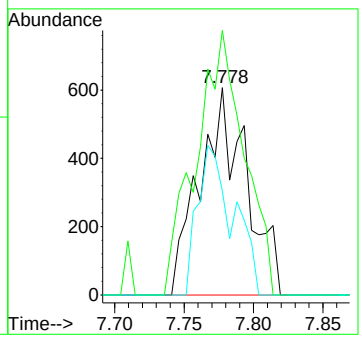


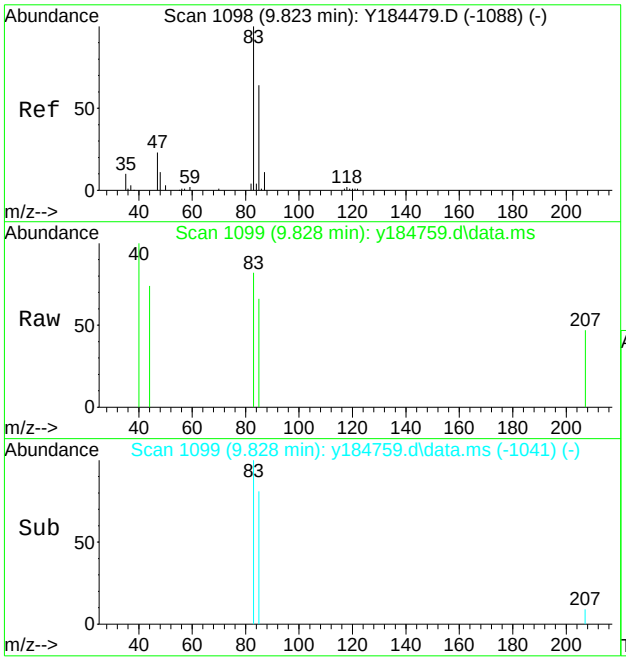


#24
methylene chloride
Concen: 0.78 ug/L
RT: 7.778 min Scan# 707
Delta R.T. -0.000 min
Lab File: y184759.d
Acq: 26 Apr 2019 10:23 am

Tgt Ion: 84 Resp: 1417

Ion	Ratio	Lower	Upper
84	100		
49	127.7	104.2	164.2
86	50.1	35.3	95.3

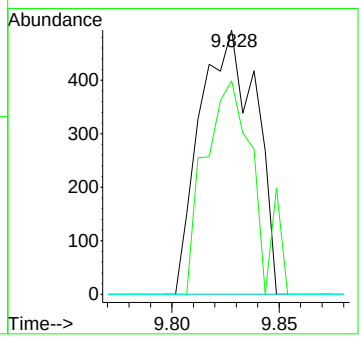




#42
chloroform
Concen: 0.32 ug/L
RT: 9.828 min Scan# 1099
Delta R.T. 0.005 min
Lab File: y184759.d
Acq: 26 Apr 2019 10:23 am

Tgt Ion: 83 Resp: 892

Ion	Ratio	Lower	Upper
83	100		
85	80.8	35.9	95.9
47	0.0	0.0	54.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264110.d
Acq On : 29 Apr 2019 12:19 pm
Operator : thienn
Sample : mb2 Inst : MSD
Misc : ms34135,vd10644,5,,100,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:46:25 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration

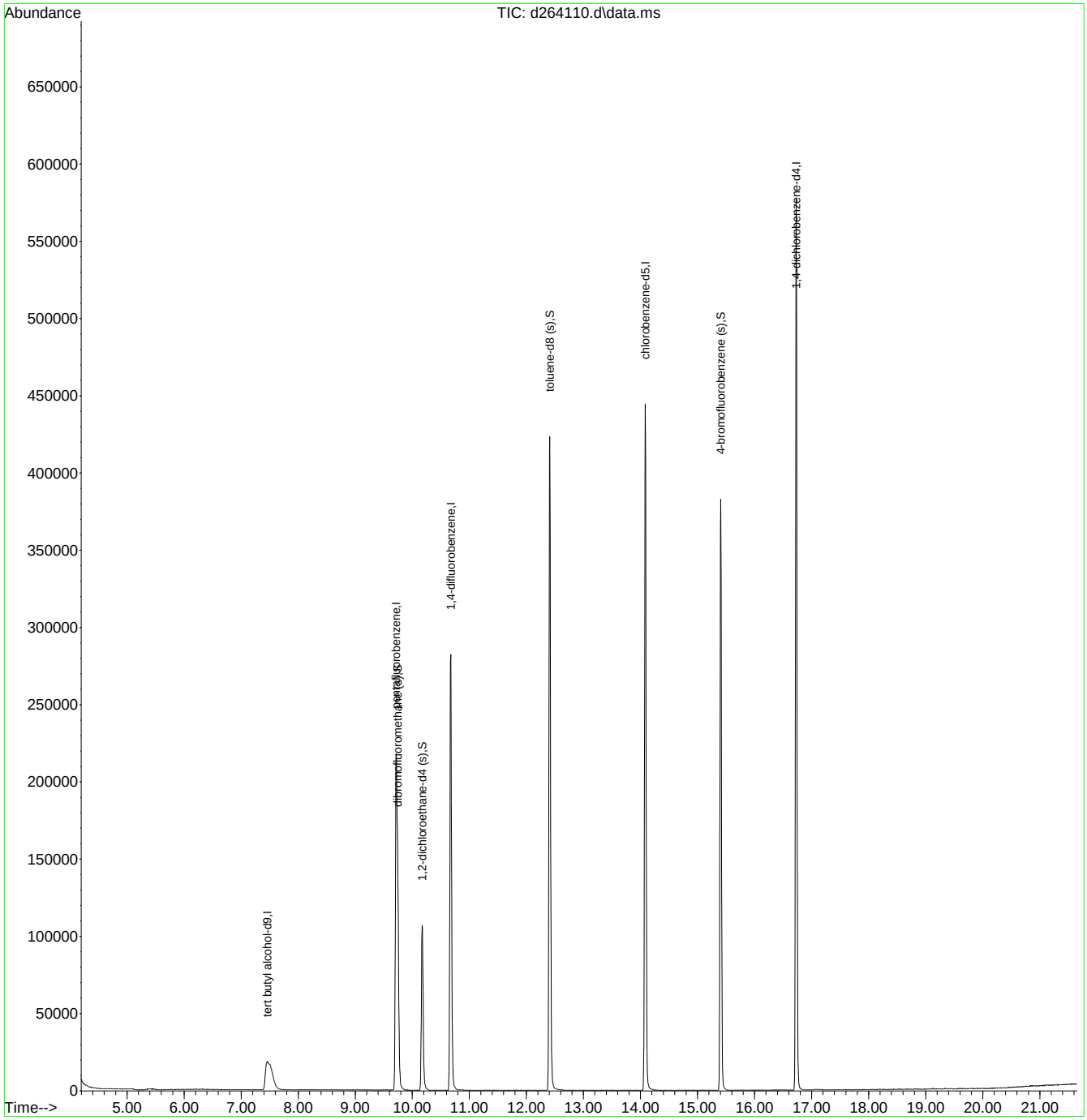
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.458	65	89663	500.00	ug/L	-0.01
5) pentafluorobenzene	9.717	168	165997	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	258404	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	274809	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	165199	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.743	113	79573	50.81	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.62%			
55) 1,2-dichloroethane-d4 (s)	10.172	65	83553	43.13	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.26%			
76) toluene-d8 (s)	12.411	98	313281	46.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.50%			
100) 4-bromofluorobenzene (s)	15.407	95	143619	46.92	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.84%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264110.d
Acq On : 29 Apr 2019 12:19 pm
Operator : thienn
Sample : mb2 Inst : MSD
Misc : ms34135,vd10644,5,,100,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:46:25 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44285.d
Acq On : 24 Apr 2019 12:53 pm
Operator : roberts
Sample : BS Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:57:53 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.290	65	133471	500.00	ug/L		-0.01
5) pentafluorobenzene	9.828	168	244154	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	334909	50.00	ug/L		0.00
74) chlorobenzene-d5	14.012	117	304631	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	177318	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	133275	51.92	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.84%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	122626	51.70	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.40%				
75) toluene-d8 (s)	12.465	98	387196	51.14	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.28%				
98) 4-bromofluorobenzene (s)	15.218	95	159340	50.90	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.80%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.442	59	96618	221.10	ug/L		98
4) 1,4-dioxane	11.474	88	38615	1195.84	ug/L		95
6) chlorodifluoromethane	3.683	51	328253	47.25	ug/L		99
7) dichlorodifluoromethane	3.667	85	410836	51.27	ug/L		99
8) chloromethane	4.024	50	372049	40.14	ug/L		99
9) vinyl chloride	4.265	62	333243	46.80	ug/L		99
10) 1,3-butadiene	4.302	54	178731	52.37	ug/L		99
11) bromomethane	4.905	96	225740	42.35	ug/L	#	98
12) chloroethane	5.099	64	152685	45.94	ug/L		99
13) trichlorofluoromethane	5.602	101	327305	47.96	ug/L		99
14) vinyl bromide	5.466	106	143540	45.88	ug/L		98
15) ethyl ether	6.032	74	65444	48.66	ug/L		95
16) 2-chloropropane	6.252	43	257924	47.80	ug/L		99
17) acrolein	6.273	56	24503	61.91	ug/L		90
18) freon 113	6.520	151	140546	49.60	ug/L		97
19) 1,1-dichloroethene	6.478	96	143743	45.78	ug/L		96
20) acetone	6.499	58	41775	205.37	ug/L		95
21) acetonitrile	6.971	41	200496	495.93	ug/L		99
22) iodomethane	6.745	142	283145	45.38	ug/L		99
23) carbon disulfide	6.892	76	573721	47.09	ug/L		99
24) methylene chloride	7.290	84	196181	44.97	ug/L		98
25) methyl acetate	7.028	43	81298	48.53	ug/L		99
26) methyl tert butyl ether	7.731	73	470082	46.42	ug/L		98
27) trans-1,2-dichloroethene	7.731	96	150618	45.11	ug/L		95
28) hexane	8.161	57	182579	51.37	ug/L		98
29) di-isopropyl ether	8.423	45	549729	48.03	ug/L		99
30) ethyl tert-butyl ether	8.937	59	527534	48.06	ug/L		98
31) 2-butanone	9.136	72	43966	197.38	ug/L		95
32) 1,1-dichloroethane	8.391	63	278316	47.20	ug/L		98
33) chloroprene	8.507	53	181315	51.55	ug/L		98
34) acrylonitrile	7.626	52	33872	49.88	ug/L		98
35) vinyl acetate	8.355	86	17575	48.69	ug/L	#	92
36) ethyl acetate	9.173	45	14497	48.65	ug/L	#	3
37) 2,2-dichloropropane	9.236	77	261712	43.45	ug/L		99
38) cis-1,2-dichloroethene	9.199	96	157814	45.79	ug/L		98
39) propionitrile	9.215	54	149426	504.58	ug/L		99
40) methyl acrylate	9.257	85	14171	49.92	ug/L	#	83
41) bromochloromethane	9.519	128	76729	47.88	ug/L		98
42) tetrahydrofuran	9.545	72	12080	52.08	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44285.d
Acq On : 24 Apr 2019 12:53 pm
Operator : roberts
Sample : BS Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:57:53 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.629	83	267722	45.06	ug/L	99
45) methacrylonitrile	9.435	67	37323	48.37	ug/L	97
46) 1,1,1-trichloroethane	9.896	97	274837	45.69	ug/L	100
47) cyclohexane	10.012	84	250451	56.95	ug/L	90
48) 1,1-dichloropropene	10.080	75	161000	48.08	ug/L	99
49) carbon tetrachloride	10.106	117	228631	45.31	ug/L	99
50) isobutyl alcohol	10.106	43	53579	491.18	ug/L	95
51) tert-amyl alcohol	10.268	55	33281	246.17	ug/L	98
54) iso-octane	10.468	57	597860	56.29	ug/L	99
55) benzene	10.337	78	494436	46.60	ug/L	99
56) tert-amyl methyl ether	10.462	73	450821	48.03	ug/L	99
57) heptane	10.651	57	88217	53.79	ug/L	97
58) isopropyl acetate	10.300	87	21598	48.71	ug/L	96
59) 1,2-dichloroethane	10.373	62	172514	44.79	ug/L	100
60) n-butyl alcohol	10.903	56	172656	2624.58	ug/L	99
61) ethyl acrylate	11.134	55	112764	47.52	ug/L	99
62) trichloroethene	11.118	95	119069	45.41	ug/L	99
63) 2-nitropropane	11.899	41	18898	43.84	ug/L	95
64) 2-chloroethyl vinyl ether	11.951	63	303848	255.04	ug/L	98
65) methyl methacrylate	11.406	100	22381	48.57	ug/L	98
66) 1,2-dichloropropane	11.411	63	134366	45.26	ug/L	99
67) methylcyclohexane	11.422	83	241901	54.61	ug/L	99
68) dibromomethane	11.516	93	79503	45.59	ug/L	98
69) bromodichloromethane	11.689	83	180028	44.92	ug/L	99
70) epichlorohydrin	12.025	57	44293	237.20	ug/L	99
71) cis-1,3-dichloropropene	12.156	75	187381	45.69	ug/L	99
72) 4-methyl-2-pentanone	12.277	58	161707	200.86	ug/L	100
73) 3-methyl-1-butanol	12.303	70	63461	1076.13	ug/L	100
76) toluene	12.539	92	265392	45.73	ug/L	98
77) ethyl methacrylate	12.748	69	122864	51.14	ug/L	96
78) trans-1,3-dichloropropene	12.738	75	159585	47.23	ug/L	99
79) 1,1,2-trichloroethane	12.958	83	86151	46.33	ug/L	99
80) tetrachloroethene	13.105	166	115415	47.10	ug/L	98
81) 2-hexanone	13.142	58	139437	208.40	ug/L	98
82) 1,3-dichloropropane	13.142	76	156698	45.65	ug/L	100
83) butyl acetate	13.236	56	64706	48.30	ug/L	96
84) dibromochloromethane	13.388	129	124225	45.90	ug/L	100
85) 1,2-dibromoethane	13.535	107	133478	46.03	ug/L	98
86) n-butyl ether	14.033	57	494167	49.21	ug/L	100
87) chlorobenzene	14.043	112	318299	44.41	ug/L	99
88) 1,1,1,2-tetrachloroethane	14.112	131	144203	48.21	ug/L	98
89) ethylbenzene	14.112	91	536239	47.06	ug/L	98
90) m,p-xylene	14.243	106	399715	96.01	ug/L	99
91) o-xylene	14.657	106	219620	49.89	ug/L	96
92) styrene	14.667	104	341857	49.00	ug/L	99
93) bromoform	14.893	173	82115	45.49	ug/L	100
94) butyl acrylate	14.500	55	209004	49.97	ug/L	99
95) isopropylbenzene	15.019	105	563445	50.99	ug/L	99
96) cis-1,4-dichloro-2-butene	15.055	88	45010	46.09	ug/L	97
99) bromobenzene	15.396	156	149515	45.54	ug/L	96
100) 1,1,2,2-tetrachloroethane	15.307	83	153004	46.60	ug/L	98
101) trans-1,4-dichloro-2-b...	15.338	53	30393	46.35	ug/L	99
102) 1,2,3-trichloropropane	15.391	110	35987	45.94	ug/L	99
103) n-propylbenzene	15.443	91	665677	49.42	ug/L	100
104) 2-chlorotoluene	15.569	126	142887	49.05	ug/L	100
105) 4-chlorotoluene	15.685	91	402551	46.65	ug/L	99
106) 1,3,5-trimethylbenzene	15.606	105	504095	51.58	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44285.d
Acq On : 24 Apr 2019 12:53 pm
Operator : roberts
Sample : BS Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:57:53 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

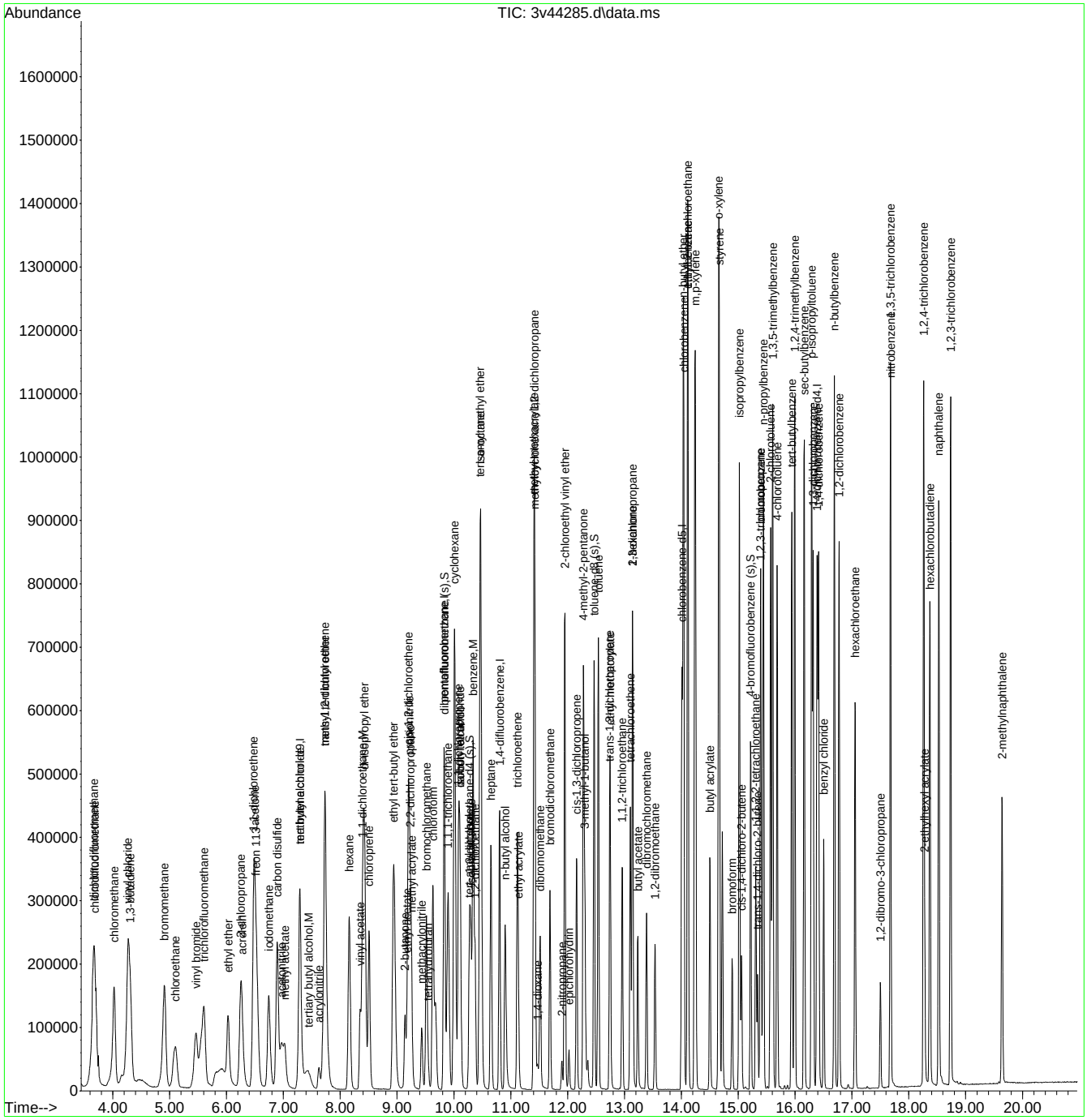
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.941	119	373978	50.65	ug/L	100
108) 1,2,4-trimethylbenzene	15.994	105	516892	50.03	ug/L	99
109) sec-butylbenzene	16.162	105	627389	52.75	ug/L	98
110) 1,3-dichlorobenzene	16.319	146	289593	44.34	ug/L	100
111) p-isopropyltoluene	16.293	119	528995	52.74	ug/L	100
112) 1,4-dichlorobenzene	16.413	146	286531	42.98	ug/L	98
113) 1,2-dichlorobenzene	16.775	146	303714	45.08	ug/L	98
114) n-butylbenzene	16.691	92	287274	50.67	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.504	157	38152	47.47	ug/L	98
116) 1,3,5-trichlorobenzene	17.677	180	301390	45.81	ug/L	99
117) 2-ethylhexyl acrylate	18.280	70	35858	8.19	ug/L	99
118) nitrobenzene	17.682	77	8447	46.24	ug/L	91
119) 1,2,4-trichlorobenzene	18.264	180	291382	47.79	ug/L	99
120) hexachlorobutadiene	18.374	225	139980	47.18	ug/L	99
121) naphthalene	18.526	128	615701	50.93	ug/L	99
122) 1,2,3-trichlorobenzene	18.736	180	303036	47.94	ug/L	99
123) hexachloroethane	17.053	119	105115	49.21	ug/L	98
124) benzyl chloride	16.502	91	234927	46.35	ug/L	99
125) 2-methylnaphthalene	19.643	142	205202	22.87	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44285.d
Acq On : 24 Apr 2019 12:53 pm
Operator : roberts
Sample : BS Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:57:53 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225702.d
Acq On : 25 Apr 2019 8:42 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:35:14 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	51601	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	137690	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	182562	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.765	117	153287	50.00	ug/L	-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	92206	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	54040	49.95	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.90%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	60461	53.06	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.12%			
74) toluene-d8 (s)	12.259	98	190521	48.48	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.96%			
97) 4-bromofluorobenzene (s)	14.932	95	70584	50.20	ug/L	-0.02
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.40%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.468	59	28364	265.58	ug/L	92
3) 1,4-dioxane	11.281	88	15902	1328.53	ug/L	99
5) dichlorodifluoromethane	3.885	85	70036	58.22	ug/L	97
6) chlorodifluoromethane	3.917	51	63191	55.64	ug/L	95
7) chloromethane	4.278	50	55806	50.10	ug/L	98
8) vinyl chloride	4.518	62	54087	57.66	ug/L	98
9) 1,3-butadiene	4.607	54	36606	55.87	ug/L	95
10) bromomethane	5.177	94	35600	56.96	ug/L	97
11) chloroethane	5.381	64	30360	53.51	ug/L	96
12) vinyl bromide	5.726	106	31364	43.26	ug/L	96
13) trichlorofluoromethane	5.852	101	82589	57.53	ug/L	99
14) ethyl ether	6.297	74	19635	48.28	ug/L	89
15) 2-chloropropane	6.495	63	16879	50.92	ug/L	94
16) acrolein	6.495	56	5476	41.32	ug/L	98
17) freon 113	6.710	151	39220	55.76	ug/L	97
18) 1,1-dichloroethene	6.710	61	65588	51.18	ug/L	96
19) acetone	6.689	43	54584	235.28	ug/L	96
20) iodomethane	6.956	142	45486	48.23	ug/L	96
21) carbon disulfide	7.112	76	125740	45.55	ug/L	100
22) acetonitrile	7.086	41	58803	507.55	ug/L	96
23) methyl acetate	7.180	74	6308	46.53	ug/L	100
24) methylene chloride	7.421	84	43844	46.20	ug/L	99
25) acrylonitrile	7.698	53	13158	48.22	ug/L	97
26) methyl tert butyl ether	7.803	73	112938	50.21	ug/L	97
27) trans-1,2-dichloroethene	7.839	61	60662	49.65	ug/L	96
28) hexane	8.227	57	62947	42.73	ug/L	97
29) 1,1-dichloroethane	8.410	63	76304	48.92	ug/L	97
30) vinyl acetate	8.357	86	7852	52.87	ug/L	99
31) di-isopropyl ether	8.425	45	124030	44.86	ug/L	98
32) chloroprene	8.525	53	71247	54.14	ug/L	97
33) ethyl tert-butyl ether	8.891	59	127265	47.69	ug/L	98
34) 2-butanone	9.058	72	19940	229.31	ug/L #	81
35) 2,2-dichloropropane	9.163	77	76680	56.70	ug/L	99
36) ethyl acetate	9.100	45	5619	43.70	ug/L #	83
37) cis-1,2-dichloroethene	9.131	96	47750	47.52	ug/L	97
38) propionitrile	9.105	54	68425	536.51	ug/L	97
39) methyl acrylate	9.173	85	6570	49.39	ug/L	96
40) methacrylonitrile	9.320	67	16243	50.45	ug/L	90
41) bromochloromethane	9.435	128	23406	51.79	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225702.d
Acq On : 25 Apr 2019 8:42 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:35:14 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.466	71	5406	53.95	ug/L		97
43) chloroform	9.524	83	83353	51.65	ug/L		99
44) carbon tetrachloride	10.005	117	72643	55.11	ug/L		97
45) 1,1-dichloropropene	9.973	75	62335	51.31	ug/L		97
48) 1,1,1-trichloroethane	9.790	97	78310	54.37	ug/L		99
49) cyclohexane	9.921	84	65543	51.68	ug/L		92
50) tert-amyl alcohol	10.073	55	10837	296.45	ug/L	#	82
53) isopropyl acetate	10.125	87	8639	52.23	ug/L	#	93
54) 1,2-dichloroethane	10.224	62	63483	52.93	ug/L		97
55) benzene	10.214	78	172889	48.47	ug/L		99
56) 2,2,4-trimethylpentane	10.334	57	159312	43.63	ug/L		95
57) tert-amyl methyl ether	10.308	87	30093	49.43	ug/L	#	91
58) heptane	10.502	57	32241	42.30	ug/L		97
59) n-butyl alcohol	10.659	56	82401	2765.48	ug/L		95
60) trichloroethene	10.951	95	48603	50.87	ug/L		97
61) ethyl acrylate	10.931	55	47570	47.10	ug/L		98
62) methylcyclohexane	11.265	83	73808	45.61	ug/L		98
63) 1,2-dichloropropane	11.223	63	40670	44.54	ug/L		88
64) methyl methacrylate	11.197	100	11105	51.69	ug/L	#	92
65) dibromomethane	11.328	93	27108	50.96	ug/L		100
66) bromodichloromethane	11.485	83	64882	51.29	ug/L		98
67) 2-nitropropane	11.658	41	12969	59.22	ug/L		92
68) 2-chloroethyl vinyl ether	11.726	63	131071	245.35	ug/L		98
69) epichlorohydrin	11.794	57	23717	265.80	ug/L		96
70) cis-1,3-dichloropropene	11.945	75	70092	49.08	ug/L		94
71) 4-methyl-2-pentanone	12.034	58	59419	209.16	ug/L		97
72) 3-methyl-1-butanol	12.034	70	26940	1091.71	ug/L		92
75) toluene	12.337	92	104950	49.47	ug/L		98
76) trans-1,3-dichloropropene	12.505	75	66028	51.72	ug/L		96
77) ethyl methacrylate	12.510	69	44007	45.73	ug/L		98
78) 1,1,2-trichloroethane	12.725	83	29346	47.15	ug/L		96
79) 1,3-dichloropropane	12.902	76	55806	49.26	ug/L		97
80) tetrachloroethene	12.897	166	55869	52.45	ug/L		98
81) 2-hexanone	12.887	58	55016	197.80	ug/L		90
82) butyl acetate	12.981	56	22084	45.63	ug/L		85
83) n-butyl ether	13.771	57	132656	37.86	ug/L		94
84) dibromochloromethane	13.153	129	49233	50.62	ug/L		97
85) 1,2-dibromoethane	13.310	107	51296	60.58	ug/L		99
86) chlorobenzene	13.797	112	112622	49.82	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.859	131	45419	50.61	ug/L		100
88) ethylbenzene	13.865	91	191313	48.40	ug/L		97
89) m,p-xylene	13.985	106	149781	96.36	ug/L		96
90) o-xylene	14.383	106	73025	47.19	ug/L		95
91) styrene	14.393	104	124182	47.78	ug/L		98
92) butyl acrylate	14.210	55	66405	44.79	ug/L		99
93) cis-1,4-dichloro-2-butene	14.749	88	22067	57.93	ug/L		91
94) bromoform	14.613	173	36674	53.69	ug/L		98
95) isopropylbenzene	14.733	105	191158	49.07	ug/L		98
98) 1,1,2,2-tetrachloroethane	14.989	83	46506	48.77	ug/L		98
99) trans-1,4-dichloro-2-b...	15.026	53	13550	54.52	ug/L		92
100) 1,2,3-trichloropropane	15.078	110	13571	55.25	ug/L		95
101) bromobenzene	15.110	156	56220	49.39	ug/L		98
102) n-propylbenzene	15.151	91	223071	47.20	ug/L		97
103) 2-chlorotoluene	15.277	126	47771	48.12	ug/L		96
104) 4-chlorotoluene	15.387	91	140132	49.60	ug/L		99
105) 1,3,5-trimethylbenzene	15.308	105	169554	47.68	ug/L		98
106) tert-butylbenzene	15.648	134	30098	45.68	ug/L	#	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225702.d
Acq On : 25 Apr 2019 8:42 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:35:14 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

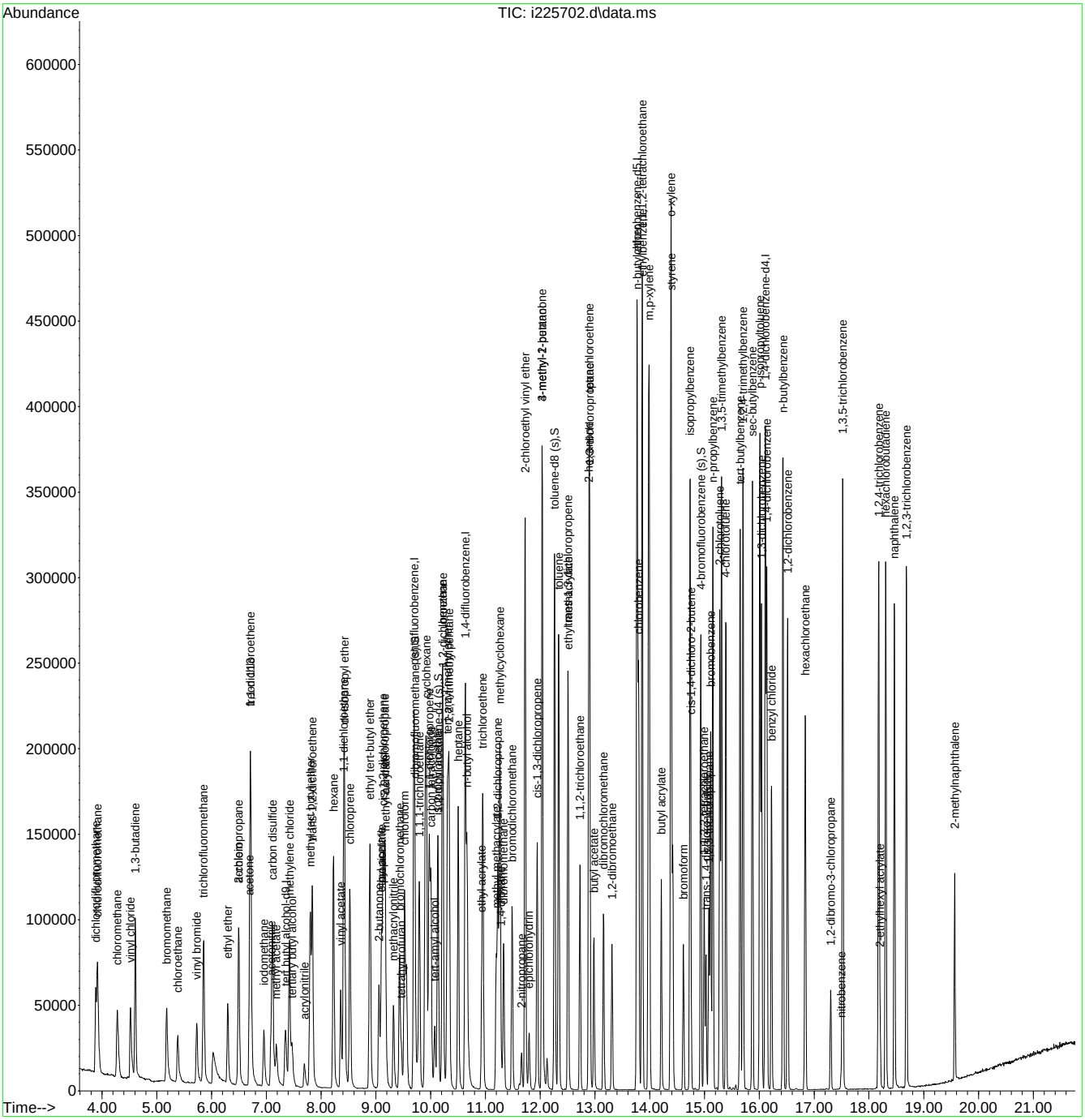
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.701	105	172590	47.37	ug/L	97
108) sec-butylbenzene	15.873	105	213432	46.57	ug/L	98
109) p-isopropyltoluene	16.009	119	193588	48.67	ug/l	98
110) benzyl chloride	16.224	91	111617	50.02	ug/L	98
111) 1,3-dichlorobenzene	16.040	146	108635	50.01	ug/L	100
112) 1,4-dichlorobenzene	16.135	146	109177	49.21	ug/L	98
113) 1,2-dichlorobenzene	16.516	146	105656	49.70	ug/L	98
114) n-butylbenzene	16.433	92	101964	49.28	ug/L	97
115) hexachloroethane	16.841	201	41746	52.63	ug/L	89
116) 1,2-dibromo-3-chloropr...	17.301	157	15231	51.50	ug/L	93
117) nitrobenzene	17.494	77	5634	55.45	ug/L	85
118) 1,3,5-trichlorobenzene	17.521	180	109685	50.79	ug/L	99
119) 1,2,4-trichlorobenzene	18.180	180	97427	50.15	ug/L	97
120) 2-ethylhexyl acrylate	18.201	55	14552	9.19	ug/L	93
121) hexachlorobutadiene	18.305	225	65929	51.56	ug/L	97
122) naphthalene	18.462	128	202465	53.91	ug/L	100
123) 1,2,3-trichlorobenzene	18.687	180	91418	47.83	ug/L	99
124) 2-methylnaphthalene	19.566	142	49454	36.93	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225702.d
Acq On : 25 Apr 2019 8:42 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34257,VI9093,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:35:14 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264044.d
Acq On : 25 Apr 2019 9:09 am
Operator : thienn
Sample : BS Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:20:02 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.473	65	89343	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	170787	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	264729	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	267169	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	159557	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	80930	50.22	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.44%			
55) 1,2-dichloroethane-d4 (s)	10.182	65	88551	44.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 89.24%			
76) toluene-d8 (s)	12.416	98	315594	48.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.88%			
100) 4-bromofluorobenzene (s)	15.407	95	138660	46.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.80%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.567	59	56823	239.90	ug/L	95
4) 1,4-dioxane	11.349	88	29249	1354.46	ug/L	97
6) chlorodifluoromethane	4.414	51	162787	45.18	ug/L	97
7) dichlorodifluoromethane	4.419	85	173363	34.96	ug/L	98
8) chloromethane	4.696	50	175744	42.33	ug/L	99
9) 1,3-butadiene	4.973	54	115658	50.29	ug/L	94
10) vinyl chloride	4.957	62	190696	45.14	ug/L	99
11) bromomethane	5.528	94	116731	53.65	ug/L	97
12) chloroethane	5.664	64	91726	49.57	ug/L	98
13) trichlorofluoromethane	6.150	101	175221	46.05	ug/L	98
14) vinyl bromide	6.019	106	87968	45.33	ug/L	97
15) ethyl ether	6.469	74	53286	56.59	ug/L	95
16) 2-chloropropane	6.673	43	191221	47.08	ug/L	95
17) acrolein	6.652	56	21626	69.19	ug/L	98
18) freon 113	6.924	151	104870	46.96	ug/L	97
19) 1,1-dichloroethene	6.887	96	107511	51.05	ug/L	95
20) acetone	6.835	58	32171	243.02	ug/L #	83
21) acetonitrile	7.206	41	151878	543.81	ug/L	99
22) iodomethane	7.133	142	163861	49.47	ug/L	96
23) carbon disulfide	7.295	76	368648	53.69	ug/L	99
24) methylene chloride	7.536	84	115787	52.32	ug/L	100
25) methyl acetate	7.290	43	63055	53.80	ug/L	97
26) methyl tert butyl ether	7.907	73	310082	48.46	ug/L	96
27) trans-1,2-dichloroethene	7.939	96	99442	51.50	ug/L	94
28) hexane	8.305	56	66249	53.31	ug/L	97
29) di-isopropyl ether	8.493	45	363037	49.62	ug/L	98
30) 2-butanone	9.095	72	35666	227.91	ug/L	92
31) 1,1-dichloroethane	8.483	63	171032	49.75	ug/L	99
32) chloroprene	8.598	53	144348	47.02	ug/L	95
33) acrylonitrile	7.766	53	31015	57.52	ug/L	92
34) vinyl acetate	8.409	86	18953	50.29	ug/L	95
35) ethyl tert-butyl ether	8.953	59	354109	49.06	ug/L	99
36) ethyl acetate	9.131	45	12453	56.51	ug/L	96
37) 2,2-dichloropropane	9.241	77	168162	45.60	ug/L	94
38) cis-1,2-dichloroethene	9.189	96	107044	50.66	ug/L	99
39) propionitrile	9.136	54	133304	566.54	ug/L	99
40) methyl acrylate	9.220	85	11462	49.50	ug/L #	93
41) methacrylonitrile	9.356	67	33000	53.53	ug/L	96
42) bromochloromethane	9.482	128	49033	51.43	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264044.d
Acq On : 25 Apr 2019 9:09 am
Operator : thienn
Sample : BS Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:20:02 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.518	42	23334	50.85	ug/L		96
44) chloroform	9.560	83	160896	46.33	ug/L		96
45) tert-butyl formate	9.612	59	92954	47.47	ug/L		95
47) 1,1,1-trichloroethane	9.863	97	163546	45.91	ug/L		97
48) cyclohexane	10.010	84	200945	56.09	ug/L		96
50) 1,1-dichloropropene	10.031	75	122448	46.54	ug/L		97
51) carbon tetrachloride	10.078	117	137487	45.21	ug/L		99
52) tert-amyl alcohol	10.114	73	26875	249.32	ug/L		94
53) isopropyl acetate	10.156	87	20130	49.29	ug/L		92
56) n-butyl alcohol	10.684	56	154585	2417.62	ug/L		95
57) 2,2,4-trimethylpentane	10.412	57	343448	52.33	ug/L		96
58) benzene	10.277	78	387683	48.23	ug/L		98
59) tert-amyl methyl ether	10.365	73	335180	45.70	ug/L		99
60) heptane	10.559	57	54235	50.50	ug/L		94
61) 1,2-dichloroethane	10.271	62	113653	40.21	ug/L		96
62) ethyl acrylate	10.977	55	94684	45.78	ug/L		99
63) trichloroethene	11.019	95	90677	45.41	ug/L		97
64) 2-chloroethyl vinyl ether	11.814	63	271676	259.48	ug/L		98
65) methyl methacrylate	11.260	100	21327	47.17	ug/L	#	87
66) methylcyclohexane	11.359	83	171387	50.30	ug/L		98
67) 1,2-dichloropropane	11.296	63	97251	48.74	ug/L		98
68) dibromomethane	11.406	93	54454	47.21	ug/L		99
69) bromodichloromethane	11.563	83	123074	46.01	ug/L		100
70) 2-nitropropane	11.741	41	18144	43.49	ug/L		93
71) epichlorohydrin	11.887	57	49066	254.48	ug/L		99
72) cis-1,3-dichloropropene	12.060	75	152565	47.37	ug/L		93
73) 4-methyl-2-pentanone	12.154	58	141726	203.59	ug/L		93
74) isoamyl alcohol	12.144	70	60246	1104.55	ug/L		97
77) toluene	12.494	92	237173	46.41	ug/L		95
78) ethyl methacrylate	12.672	69	115680	47.79	ug/L		96
79) trans-1,3-dichloropropene	12.667	75	136076	45.83	ug/L		90
80) 1,1,2-trichloroethane	12.907	83	65247	47.88	ug/L		98
81) tetrachloroethene	13.127	164	75507	45.36	ug/L		97
82) 2-hexanone	13.090	58	126075	204.59	ug/L		96
83) 1,3-dichloropropane	13.111	76	137168	46.76	ug/L		94
84) butyl acetate	13.200	56	63832	50.87	ug/L		93
85) dibromochloromethane	13.394	129	91184	47.50	ug/L		98
86) 1,2-dibromoethane	13.571	107	110276	52.06	ug/L		100
87) n-butyl ether	14.100	57	441446	47.40	ug/L		99
88) chlorobenzene	14.126	112	264206	44.64	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.194	131	103078	45.33	ug/L		99
90) ethylbenzene	14.204	91	470981	46.50	ug/L		99
91) m,p-xylene	14.340	106	362869	94.04	ug/L		98
92) o-xylene	14.790	91	396788	46.81	ug/L		99
93) styrene	14.801	104	309480	47.08	ug/L		96
94) butyl acrylate	14.586	55	198076	49.84	ug/L		98
95) n-amyl acetate	14.827	70	81433	48.40	ug/L		96
96) isopropylbenzene	15.193	105	483858	48.91	ug/L		99
97) bromoform	15.046	173	65920	47.65	ug/L		99
98) cis-1,4-dichloro-2-butene	15.193	88	39996	43.55	ug/L		94
101) 1,1,2,2-tetrachloroethane	15.470	83	120475	48.86	ug/L		99
102) trans-1,4-dichloro-2-b...	15.507	53	29970	48.56	ug/L		90
103) 1,2,3-trichloropropane	15.569	110	33646	47.34	ug/L		98
104) bromobenzene	15.616	156	127585	45.62	ug/L		98
105) n-propylbenzene	15.664	91	555627	50.28	ug/L		99
106) 2-chlorotoluene	15.810	126	117827	47.58	ug/L		98
107) 4-chlorotoluene	15.930	91	351889	48.24	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264044.d
Acq On : 25 Apr 2019 9:09 am
Operator : thienn
Sample : BS Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:20:02 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

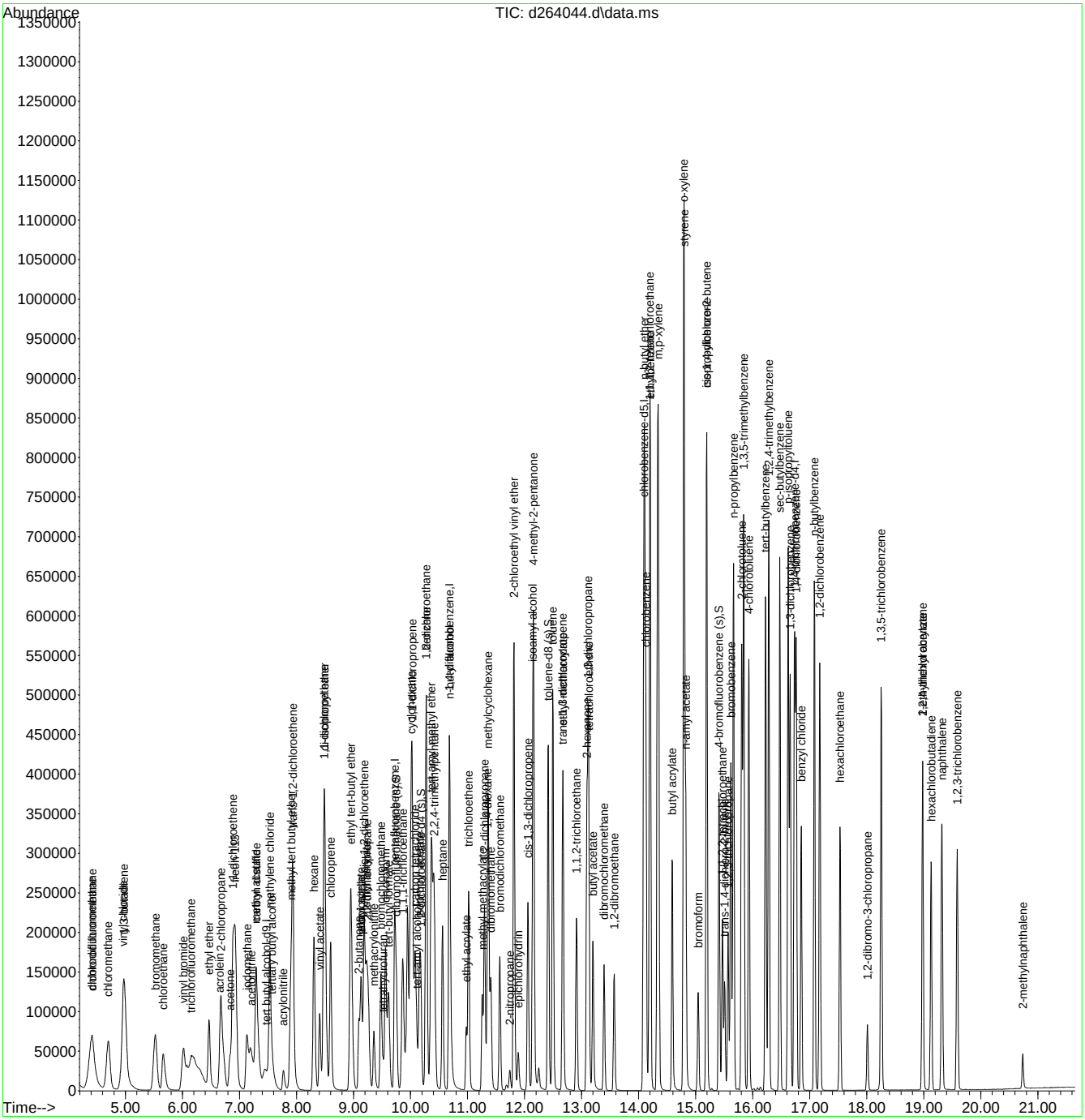
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.841	105	420177	49.76	ug/L	99
109) tert-butylbenzene	16.223	119	324843	49.59	ug/L	97
110) 1,2,4-trimethylbenzene	16.281	105	426031	50.60	ug/L	99
111) sec-butylbenzene	16.474	105	492934	51.09	ug/L	98
112) p-isopropyltoluene	16.621	119	420124	52.31	ug/L	97
113) 1,3-dichlorobenzene	16.657	146	238066	48.73	ug/L	99
114) 1,4-dichlorobenzene	16.762	146	243799	48.12	ug/L	100
115) 1,2-dichlorobenzene	17.175	146	243649	49.77	ug/L	100
116) benzyl chloride	16.851	91	261960	55.09	ug/L	99
117) n-butylbenzene	17.081	92	208349	55.54	ug/L	97
118) 2-ethylhexyl acrylate	18.979	70	6936	8.77	ug/L	94
119) hexachloroethane	17.531	201	67298	53.97	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.012	75	23043	52.14	ug/L	98
121) 1,3,5-trichlorobenzene	18.252	180	179765	54.58	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	143117	47.93	ug/L	99
123) hexachlorobutadiene	19.131	225	72809	48.50	ug/L	96
124) naphthalene	19.319	128	314041	47.28	ug/L	99
125) 1,2,3-trichlorobenzene	19.586	180	117317	44.74	ug/L	99
126) 2-methylnaphthalene	20.737	142	26069	18.29	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264044.d
Acq On : 25 Apr 2019 9:09 am
Operator : thienn
Sample : BS Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:20:02 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264067.d
Acq On : 26 Apr 2019 9:24 am
Operator : juntaep
Sample : bs Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:43:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.463	65	89678	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	171709	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	262554	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	262449	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	158440	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.753	113	79768	49.24	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.48%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	86435	43.92	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 87.84%			
76) toluene-d8 (s)	12.416	98	316317	49.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.86%			
100) 4-bromofluorobenzene (s)	15.407	95	137724	46.91	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.82%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.567	59	65050	273.61	ug/L	96
4) 1,4-dioxane	11.349	88	32539	1501.19	ug/L	95
6) chlorodifluoromethane	4.413	51	176587	48.75	ug/L	97
7) dichlorodifluoromethane	4.408	85	211137	42.35	ug/L	98
8) chloromethane	4.701	50	202171	48.43	ug/L	98
9) 1,3-butadiene	4.978	54	121985	52.76	ug/L	98
10) vinyl chloride	4.952	62	212404	50.01	ug/L	99
11) bromomethane	5.522	94	127957	58.50	ug/L	96
12) chloroethane	5.663	64	99434	53.44	ug/L	97
13) trichlorofluoromethane	6.145	101	184770	48.30	ug/L	99
14) vinyl bromide	6.014	106	94889	48.63	ug/L	96
15) ethyl ether	6.464	74	60359	63.75	ug/L	97
16) 2-chloropropane	6.673	43	212686	52.08	ug/L	95
17) acrolein	6.652	56	24350	77.48	ug/L	94
18) freon 113	6.929	151	117888	52.50	ug/L	100
19) 1,1-dichloroethene	6.887	96	118776	56.10	ug/L	93
20) acetone	6.830	58	36268	272.49	ug/L #	82
21) acetonitrile	7.201	41	170169	606.03	ug/L	99
22) iodomethane	7.128	142	188130	56.49	ug/L	99
23) carbon disulfide	7.295	76	408797	59.22	ug/L	100
24) methylene chloride	7.531	84	131596	59.14	ug/L	98
25) methyl acetate	7.290	43	70807	60.09	ug/L	96
26) methyl tert butyl ether	7.907	73	362330	56.33	ug/L	96
27) trans-1,2-dichloroethene	7.933	96	112443	57.92	ug/L	95
28) hexane	8.310	56	72634	58.13	ug/L	97
29) di-isopropyl ether	8.498	45	416500	56.62	ug/L	98
30) 2-butanone	9.094	72	38670	245.78	ug/L #	87
31) 1,1-dichloroethane	8.482	63	193806	56.07	ug/L	99
32) chloroprene	8.598	53	161279	52.25	ug/L	94
33) acrylonitrile	7.771	53	34868	64.32	ug/L	97
34) vinyl acetate	8.409	86	21740	57.38	ug/L	95
35) ethyl tert-butyl ether	8.953	59	409749	56.46	ug/L	99
36) ethyl acetate	9.131	45	14589	65.85	ug/L #	85
37) 2,2-dichloropropane	9.246	77	193293	52.14	ug/L	94
38) cis-1,2-dichloroethene	9.189	96	122370	57.60	ug/L	96
39) propionitrile	9.136	54	148279	626.81	ug/L	97
40) methyl acrylate	9.215	85	12839	54.96	ug/L #	83
41) methacrylonitrile	9.361	67	37244	60.09	ug/L	90
42) bromochloromethane	9.481	128	55808	58.22	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264067.d
Acq On : 26 Apr 2019 9:24 am
Operator : juntaep
Sample : bs Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:43:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.523	42	26765	58.02	ug/L		100
44) chloroform	9.560	83	182337	52.22	ug/L		96
45) tert-butyl formate	9.612	59	108779	55.25	ug/L		93
47) 1,1,1-trichloroethane	9.863	97	188924	52.75	ug/L		97
48) cyclohexane	10.010	84	204040	56.65	ug/L		95
50) 1,1-dichloropropene	10.031	75	138178	52.23	ug/L		99
51) carbon tetrachloride	10.083	117	158349	51.79	ug/L		96
52) tert-amyl alcohol	10.109	73	31287	288.70	ug/L		95
53) isopropyl acetate	10.156	87	22941	55.87	ug/L	#	89
56) n-butyl alcohol	10.684	56	170946	2695.64	ug/L		96
57) 2,2,4-trimethylpentane	10.412	57	384263	59.03	ug/L		96
58) benzene	10.276	78	440100	55.21	ug/L		98
59) tert-amyl methyl ether	10.365	73	389060	53.49	ug/L		99
60) heptane	10.559	57	60940	57.22	ug/L		97
61) 1,2-dichloroethane	10.271	62	127273	45.40	ug/L		96
62) ethyl acrylate	10.977	55	108864	53.07	ug/L		98
63) trichloroethene	11.019	95	103331	52.17	ug/L		98
64) 2-chloroethyl vinyl ether	11.814	63	307323	295.95	ug/L		100
65) methyl methacrylate	11.260	100	24590	54.84	ug/L	#	84
66) methylcyclohexane	11.359	83	189810	56.17	ug/L		99
67) 1,2-dichloropropane	11.296	63	111164	56.18	ug/L		99
68) dibromomethane	11.406	93	61601	53.85	ug/L		98
69) bromodichloromethane	11.563	83	140432	52.94	ug/L		98
70) 2-nitropropane	11.741	41	20732	50.11	ug/L		94
71) epichlorohydrin	11.887	57	55376	289.59	ug/L		96
72) cis-1,3-dichloropropene	12.060	75	174211	54.53	ug/L		95
73) 4-methyl-2-pentanone	12.154	58	158494	229.56	ug/L		92
74) isoamyl alcohol	12.144	70	68433	1265.05	ug/L		96
77) toluene	12.494	92	268395	53.46	ug/L		98
78) ethyl methacrylate	12.672	69	130830	55.03	ug/L		97
79) trans-1,3-dichloropropene	12.667	75	153564	52.65	ug/L		90
80) 1,1,2-trichloroethane	12.907	83	75134	56.13	ug/L		95
81) tetrachloroethene	13.122	164	86587	52.95	ug/L		98
82) 2-hexanone	13.090	58	142266	235.01	ug/L		96
83) 1,3-dichloropropane	13.111	76	152082	52.77	ug/L		94
84) butyl acetate	13.200	56	72223	58.59	ug/L		92
85) dibromochloromethane	13.394	129	104612	55.48	ug/L		99
86) 1,2-dibromoethane	13.571	107	122683	58.95	ug/L		99
87) n-butyl ether	14.100	57	495577	54.17	ug/L		99
88) chlorobenzene	14.126	112	295143	50.77	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.194	131	118429	53.02	ug/L		99
90) ethylbenzene	14.204	91	531244	53.40	ug/L		99
91) m,p-xylene	14.340	106	410753	108.36	ug/L		98
92) o-xylene	14.790	91	448350	53.84	ug/L		98
93) styrene	14.801	104	347976	53.89	ug/L		94
94) butyl acrylate	14.586	55	226718	58.07	ug/L		99
95) n-amyl acetate	14.827	70	94120	56.95	ug/L		92
96) isopropylbenzene	15.193	105	551386	56.74	ug/L		99
97) bromoform	15.046	173	75443	55.51	ug/L		98
98) cis-1,4-dichloro-2-butene	15.193	88	45747	50.71	ug/L		95
101) 1,1,2,2-tetrachloroethane	15.470	83	135541	55.35	ug/L		99
102) trans-1,4-dichloro-2-b...	15.507	53	33548	54.74	ug/L		91
103) 1,2,3-trichloropropane	15.569	110	38145	54.04	ug/L		94
104) bromobenzene	15.616	156	145152	52.27	ug/L		96
105) n-propylbenzene	15.663	91	627428	57.18	ug/L		99
106) 2-chlorotoluene	15.810	126	134138	54.55	ug/L		97
107) 4-chlorotoluene	15.930	91	398950	55.08	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264067.d
Acq On : 26 Apr 2019 9:24 am
Operator : juntaep
Sample : bs Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:43:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

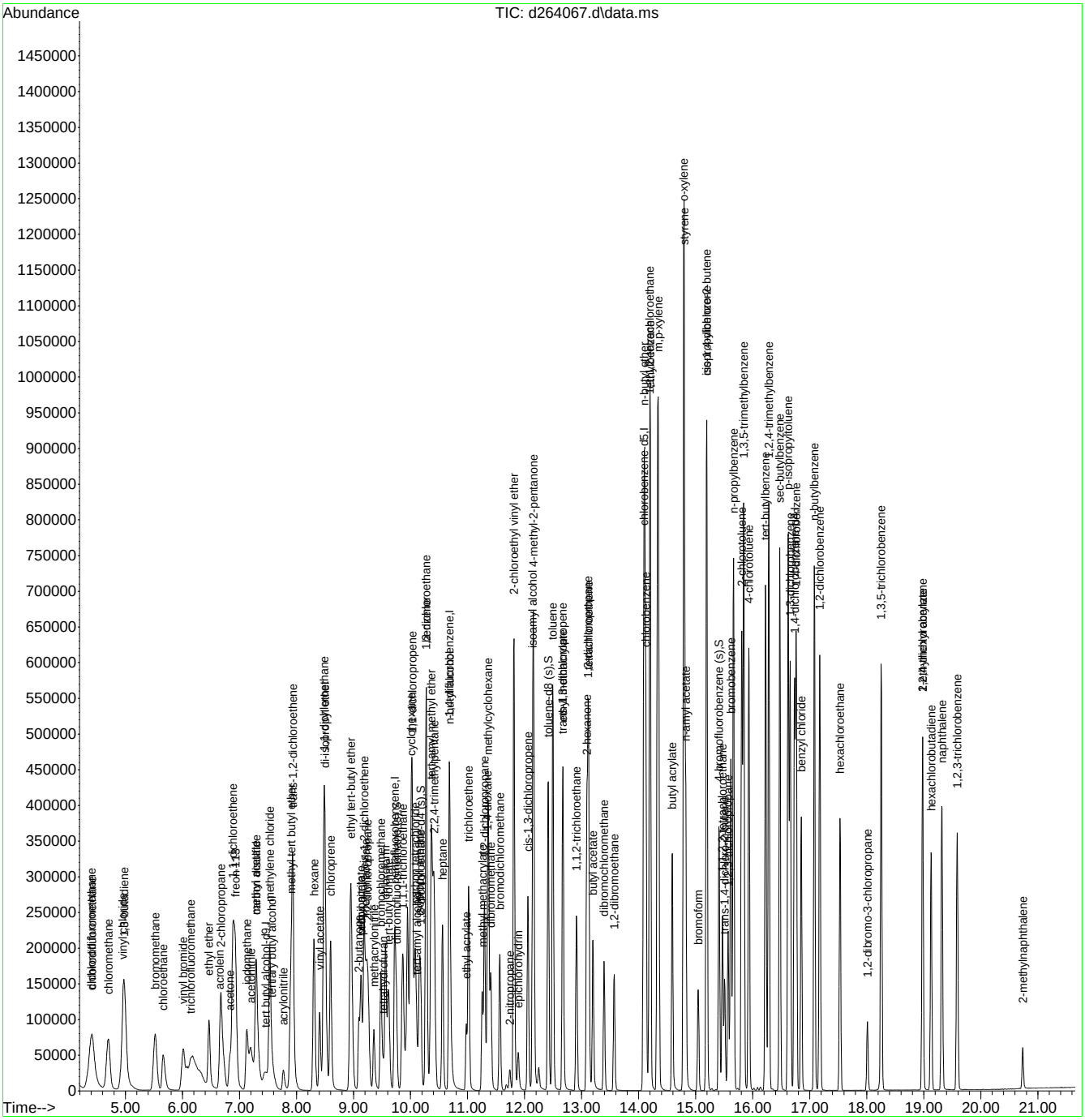
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.841	105	482311	57.52	ug/L	100
109) tert-butylbenzene	16.223	119	374708	57.60	ug/L	98
110) 1,2,4-trimethylbenzene	16.281	105	487349	58.29	ug/L	99
111) sec-butylbenzene	16.474	105	562358	58.69	ug/L	98
112) p-isopropyltoluene	16.621	119	483120	60.58	ug/L	98
113) 1,3-dichlorobenzene	16.657	146	272831	56.24	ug/L	100
114) 1,4-dichlorobenzene	16.762	146	280608	55.77	ug/L	98
115) 1,2-dichlorobenzene	17.175	146	279200	57.43	ug/L	99
116) benzyl chloride	16.851	91	301433	63.84	ug/L	99
117) n-butylbenzene	17.081	92	238980	64.16	ug/L	99
118) 2-ethylhexyl acrylate	18.979	70	9920	12.64	ug/L	91
119) hexachloroethane	17.531	201	78842	63.67	ug/L	97
120) 1,2-dibromo-3-chloropr...	18.012	75	25320	57.70	ug/L	92
121) 1,3,5-trichlorobenzene	18.252	180	211421	64.64	ug/L	100
122) 1,2,4-trichlorobenzene	18.979	180	170634	57.26	ug/L	99
123) hexachlorobutadiene	19.131	225	84813	56.89	ug/L	97
124) naphthalene	19.319	128	372255	56.09	ug/L	98
125) 1,2,3-trichlorobenzene	19.586	180	140731	53.67	ug/L	98
126) 2-methylnaphthalene	20.737	142	34729	24.53	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264067.d
Acq On : 26 Apr 2019 9:24 am
Operator : juntaep
Sample : bs Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:43:50 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184757.d
Acq On : 26 Apr 2019 9:26 am
Operator : EddieH
Sample : bs Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:17:23 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.741	65	52271	500.00	ug/L	0.00
5) pentafluorobenzene	9.974	168	136143	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	206484	50.00	ug/L	0.00
74) chlorobenzene-d5	13.991	117	208695	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.293	152	128355	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	67341	54.53	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 109.06%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	54540	47.28	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.56%			
75) toluene-d8 (s)	12.506	98	230122	43.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.14%			
98) 4-bromofluorobenzene (s)	15.131	95	101635	47.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.50%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.861	59	38071	233.69	ug/L	97
4) 1,4-dioxane	11.544	88	19617	1214.59	ug/L	96
6) chlorodifluoromethane	4.378	51	121506	56.60	ug/L	98
7) dichlorodifluoromethane	4.352	85	143282	53.15	ug/L	96
8) chloromethane	4.744	50	147892	52.11	ug/L	94
9) vinyl chloride	4.995	62	132076	56.58	ug/L	96
10) 1,3-butadiene	5.027	54	84463	58.43	ug/L	96
11) bromomethane	5.628	94	100944	51.07	ug/L	98
12) chloroethane	5.811	64	69640	55.16	ug/L	99
13) vinyl bromide	6.156	106	63869	58.33	ug/L	96
14) trichlorofluoromethane	6.271	101	150079	55.81	ug/L	96
15) ethyl ether	6.627	74	37121	56.34	ug/L	94
16) 2-chloropropane	6.862	63	32790	56.23	ug/L	100
17) acrolein	6.878	56	11282	61.48	ug/L	99
18) freon 113	7.098	151	77501	61.46	ug/L	96
19) 1,1-dichloroethene	7.072	61	118646	56.75	ug/L	95
20) acetone	7.072	43	67454	202.24	ug/L	97
21) acetonitrile	7.490	41	90957	555.74	ug/L	96
22) iodomethane	7.333	142	155165	58.78	ug/L	99
23) carbon disulfide	7.474	76	255789	55.90	ug/L	99
24) methylene chloride	7.783	84	97942	53.90	ug/L	92
25) methyl acetate	7.521	43	41792	54.16	ug/L	99
26) methyl tert butyl ether	8.133	73	238774	56.90	ug/L	97
27) trans-1,2-dichloroethene	8.160	61	111523	53.81	ug/L	98
28) hexane	8.510	57	100716	55.06	ug/L	97
29) di-isopropyl ether	8.724	45	280385	53.68	ug/L	97
30) ethyl tert-butyl ether	9.190	59	267049	56.22	ug/L	96
31) 2-butanone	9.383	72	24519	223.61	ug/L	98
32) 1,1-dichloroethane	8.740	63	139600	53.70	ug/L	97
33) chloroprene	8.834	53	99722	53.54	ug/L	97
34) acrylonitrile	8.065	53	22956	55.08	ug/L	96
35) vinyl acetate	8.662	86	11564	55.83	ug/L #	88
36) ethyl acetate	9.389	45	7755	52.63	ug/L	95
37) 2,2-dichloropropane	9.488	77	127165	56.64	ug/L	95
38) cis-1,2-dichloroethene	9.446	96	92821	54.31	ug/L	94
39) propionitrile	9.462	54	81085	551.32	ug/L	87
40) bromochloromethane	9.744	130	60834	56.79	ug/L	97
41) tetrahydrofuran	9.765	72	7623	58.14	ug/L	90
42) chloroform	9.828	83	145240	52.56	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184757.d
Acq On : 26 Apr 2019 9:26 am
Operator : EddieH
Sample : bs Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:17:23 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.870	59	59878	57.42	ug/L		92
46) methacrylonitrile	9.655	67	22254	56.31	ug/L		91
47) 1,1,1-trichloroethane	10.095	97	137962	57.92	ug/L		99
48) cyclohexane	10.205	84	124563	52.61	ug/L		96
49) 1,1-dichloropropene	10.257	75	95588	56.74	ug/L		98
50) tert-amyl alcohol	10.382	55	13411	277.58	ug/L	#	86
51) carbon tetrachloride	10.288	117	122378	59.02	ug/L		99
54) 2,2,4-trimethylpentane	10.597	57	322190	56.90	ug/L		97
55) tert-amyl methyl ether	10.581	73	253986	54.79	ug/L		98
56) n-butyl alcohol	10.947	41	70398	2749.11	ug/L		97
57) benzene	10.503	78	302019	50.66	ug/L		99
58) heptane	10.749	57	53355	52.45	ug/L		98
59) isopropyl acetate	10.409	87	13168	54.20	ug/L		93
60) 1,2-dichloroethane	10.529	62	95525	49.87	ug/L		98
61) trichloroethene	11.219	130	84290	54.38	ug/L		99
62) ethyl acrylate	11.198	55	65938	51.75	ug/L		96
63) 2-nitropropane	11.957	41	20090	48.44	ug/L		93
64) 2-chloroethyl vinyl ether	11.983	63	189489	268.31	ug/L		98
65) methyl methacrylate	11.455	100	15043	53.61	ug/L	#	76
66) 1,2-dichloropropane	11.507	63	78844	51.92	ug/L		100
67) methylcyclohexane	11.512	83	138356	56.21	ug/L		97
68) dibromomethane	11.606	93	47414	53.52	ug/L		95
69) bromodichloromethane	11.758	83	109343	51.49	ug/L		98
70) epichlorohydrin	12.072	57	27407	255.68	ug/L		98
71) cis-1,3-dichloropropene	12.203	75	119106	51.55	ug/L		100
72) 4-methyl-2-pentanone	12.302	58	86420	207.47	ug/L		95
73) 3-methyl-1-butanol	12.297	70	35533	1140.42	ug/L		89
76) toluene	12.579	92	172341	42.89	ug/L		99
77) trans-1,3-dichloropropene	12.757	75	102684	44.28	ug/L		99
78) ethyl methacrylate	12.741	69	73234	45.06	ug/L		97
79) 1,1,2-trichloroethane	12.977	83	50039	43.64	ug/L		96
80) 2-hexanone	13.134	58	77872	181.32	ug/L		98
81) tetrachloroethene	13.123	166	82444	45.22	ug/L		94
82) 1,3-dichloropropane	13.154	76	92774	43.42	ug/L		99
83) butyl acetate	13.207	56	37176	44.79	ug/L		95
84) dibromochloromethane	13.395	129	82811	48.14	ug/L		97
85) 1,2-dibromoethane	13.552	107	83280	46.08	ug/L		98
86) n-butyl ether	13.970	57	299656	45.16	ug/L		99
87) chlorobenzene	14.017	112	214591	44.39	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.080	131	91972	48.24	ug/L		98
89) ethylbenzene	14.080	91	343798	45.53	ug/L		98
90) m,p-xylene	14.195	106	269464	91.64	ug/L		99
91) o-xylene	14.593	91	297753	47.06	ug/L		99
92) styrene	14.603	104	239167	47.78	ug/L		98
93) bromoform	14.833	173	57070	48.83	ug/L		98
94) butyl acrylate	14.415	55	129505	47.32	ug/L		100
95) isopropylbenzene	14.938	105	363463	47.79	ug/L		99
96) cis-1,4-dichloro-2-butene	14.969	88	30050	49.33	ug/L		98
99) bromobenzene	15.320	156	109178	42.60	ug/L		90
100) 1,1,2,2-tetrachloroethane	15.210	83	83956	42.74	ug/L		99
101) trans-1,4-dichloro-2-b...	15.241	53	20125	46.01	ug/L		98
102) 1,2,3-trichloropropane	15.294	110	21589	43.26	ug/L		99
103) n-propylbenzene	15.346	91	430821	43.49	ug/L		100
104) 2-chlorotoluene	15.477	126	95647	42.41	ug/L		99
105) 4-chlorotoluene	15.586	91	267322	42.51	ug/L		100
106) 1,3,5-trimethylbenzene	15.498	105	317011	43.48	ug/L		99
107) tert-butylbenzene	15.838	134	58933	45.73	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184757.d
Acq On : 26 Apr 2019 9:26 am
Operator : EddieH
Sample : bs Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:17:23 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

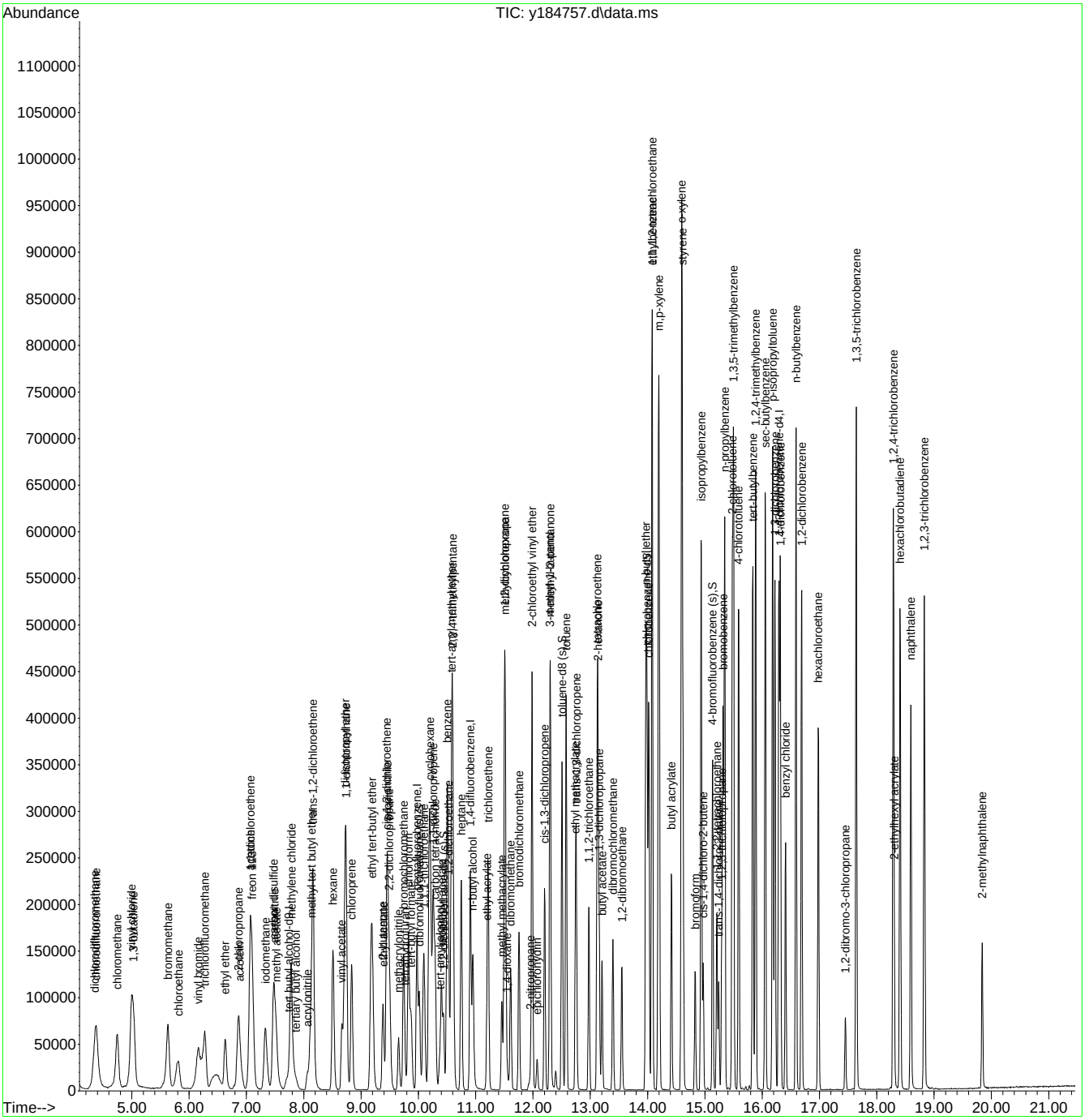
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.885	105	330085	43.96	ug/L	99
109) sec-butylbenzene	16.052	105	409815	45.06	ug/L	99
110) 1,3-dichlorobenzene	16.225	146	211992	44.73	ug/L	98
111) p-isopropyltoluene	16.183	119	365540	45.64	ug/L	100
112) 1,4-dichlorobenzene	16.319	146	211195	43.27	ug/L	98
113) 1,2-dichlorobenzene	16.690	146	210431	43.35	ug/L	99
114) n-butylbenzene	16.591	92	188286	45.09	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.454	157	21713	47.60	ug/L	98
116) 1,3,5-trichlorobenzene	17.642	180	218255	47.58	ug/L	99
117) 1,2,4-trichlorobenzene	18.291	180	192235	49.67	ug/L	96
118) hexachlorobutadiene	18.406	225	106749	44.93	ug/L	96
119) naphthalene	18.594	128	309294	51.52	ug/L	99
120) 1,2,3-trichlorobenzene	18.829	180	172459	51.43	ug/L	99
121) hexachloroethane	16.978	201	64070	44.94	ug/L	97
122) benzyl chloride	16.408	91	169174	47.42	ug/L	97
123) 2-ethylhexyl acrylate	18.306	70	19840	8.43	ug/L	92
124) 2-methylnaphthalene	19.839	142	73966	24.54	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184757.d
Acq On : 26 Apr 2019 9:26 am
Operator : EddieH
Sample : bs Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:17:23 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44297.d
Acq On : 24 Apr 2019 6:05 pm
Operator : roberts
Sample : jc86406-10ms Inst : MS3V
Misc : MS34034,V3V1778,5.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:58:39 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.290	65	119285	500.00	ug/L		-0.01
5) pentafluorobenzene	9.823	168	242578	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	335191	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	295613	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	163760	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	121292	47.56	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 95.12%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	114335	48.17	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.34%				
75) toluene-d8 (s)	12.465	98	382703	52.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.18%				
98) 4-bromofluorobenzene (s)	15.218	95	153962	53.25	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.406	59	80207	205.38	ug/L		98
4) 1,4-dioxane	11.469	88	29539	1023.56	ug/L		98
6) chlorodifluoromethane	3.668	51	271843	39.39	ug/L		99
7) dichlorodifluoromethane	3.641	85	337440	42.38	ug/L		99
8) chloromethane	4.003	50	315467	34.26	ug/L		99
9) vinyl chloride	4.244	62	285893	40.41	ug/L		99
10) 1,3-butadiene	4.286	54	133131	39.26	ug/L		98
11) bromomethane	4.889	96	187450	35.39	ug/L	#	97
12) chloroethane	5.088	64	129267	39.14	ug/L		99
13) trichlorofluoromethane	5.587	101	270508	39.90	ug/L		99
14) vinyl bromide	5.445	106	119171	38.34	ug/L		99
15) ethyl ether	6.016	74	49837	37.30	ug/L		95
16) 2-chloropropane	6.237	43	198795	37.08	ug/L		99
17) acrolein	6.263	56	3406	8.66	ug/L		80
18) freon 113	6.520	151	109296	38.82	ug/L		97
19) 1,1-dichloroethene	6.467	96	107219	34.37	ug/L		95
20) acetone	6.494	58	31322	153.64	ug/L		99
21) acetonitrile	6.955	41	146513	364.76	ug/L		97
22) iodomethane	6.735	142	211241	34.08	ug/L		98
23) carbon disulfide	6.876	76	402829	33.28	ug/L		99
24) methylene chloride	7.280	84	146009	33.69	ug/L		99
25) methyl acetate	7.018	43	101704	61.10	ug/L		98
26) methyl tert butyl ether	7.715	73	391801	38.94	ug/L		100
27) trans-1,2-dichloroethene	7.726	96	110859	33.41	ug/L		99
28) hexane	8.150	57	111298	31.52	ug/L		99
29) di-isopropyl ether	8.418	45	439493	38.65	ug/L		99
30) ethyl tert-butyl ether	8.937	59	428222	39.26	ug/L		98
31) 2-butanone	9.136	72	33728	152.40	ug/L		97
32) 1,1-dichloroethane	8.386	63	211751	36.14	ug/L		99
33) chloroprene	8.496	53	137434	39.33	ug/L		99
34) acrylonitrile	7.616	52	23972	35.53	ug/L		97
35) vinyl acetate	8.344	86	4627	12.90	ug/L		93
36) ethyl acetate	9.178	45	8514	28.76	ug/L	#	1
37) 2,2-dichloropropane	9.225	77	198891	33.24	ug/L		100
38) cis-1,2-dichloroethene	9.194	96	116431	34.00	ug/L		95
39) propionitrile	9.209	54	110882	376.86	ug/L		100
40) methyl acrylate	9.251	85	15063	53.40	ug/L	#	85
41) bromochloromethane	9.508	128	55812	35.06	ug/L		97
42) tetrahydrofuran	9.534	72	9217	39.99	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44297.d
Acq On : 24 Apr 2019 6:05 pm
Operator : roberts
Sample : jc86406-10ms Inst : MS3V
Misc : MS34034,V3V1778,5.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:58:39 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	9.624	83	200274	33.93	ug/L		99
45)	methacrylonitrile	9.430	67	29004	37.83	ug/L		99
46)	1,1,1-trichloroethane	9.891	97	230699	38.60	ug/L		98
47)	cyclohexane	10.012	84	201880	46.21	ug/L	#	87
48)	1,1-dichloropropene	10.075	75	124493	37.42	ug/L		99
49)	carbon tetrachloride	10.101	117	188903	37.68	ug/L		99
50)	isobutyl alcohol	10.101	43	41190	380.06	ug/L		93
51)	tert-amyl alcohol	10.263	55	28146	209.54	ug/L	#	86
54)	iso-octane	10.463	57	312321	29.38	ug/L		96
55)	benzene	10.331	78	386120	36.36	ug/L		100
56)	tert-amyl methyl ether	10.457	73	368427	39.22	ug/L		99
57)	heptane	10.646	57	48332	29.44	ug/L		97
58)	isopropyl acetate	10.295	87	13747	30.98	ug/L		97
59)	1,2-dichloroethane	10.368	62	135093	35.04	ug/L		98
60)	n-butyl alcohol	10.898	56	124358	1888.80	ug/L		100
61)	ethyl acrylate	11.128	55	63800	26.86	ug/L		94
62)	trichloroethene	11.113	95	97996	37.34	ug/L		97
63)	2-nitropropane	11.899	41	15444	35.80	ug/L		97
64)	2-chloroethyl vinyl ether	11.946	63	267433	224.28	ug/L		98
65)	methyl methacrylate	11.406	100	20020	43.41	ug/L		95
66)	1,2-dichloropropane	11.406	63	106582	35.87	ug/L		99
67)	methylcyclohexane	11.417	83	165578	37.35	ug/L		99
68)	dibromomethane	11.516	93	62244	35.66	ug/L		97
69)	bromodichloromethane	11.684	83	140508	35.03	ug/L		99
70)	epichlorohydrin	12.020	57	35015	187.36	ug/L		99
71)	cis-1,3-dichloropropene	12.156	75	145635	35.48	ug/L		98
72)	4-methyl-2-pentanone	12.277	58	132693	164.68	ug/L		99
73)	3-methyl-1-butanol	12.303	70	49640	841.05	ug/L		92
76)	toluene	12.539	92	213413	37.90	ug/L		98
77)	ethyl methacrylate	12.748	69	76662	32.89	ug/L		100
78)	trans-1,3-dichloropropene	12.738	75	124564	37.99	ug/L		99
79)	1,1,2-trichloroethane	12.958	83	69656	38.60	ug/L		99
80)	tetrachloroethene	13.100	166	91491	38.48	ug/L		97
81)	2-hexanone	13.142	58	113410	174.67	ug/L		99
82)	1,3-dichloropropane	13.142	76	126304	37.92	ug/L		100
83)	butyl acetate	13.231	56	33110	25.47	ug/L		95
84)	dibromochloromethane	13.388	129	98628	37.55	ug/L		99
85)	1,2-dibromoethane	13.535	107	109617	38.95	ug/L		100
86)	n-butyl ether	14.033	57	418725	42.97	ug/L		99
87)	chlorobenzene	14.044	112	247039	35.52	ug/L		99
88)	1,1,1,2-tetrachloroethane	14.112	131	112237	38.67	ug/L		99
89)	ethylbenzene	14.112	91	433362	39.19	ug/L		99
90)	m,p-xylene	14.243	106	320546	79.34	ug/L		99
91)	o-xylene	14.657	106	174226	40.78	ug/L		98
92)	styrene	14.667	104	263963	38.99	ug/L		99
93)	bromoform	14.893	173	64388	36.76	ug/L		95
94)	butyl acrylate	14.500	55	115429	28.44	ug/L		99
95)	isopropylbenzene	15.019	105	447973	41.78	ug/L		99
96)	cis-1,4-dichloro-2-butene	15.055	88	34103	35.99	ug/L		98
99)	bromobenzene	15.396	156	117459	38.74	ug/L		99
100)	1,1,2,2-tetrachloroethane	15.307	83	119990	39.57	ug/L		97
101)	trans-1,4-dichloro-2-b...	15.339	53	24492	40.44	ug/L		99
102)	1,2,3-trichloropropane	15.386	110	29023	40.12	ug/L		97
103)	n-propylbenzene	15.443	91	518298	41.66	ug/L		100
104)	2-chlorotoluene	15.569	126	109986	40.88	ug/L		97
105)	4-chlorotoluene	15.685	91	311789	39.13	ug/L		99
106)	1,3,5-trimethylbenzene	15.606	105	389011	43.10	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44297.d
Acq On : 24 Apr 2019 6:05 pm
Operator : roberts
Sample : jc86406-10ms Inst : MS3V
Misc : MS34034,V3V1778,5.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:58:39 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

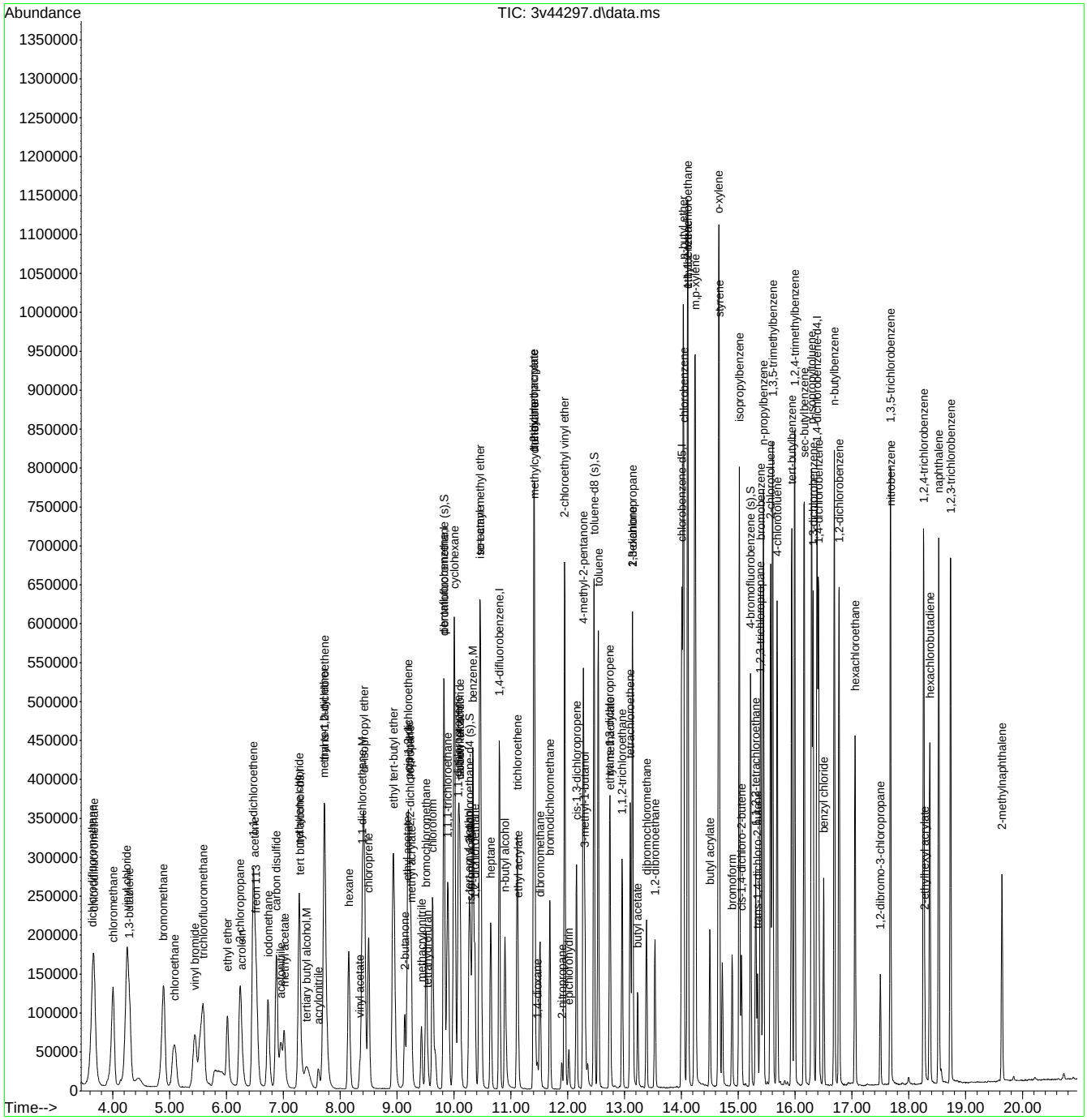
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.942	119	293079	42.98	ug/L	100
108) 1,2,4-trimethylbenzene	15.994	105	402905	42.22	ug/L	100
109) sec-butylbenzene	16.162	105	469488	42.74	ug/L	99
110) 1,3-dichlorobenzene	16.319	146	217410	36.04	ug/L	100
111) p-isopropyltoluene	16.293	119	399161	43.09	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	216159	35.11	ug/L	99
113) 1,2-dichlorobenzene	16.775	146	227041	36.49	ug/L	99
114) n-butylbenzene	16.691	92	211598	40.41	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.499	157	31634	42.62	ug/L	93
116) 1,3,5-trichlorobenzene	17.677	180	207182	34.10	ug/L	98
117) 2-ethylhexyl acrylate	18.280	70	20297	5.44	ug/L	98
118) nitrobenzene	17.682	77	7260	43.03	ug/L	90
119) 1,2,4-trichlorobenzene	18.264	180	187377	33.28	ug/L	98
120) hexachlorobutadiene	18.369	225	78740	28.74	ug/L	99
121) naphthalene	18.526	128	447790	40.10	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	190373	32.61	ug/L	99
123) hexachloroethane	17.053	119	75610	38.33	ug/L	99
124) benzyl chloride	16.503	91	157133	33.57	ug/L	99
125) 2-methylnaphthalene	19.638	142	116235	15.00	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44297.d
Acq On : 24 Apr 2019 6:05 pm
Operator : roberts
Sample : jc86406-10ms Inst : MS3V
Misc : MS34034,V3V1778,5.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:58:39 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44298.d
Acq On : 24 Apr 2019 6:31 pm
Operator : roberts
Sample : jc86406-10msd Inst : MS3V
Misc : MS34034,V3V1778,4.7,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:59:29 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.269	65	108696	500.00	ug/L		-0.03
5) pentafluorobenzene	9.823	168	264583	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	358062	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	329189	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	202445	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	129057	46.39	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 92.78%				
53) 1,2-dichloroethane-d4 (s)	10.268	65	118420	46.70	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 93.40%				
75) toluene-d8 (s)	12.465	98	415990	50.85	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.70%				
98) 4-bromofluorobenzene (s)	15.218	95	175667	49.15	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.30%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.395	59	73451	206.40	ug/L		92
4) 1,4-dioxane	11.469	88	27168	1033.11	ug/L		100
6) chlorodifluoromethane	3.662	51	277937	36.92	ug/L		97
7) dichlorodifluoromethane	3.652	85	344305	39.65	ug/L		99
8) chloromethane	4.008	50	333571	33.21	ug/L		99
9) vinyl chloride	4.244	62	291174	37.73	ug/L		98
10) 1,3-butadiene	4.281	54	134652	36.40	ug/L		96
11) bromomethane	4.894	96	190517	32.98	ug/L	#	97
12) chloroethane	5.083	64	129375	35.92	ug/L		98
13) trichlorofluoromethane	5.581	101	272212	36.81	ug/L		100
14) vinyl bromide	5.450	106	119992	35.39	ug/L		99
15) ethyl ether	6.016	74	48527	33.30	ug/L		96
16) 2-chloropropane	6.237	43	198809	34.00	ug/L		97
17) acrolein	6.263	56	8413	19.61	ug/L		92
18) freon 113	6.509	151	109225	35.57	ug/L		99
19) 1,1-dichloroethene	6.472	96	106404	31.27	ug/L		99
20) acetone	6.488	58	27180	121.12	ug/L		89
21) acetonitrile	6.950	41	136764	312.17	ug/L		99
22) iodomethane	6.735	142	211773	31.32	ug/L		100
23) carbon disulfide	6.881	76	395042	29.92	ug/L		100
24) methylene chloride	7.285	84	144038	30.47	ug/L		99
25) methyl acetate	7.018	43	76674	42.23	ug/L		99
26) methyl tert butyl ether	7.715	73	389056	35.45	ug/L		99
27) trans-1,2-dichloroethene	7.726	96	108262	29.92	ug/L		95
28) hexane	8.150	57	109877	28.53	ug/L		96
29) di-isopropyl ether	8.418	45	447643	36.09	ug/L		98
30) ethyl tert-butyl ether	8.937	59	434847	36.56	ug/L		98
31) 2-butanone	9.136	72	31431	130.21	ug/L		93
32) 1,1-dichloroethane	8.386	63	209014	32.71	ug/L		99
33) chloroprene	8.502	53	134893	35.39	ug/L		99
34) acrylonitrile	7.610	52	22955	31.19	ug/L		90
35) vinyl acetate	8.344	86	6799	17.38	ug/L	#	87
36) ethyl acetate	9.178	45	9298	28.80	ug/L	#	1
37) 2,2-dichloropropane	9.230	77	196819	30.16	ug/L		99
38) cis-1,2-dichloroethene	9.194	96	114071	30.54	ug/L		97
39) propionitrile	9.209	54	102426	319.17	ug/L		99
40) methyl acrylate	9.251	85	13023	42.33	ug/L		94
41) bromochloromethane	9.508	128	54350	31.30	ug/L		95
42) tetrahydrofuran	9.540	72	8704	34.63	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44298.d
Acq On : 24 Apr 2019 6:31 pm
Operator : roberts
Sample : jc86406-10msd Inst : MS3V
Misc : MS34034,V3V1778,4.7,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:59:29 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.624	83	199947	31.05	ug/L	99
45) methacrylonitrile	9.430	67	27779	33.22	ug/L	95
46) 1,1,1-trichloroethane	9.891	97	225277	34.56	ug/L	99
47) cyclohexane	10.006	84	196727	41.28	ug/L	94
48) 1,1-dichloropropene	10.074	75	122933	33.88	ug/L	99
49) carbon tetrachloride	10.101	117	186624	34.13	ug/L	98
50) isobutyl alcohol	10.101	43	36865	311.86	ug/L	94
51) tert-amyl alcohol	10.263	55	24613	168.00	ug/L	94
54) iso-octane	10.462	57	318815	28.07	ug/L	97
55) benzene	10.331	78	381775	33.65	ug/L	99
56) tert-amyl methyl ether	10.457	73	365233	36.40	ug/L	100
57) heptane	10.646	57	47520	27.10	ug/L	99
58) isopropyl acetate	10.295	87	15010	31.66	ug/L	99
59) 1,2-dichloroethane	10.368	62	134271	32.61	ug/L	98
60) n-butyl alcohol	10.898	56	117218	1666.64	ug/L	99
61) ethyl acrylate	11.134	55	73325	28.90	ug/L	99
62) trichloroethene	11.113	95	97106	34.64	ug/L	98
63) 2-nitropropane	11.894	41	14351	31.14	ug/L	92
64) 2-chloroethyl vinyl ether	11.946	63	255706	200.75	ug/L	98
65) methyl methacrylate	11.406	100	18441	37.43	ug/L	98
66) 1,2-dichloropropane	11.406	63	106873	33.67	ug/L	99
67) methylcyclohexane	11.417	83	159382	33.66	ug/L	99
68) dibromomethane	11.516	93	60683	32.54	ug/L	97
69) bromodichloromethane	11.689	83	141935	33.13	ug/L	98
70) epichlorohydrin	12.025	57	32683	163.71	ug/L	98
71) cis-1,3-dichloropropene	12.156	75	148472	33.86	ug/L	100
72) 4-methyl-2-pentanone	12.277	58	123355	143.32	ug/L	98
73) 3-methyl-1-butanol	12.303	70	45686	724.62	ug/L	97
76) toluene	12.539	92	214642	34.23	ug/L	100
77) ethyl methacrylate	12.748	69	83869	32.31	ug/L	98
78) trans-1,3-dichloropropene	12.738	75	123987	33.96	ug/L	99
79) 1,1,2-trichloroethane	12.958	83	68920	34.30	ug/L	99
80) tetrachloroethene	13.105	166	91006	34.37	ug/L	98
81) 2-hexanone	13.142	58	107343	148.46	ug/L	98
82) 1,3-dichloropropane	13.142	76	126987	34.24	ug/L	97
83) butyl acetate	13.231	56	39960	27.60	ug/L	96
84) dibromochloromethane	13.388	129	100323	34.30	ug/L	99
85) 1,2-dibromoethane	13.535	107	107315	34.25	ug/L	100
86) n-butyl ether	14.033	57	415906	38.32	ug/L	99
87) chlorobenzene	14.043	112	255909	33.04	ug/L	99
88) 1,1,1,2-tetrachloroethane	14.112	131	111909	34.62	ug/L	97
89) ethylbenzene	14.112	91	436840	35.48	ug/L	100
90) m,p-xylene	14.243	106	324943	72.23	ug/L	100
91) o-xylene	14.657	106	176448	37.09	ug/L	97
92) styrene	14.667	104	272303	36.12	ug/L	99
93) bromoform	14.893	173	65046	33.35	ug/L	99
94) butyl acrylate	14.500	55	134851	29.84	ug/L	100
95) isopropylbenzene	15.019	105	445527	37.31	ug/L	99
96) cis-1,4-dichloro-2-butene	15.055	88	34365	32.56	ug/L	98
99) bromobenzene	15.396	156	121554	32.43	ug/L	98
100) 1,1,2,2-tetrachloroethane	15.307	83	117899	31.45	ug/L	99
101) trans-1,4-dichloro-2-b...	15.338	53	24008	32.07	ug/L	99
102) 1,2,3-trichloropropane	15.386	110	28440	31.80	ug/L	96
103) n-propylbenzene	15.443	91	529928	34.46	ug/L	100
104) 2-chlorotoluene	15.569	126	112941	33.96	ug/L	98
105) 4-chlorotoluene	15.685	91	324819	32.97	ug/L	100
106) 1,3,5-trimethylbenzene	15.606	105	397872	35.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44298.d
Acq On : 24 Apr 2019 6:31 pm
Operator : roberts
Sample : jc86406-10msd Inst : MS3V
Misc : MS34034,V3V1778,4.7,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:59:29 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

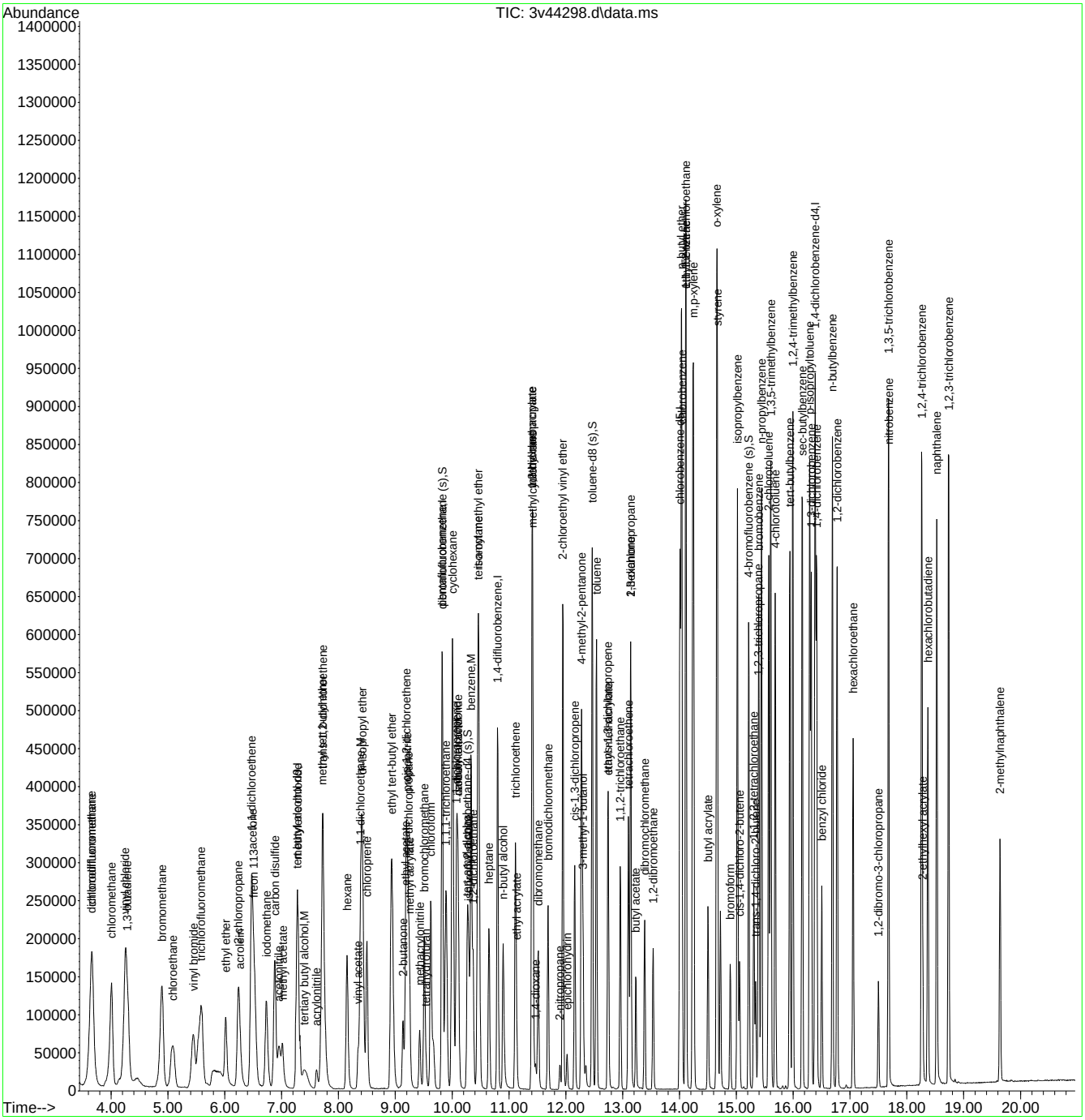
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.941	119	291550	34.58	ug/L	99
108) 1,2,4-trimethylbenzene	15.994	105	417868	35.42	ug/L	99
109) sec-butylbenzene	16.162	105	479699	35.33	ug/L	100
110) 1,3-dichlorobenzene	16.319	146	233022	31.25	ug/L	99
111) p-isopropyltoluene	16.293	119	411643	35.94	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	232004	30.48	ug/L	100
113) 1,2-dichlorobenzene	16.775	146	243355	31.64	ug/L	99
114) n-butylbenzene	16.691	92	221382	34.20	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.499	157	30428	33.16	ug/L	91
116) 1,3,5-trichlorobenzene	17.677	180	237354	31.60	ug/L	99
117) 2-ethylhexyl acrylate	18.280	70	25900	5.58	ug/L	99
118) nitrobenzene	17.682	77	6613	31.71	ug/L	86
119) 1,2,4-trichlorobenzene	18.264	180	225820	32.44	ug/L	99
120) hexachlorobutadiene	18.369	225	89734	26.49	ug/L	98
121) naphthalene	18.526	128	485591	35.18	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	234433	32.49	ug/L	99
123) hexachloroethane	17.053	119	76086	31.20	ug/L	98
124) benzyl chloride	16.502	91	161988	27.99	ug/L	99
125) 2-methylnaphthalene	19.638	142	142762	14.92	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44298.d
Acq On : 24 Apr 2019 6:31 pm
Operator : roberts
Sample : jc86406-10msd Inst : MS3V
Misc : MS34034,V3V1778,4.7,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:59:29 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225711.d
Acq On : 25 Apr 2019 1:47 pm
Operator : thienn
Sample : jc86863-3ms Inst : GCMSI
Misc : MS34257,VI9093,3.1,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:56:09 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.353	65	41870	500.00	ug/L		-0.03
4) pentafluorobenzene	9.696	168	146382	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	193441	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.765	117	158230	50.00	ug/L		-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	86653	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	58106	50.52	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.04%				
52) 1,2-dichloroethane-d4 (s)	10.136	65	64441	53.37	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.74%				
74) toluene-d8 (s)	12.259	98	202928	50.03	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.06%				
97) 4-bromofluorobenzene (s)	14.926	95	70707	53.51	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 107.02%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.473	59	21459	247.62	ug/L		96
3) 1,4-dioxane	11.281	88	11248	1158.11	ug/L		96
5) dichlorodifluoromethane	3.885	85	64551	50.48	ug/L		98
6) chlorodifluoromethane	3.917	51	61226	50.71	ug/L		97
7) chloromethane	4.278	50	53974	45.58	ug/L		95
8) vinyl chloride	4.518	62	51941	52.09	ug/L		98
9) 1,3-butadiene	4.607	54	34393	49.38	ug/L		94
10) bromomethane	5.182	94	35093	52.82	ug/L		97
11) chloroethane	5.386	64	29611	49.09	ug/L		98
12) vinyl bromide	5.726	106	30467	39.53	ug/L		97
13) trichlorofluoromethane	5.857	101	77293	50.65	ug/L		100
14) ethyl ether	6.297	74	19966	46.18	ug/L		93
15) 2-chloropropane	6.500	63	17062	48.41	ug/L	#	83
16) acrolein	6.495	56	4252	30.18	ug/L		97
17) freon 113	6.710	151	34302	45.88	ug/L		94
18) 1,1-dichloroethene	6.710	61	62559	45.92	ug/L		99
19) acetone	6.694	43	46889	190.11	ug/L		96
20) iodomethane	6.956	142	44064	43.90	ug/L		97
21) carbon disulfide	7.112	76	117408	40.01	ug/L		99
22) acetonitrile	7.092	41	46574	378.13	ug/L		98
23) methyl acetate	7.186	74	5337	37.53	ug/L	#	82
24) methylene chloride	7.421	84	43320	42.94	ug/L		94
25) acrylonitrile	7.693	53	10825	37.31	ug/L		96
26) methyl tert butyl ether	7.803	73	111456	46.61	ug/L		96
27) trans-1,2-dichloroethene	7.839	61	58651	45.16	ug/L		96
28) hexane	8.226	57	39539	25.24	ug/L		97
29) 1,1-dichloroethane	8.415	63	74287	44.80	ug/L		98
30) vinyl acetate	8.362	86	5645	35.75	ug/L	#	95
31) di-isopropyl ether	8.425	45	123603	42.05	ug/L		93
32) chloroprene	8.525	53	63864	45.64	ug/L		97
33) ethyl tert-butyl ether	8.891	59	127238	44.85	ug/L		100
34) 2-butanone	9.053	72	15436	166.97	ug/L	#	87
35) 2,2-dichloropropane	9.163	77	65496	45.55	ug/L		97
36) ethyl acetate	9.100	45	4562	33.92	ug/L	#	87
37) cis-1,2-dichloroethene	9.131	96	46679	43.69	ug/L		96
38) propionitrile	9.105	54	53881	397.39	ug/L		93
39) methyl acrylate	9.184	85	5426	38.92	ug/L	#	89
40) methacrylonitrile	9.320	67	13878	40.55	ug/L		99
41) bromochloromethane	9.435	128	22229	46.27	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225711.d
Acq On : 25 Apr 2019 1:47 pm
Operator : thienn
Sample : jc86863-3ms Inst : GCMSI
Misc : MS34257,VI9093,3.1,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:56:09 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.471	71	4290	40.27	ug/L		85
43) chloroform	9.524	83	79458	46.31	ug/L		96
44) carbon tetrachloride	10.005	117	64971	46.36	ug/L		97
45) 1,1-dichloropropene	9.973	75	54576	42.25	ug/L		97
48) 1,1,1-trichloroethane	9.790	97	74490	48.64	ug/L		99
49) cyclohexane	9.921	84	52977	39.29	ug/L		99
50) tert-amyl alcohol	10.078	55	8024	208.44	ug/L	#	82
53) isopropyl acetate	10.125	87	7561	43.14	ug/L	#	81
54) 1,2-dichloroethane	10.230	62	61936	48.74	ug/L		99
55) benzene	10.214	78	163736	43.32	ug/L		99
56) 2,2,4-trimethylpentane	10.334	57	84846	21.93	ug/L		92
57) tert-amyl methyl ether	10.308	87	29620	45.92	ug/L		95
58) heptane	10.502	57	15525	19.22	ug/L		95
59) n-butyl alcohol	10.664	56	59929	1898.18	ug/L		91
60) trichloroethene	10.951	95	41281	40.78	ug/L		97
61) ethyl acrylate	10.931	55	40246	37.61	ug/L		99
62) methylcyclohexane	11.260	83	50916	29.70	ug/L		98
63) 1,2-dichloropropane	11.223	63	38738	40.04	ug/L		83
64) methyl methacrylate	11.197	100	9536	41.89	ug/L	#	87
65) dibromomethane	11.333	93	24720	43.86	ug/L		93
66) bromodichloromethane	11.485	83	59009	44.02	ug/L		100
67) 2-nitropropane	11.663	41	10957	47.22	ug/L		99
68) 2-chloroethyl vinyl ether	11.726	63	116774	206.29	ug/L		98
69) epichlorohydrin	11.794	57	18357	194.16	ug/L		96
70) cis-1,3-dichloropropene	11.945	75	62913	41.57	ug/L		95
71) 4-methyl-2-pentanone	12.034	58	49239	163.58	ug/L		98
72) 3-methyl-1-butanol	12.034	70	19667	752.16	ug/L		91
75) toluene	12.337	92	92359	42.17	ug/L		97
76) trans-1,3-dichloropropene	12.505	75	57250	43.44	ug/L		97
77) ethyl methacrylate	12.510	69	39969	40.24	ug/L		99
78) 1,1,2-trichloroethane	12.724	83	26382	41.06	ug/L		96
79) 1,3-dichloropropane	12.902	76	50733	43.38	ug/L		99
80) tetrachloroethene	12.897	166	43145	39.24	ug/L		97
81) 2-hexanone	12.881	58	43757	152.41	ug/L		96
82) butyl acetate	12.981	56	18467	36.97	ug/L		85
83) n-butyl ether	13.771	57	116363	32.17	ug/L		93
84) dibromochloromethane	13.153	129	43145	42.97	ug/L		98
85) 1,2-dibromoethane	13.310	107	44956	51.43	ug/L		99
86) chlorobenzene	13.797	112	91232	39.10	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.859	131	39574	42.72	ug/L		98
88) ethylbenzene	13.859	91	155198	38.04	ug/L		98
89) m,p-xylene	13.985	106	118685	73.97	ug/L		97
90) o-xylene	14.382	106	56992	35.68	ug/L		94
91) styrene	14.393	104	96157	35.84	ug/L		99
92) butyl acrylate	14.210	55	56934	37.20	ug/L		99
93) cis-1,4-dichloro-2-butene	14.749	88	16739	42.57	ug/L		91
94) bromoform	14.613	173	28772	40.80	ug/L		98
95) isopropylbenzene	14.733	105	139814	34.77	ug/L		99
98) 1,1,2,2-tetrachloroethane	14.994	83	35525	39.64	ug/L		96
99) trans-1,4-dichloro-2-b...	15.026	53	10196	43.66	ug/L		88
100) 1,2,3-trichloropropane	15.078	110	10485	45.42	ug/L		95
101) bromobenzene	15.109	156	41378	38.68	ug/L		99
102) n-propylbenzene	15.151	91	152043	34.24	ug/L		97
103) 2-chlorotoluene	15.277	126	33503	35.91	ug/L		97
104) 4-chlorotoluene	15.387	91	95497	35.97	ug/L		98
105) 1,3,5-trimethylbenzene	15.308	105	118644	35.50	ug/L		97
106) tert-butylbenzene	15.648	134	20941	33.82	ug/L	#	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225711.d
Acq On : 25 Apr 2019 1:47 pm
Operator : thienn
Sample : jc86863-3ms Inst : GCMSI
Misc : MS34257,VI9093,3.1,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:56:09 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

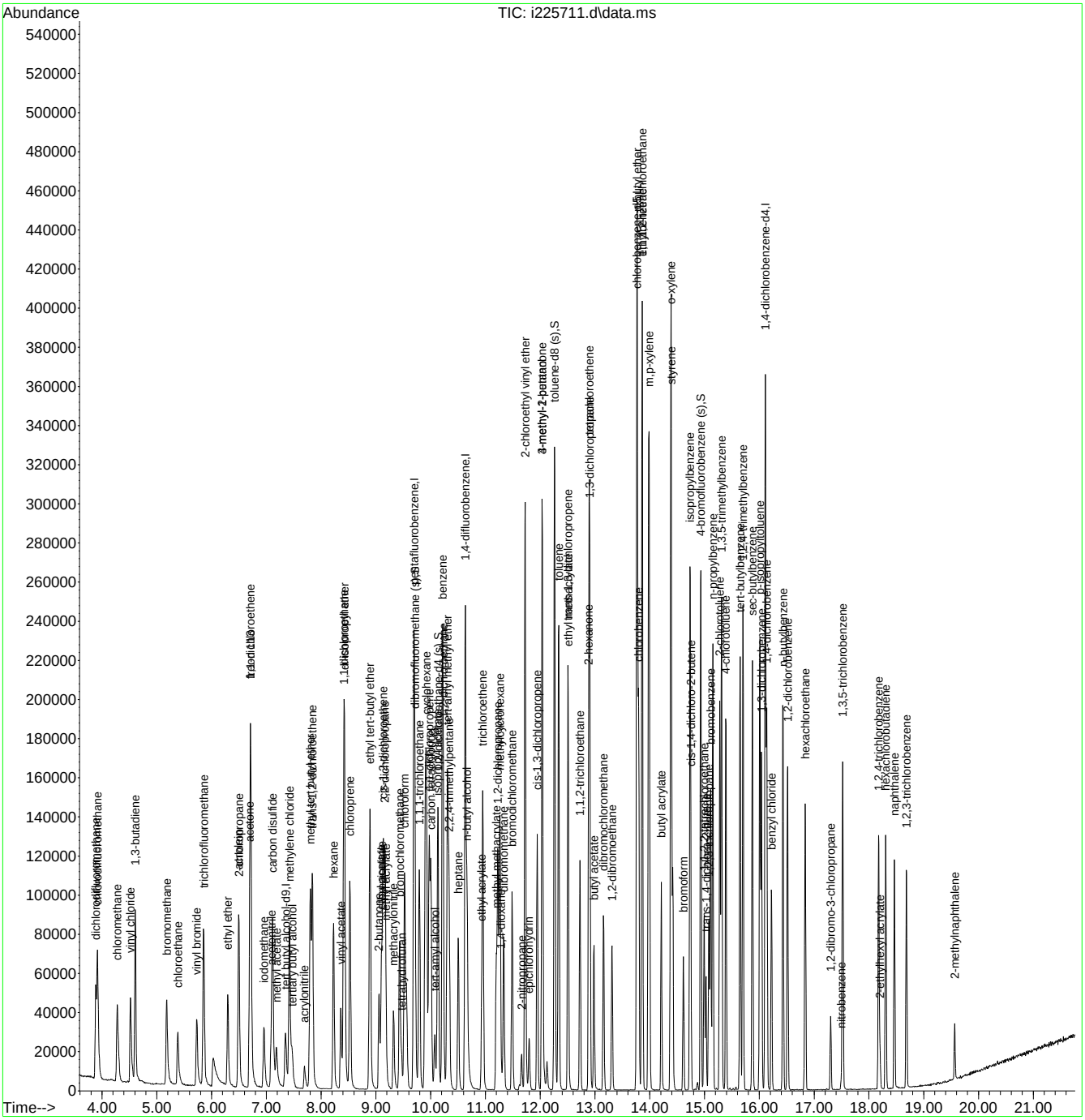
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.701	105	118660	34.65	ug/L	97
108) sec-butylbenzene	15.873	105	130840	30.38	ug/L	98
109) p-isopropyltoluene	16.009	119	117787	31.51	ug/l	98
110) benzyl chloride	16.224	91	65197	31.09	ug/L	99
111) 1,3-dichlorobenzene	16.040	146	66728	32.69	ug/L	99
112) 1,4-dichlorobenzene	16.135	146	67326	32.29	ug/L	99
113) 1,2-dichlorobenzene	16.516	146	64828	32.45	ug/L	99
114) n-butylbenzene	16.433	92	53184	27.35	ug/L	97
115) hexachloroethane	16.835	201	26686	35.80	ug/L	95
116) 1,2-dibromo-3-chloropr...	17.301	157	9467	34.06	ug/L	92
117) nitrobenzene	17.494	77	3046	31.90	ug/L	92
118) 1,3,5-trichlorobenzene	17.521	180	52342	25.79	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	39862	21.83	ug/L	93
120) 2-ethylhexyl acrylate	18.201	55	6740	4.53	ug/L	86
121) hexachlorobutadiene	18.305	225	27444	22.84	ug/L	96
122) naphthalene	18.467	128	84626	23.98	ug/L	100
123) 1,2,3-trichlorobenzene	18.687	180	33197	18.48	ug/L	94
124) 2-methylnaphthalene	19.566	142	12549	9.97	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225711.d
Acq On : 25 Apr 2019 1:47 pm
Operator : thienn
Sample : jc86863-3ms Inst : GCMSI
Misc : MS34257,VI9093,3.1,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:56:09 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264055.d
Acq On : 25 Apr 2019 2:41 pm
Operator : thienn
Sample : JC86424-5MS Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:44:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.473	65	75257	500.00	ug/L		0.00
5) pentafluorobenzene	9.722	168	171736	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.679	114	263010	50.00	ug/L		0.00
75) chlorobenzene-d5	14.089	117	256604	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.735	152	161351	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.753	113	78433	48.41	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.82%				
55) 1,2-dichloroethane-d4 (s)	10.182	65	84670	42.94	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.88%				
76) toluene-d8 (s)	12.415	98	326587	52.19	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.38%				
100) 4-bromofluorobenzene (s)	15.407	95	144804	48.43	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.86%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.583	59	44723	224.16	ug/L		97
4) 1,4-dioxane	11.348	88	14511	797.75	ug/L	#	69
6) chlorodifluoromethane	4.413	51	151254	41.75	ug/L		98
7) dichlorodifluoromethane	4.413	85	153942	30.88	ug/L		98
8) chloromethane	4.701	50	160536	38.45	ug/L		98
9) 1,3-butadiene	4.978	54	109950	47.54	ug/L		96
10) vinyl chloride	4.947	62	178464	42.01	ug/L		98
11) bromomethane	5.522	94	104535	47.78	ug/L		95
12) chloroethane	5.663	64	83879	45.08	ug/L		97
13) trichlorofluoromethane	6.144	101	161743	42.27	ug/L		97
14) vinyl bromide	6.014	106	80201	41.10	ug/L		97
15) ethyl ether	6.469	74	51576	54.47	ug/L		94
16) 2-chloropropane	6.673	43	183784	45.00	ug/L		94
17) acrolein	6.652	56	15455	49.17	ug/L		93
18) freon 113	6.929	151	105775	47.10	ug/L		99
19) 1,1-dichloroethene	6.882	96	101507	47.93	ug/L		95
20) acetone	6.835	58	28695	215.56	ug/L	#	75
21) acetonitrile	7.201	41	128256	456.69	ug/L		100
22) iodomethane	7.128	142	159292	47.82	ug/L		98
23) carbon disulfide	7.290	76	348465	50.47	ug/L		98
24) methylene chloride	7.536	84	110550	49.67	ug/L		100
25) methyl acetate	7.290	43	60782	51.58	ug/L		95
26) methyl tert butyl ether	7.907	73	304927	47.40	ug/L		97
27) trans-1,2-dichloroethene	7.933	96	98592	50.77	ug/L		96
28) hexane	8.310	56	74804	59.86	ug/L		97
29) di-isopropyl ether	8.493	45	362603	49.29	ug/L		98
30) 2-butanone	9.094	72	32210	204.69	ug/L		96
31) 1,1-dichloroethane	8.482	63	198307	57.36	ug/L		99
32) chloroprene	8.597	53	137521	44.55	ug/L		95
33) acrylonitrile	7.771	53	29166	53.79	ug/L		90
34) vinyl acetate	8.404	86	17925	47.30	ug/L		96
35) ethyl tert-butyl ether	8.953	59	350073	48.23	ug/L		99
36) ethyl acetate	9.136	45	12248	55.27	ug/L	#	77
37) 2,2-dichloropropane	9.241	77	167198	45.09	ug/L		92
38) cis-1,2-dichloroethene	9.188	96	141231	66.47	ug/L		97
39) propionitrile	9.136	54	117401	496.20	ug/L		96
40) methyl acrylate	9.220	85	11053	47.54	ug/L	#	92
41) methacrylonitrile	9.356	67	31076	50.13	ug/L		90
42) bromochloromethane	9.481	128	45559	47.52	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264055.d
Acq On : 25 Apr 2019 2:41 pm
Operator : thienn
Sample : JC86424-5MS Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:44:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.523	42	21600	46.81	ug/L		97
44) chloroform	9.560	83	151192	43.29	ug/L		97
45) tert-butyl formate	9.617	59	92310	46.88	ug/L		98
47) 1,1,1-trichloroethane	9.863	97	159554	44.54	ug/L		97
48) cyclohexane	10.009	84	200043	55.53	ug/L		95
50) 1,1-dichloropropene	10.030	75	117210	44.30	ug/L		98
51) carbon tetrachloride	10.077	117	134152	43.87	ug/L		99
52) tert-amyl alcohol	10.114	73	22867	210.97	ug/L		96
53) isopropyl acetate	10.156	87	19454	47.37	ug/L		97
56) n-butyl alcohol	10.689	56	102453	1612.78	ug/L		98
57) 2,2,4-trimethylpentane	10.412	57	465677	71.42	ug/L		95
58) benzene	10.276	78	375758	47.05	ug/L		99
59) tert-amyl methyl ether	10.365	73	336111	46.13	ug/L		100
60) heptane	10.559	57	111771	104.76	ug/L		95
61) 1,2-dichloroethane	10.271	62	107046	38.12	ug/L		98
62) ethyl acrylate	10.977	55	93200	45.35	ug/L		100
63) trichloroethene	11.019	95	88283	44.50	ug/L		99
64) 2-chloroethyl vinyl ether	11.814	63	258683	248.68	ug/L		100
65) methyl methacrylate	11.254	100	21677	48.26	ug/L		92
66) methylcyclohexane	11.364	83	235007	69.42	ug/L		99
67) 1,2-dichloropropane	11.296	63	94068	47.46	ug/L		97
68) dibromomethane	11.406	93	50604	44.16	ug/L		99
69) bromodichloromethane	11.563	83	119205	44.86	ug/L		99
70) 2-nitropropane	11.746	41	41139	99.25	ug/L		96
71) epichlorohydrin	11.929	57	289945	1513.65	ug/L		58
72) cis-1,3-dichloropropene	12.060	75	145046	45.33	ug/L		93
73) 4-methyl-2-pentanone	12.154	58	136774	197.76	ug/L		96
74) isoamyl alcohol	12.143	70	63235	1166.93	ug/L		91
77) toluene	12.494	92	1795564	365.81	ug/L		94
78) ethyl methacrylate	12.677	69	127678	54.92	ug/L		98
79) trans-1,3-dichloropropene	12.666	75	128226	44.96	ug/L		93
80) 1,1,2-trichloroethane	12.912	83	66925	51.14	ug/L	#	86
81) tetrachloroethene	13.127	164	80690	50.47	ug/L		97
82) 2-hexanone	13.090	58	121226	204.82	ug/L		96
83) 1,3-dichloropropane	13.111	76	127460	45.24	ug/L		95
84) butyl acetate	13.200	56	62927	52.21	ug/L		93
85) dibromochloromethane	13.393	129	84509	45.84	ug/L		98
86) 1,2-dibromoethane	13.571	107	102081	50.17	ug/L		99
87) n-butyl ether	14.105	57	447673	50.04	ug/L		98
88) chlorobenzene	14.126	112	248468	43.71	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.194	131	98968	45.32	ug/L		99
90) ethylbenzene	14.204	91	1291561	132.78	ug/L		99
91) m,p-xylene	14.335	106	1283684	346.36	ug/L		96
92) o-xylene	14.790	91	964815	118.50	ug/L		94
93) styrene	14.800	104	306123	48.48	ug/L		92
94) butyl acrylate	14.591	55	202054	52.94	ug/L		96
95) n-amyl acetate	14.826	70	93157	57.65	ug/L		94
96) isopropylbenzene	15.193	105	511942	53.88	ug/L		98
97) bromoform	15.041	173	62398	46.96	ug/L		98
98) cis-1,4-dichloro-2-butene	15.193	88	38276	43.40	ug/L		93
101) 1,1,2,2-tetrachloroethane	15.470	83	123936	49.70	ug/L		77
102) trans-1,4-dichloro-2-b...	15.506	53	34934	55.97	ug/L		94
103) 1,2,3-trichloropropane	15.569	110	33881	47.14	ug/L		82
104) bromobenzene	15.616	156	122657	43.37	ug/L		96
105) n-propylbenzene	15.663	91	638772	57.16	ug/L		98
106) 2-chlorotoluene	15.810	126	120815	48.25	ug/L		99
107) 4-chlorotoluene	15.930	91	342606	46.45	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264055.d
Acq On : 25 Apr 2019 2:41 pm
Operator : thienn
Sample : JC86424-5MS Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:44:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

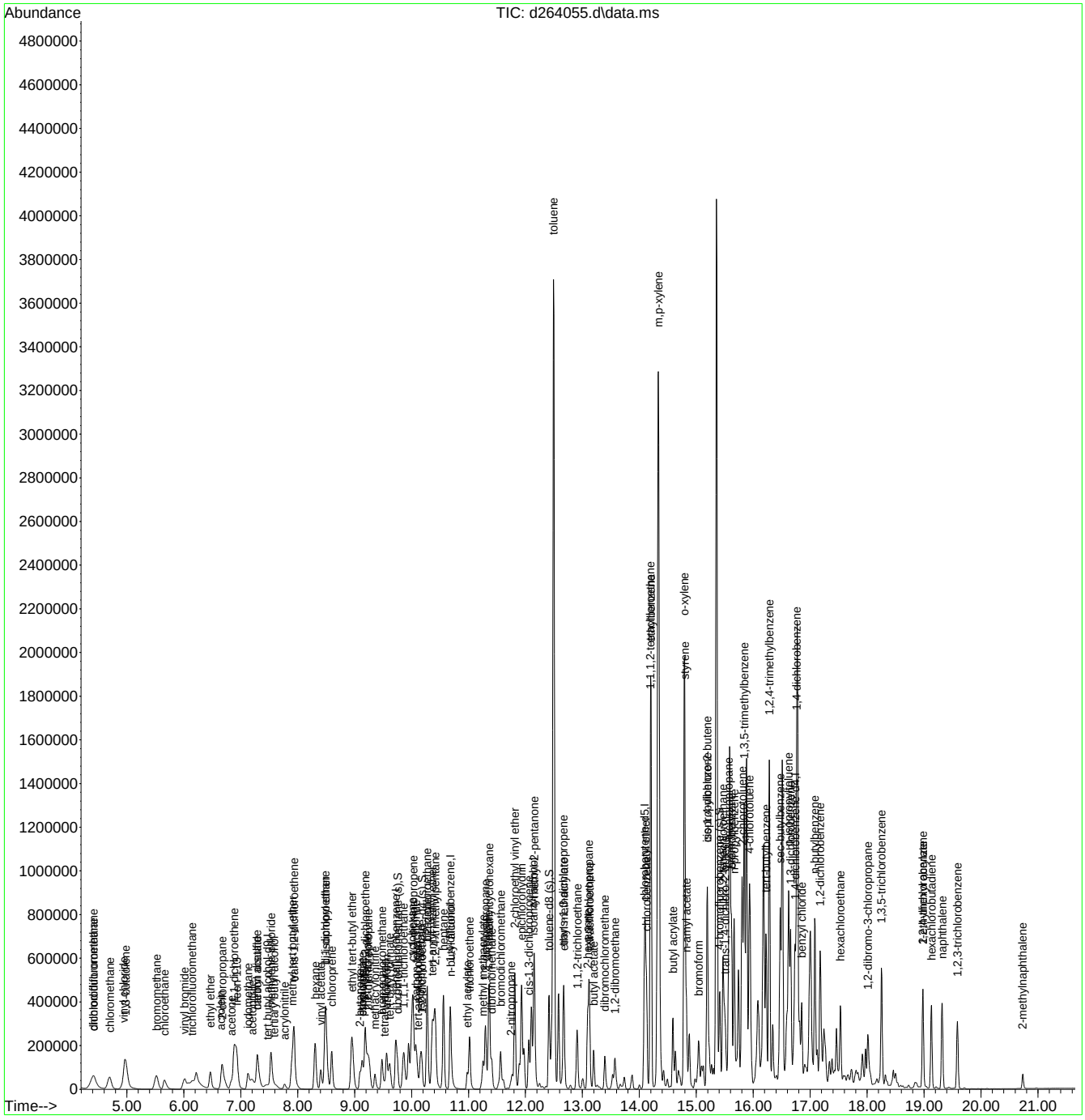
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.841	105	564274	66.08	ug/L	100
109) tert-butylbenzene	16.228	119	340718	51.43	ug/L	98
110) 1,2,4-trimethylbenzene	16.280	105	855162	100.43	ug/L	99
111) sec-butylbenzene	16.474	105	514845	52.76	ug/L	98
112) p-isopropyltoluene	16.620	119	495340	60.99	ug/L	97
113) 1,3-dichlorobenzene	16.657	146	236223	47.82	ug/L	99
114) 1,4-dichlorobenzene	16.762	146	238007	46.45	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	248721	50.24	ug/L	98
116) benzyl chloride	16.850	91	256954	53.44	ug/L	98
117) n-butylbenzene	17.081	92	229377	60.47	ug/L	98
118) 2-ethylhexyl acrylate	18.979	70	13383	16.74	ug/L	77
119) hexachloroethane	17.530	201	71256	56.51	ug/L	97
120) 1,2-dibromo-3-chloropr...	18.012	75	21667	48.48	ug/L	91
121) 1,3,5-trichlorobenzene	18.252	180	188181	56.50	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	150142	49.67	ug/L	99
123) hexachlorobutadiene	19.131	225	97814	64.43	ug/L	99
124) naphthalene	19.319	128	374935	55.49	ug/L	98
125) 1,2,3-trichlorobenzene	19.586	180	120492	45.41	ug/L	99
126) 2-methylnaphthalene	20.731	142	38334	26.59	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264055.d
Acq On : 25 Apr 2019 2:41 pm
Operator : thienn
Sample : JC86424-5MS Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:44:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264056.d
Acq On : 25 Apr 2019 3:10 pm
Operator : thienn
Sample : JC86424-5MSD Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:45:17 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.457	65	74310	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	170702	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	265057	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	260754	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	160355	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	78828	48.94	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.88%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	85779	43.17	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.34%			
76) toluene-d8 (s)	12.416	98	326579	51.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.72%			
100) 4-bromofluorobenzene (s)	15.407	95	142747	48.04	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.588	59	47940	243.34	ug/L	99
4) 1,4-dioxane	11.349	88	22335	1243.53	ug/L	85
6) chlorodifluoromethane	4.403	51	152567	42.36	ug/L	96
7) dichlorodifluoromethane	4.419	85	153285	30.93	ug/L	98
8) chloromethane	4.701	50	160605	38.70	ug/L	98
9) 1,3-butadiene	4.978	54	111272	48.41	ug/L	98
10) vinyl chloride	4.957	62	178462	42.27	ug/L	98
11) bromomethane	5.517	94	105348	48.44	ug/L	98
12) chloroethane	5.658	64	83995	45.41	ug/L	97
13) trichlorofluoromethane	6.150	101	164186	43.17	ug/L	97
14) vinyl bromide	6.019	106	82314	42.44	ug/L	99
15) ethyl ether	6.469	74	52536	55.82	ug/L	93
16) 2-chloropropane	6.678	43	187978	46.30	ug/L	95
17) acrolein	6.652	56	15437	49.41	ug/L	97
18) freon 113	6.924	151	108086	48.42	ug/L	97
19) 1,1-dichloroethene	6.887	96	106651	50.67	ug/L	93
20) acetone	6.835	58	29180	220.53	ug/L #	77
21) acetonitrile	7.201	41	131760	472.01	ug/L	98
22) iodomethane	7.128	142	165302	49.93	ug/L	97
23) carbon disulfide	7.295	76	360358	52.51	ug/L	100
24) methylene chloride	7.531	84	113775	51.43	ug/L	97
25) methyl acetate	7.290	43	61626	52.61	ug/L	97
26) methyl tert butyl ether	7.907	73	312850	48.92	ug/L	98
27) trans-1,2-dichloroethene	7.933	96	102138	52.92	ug/L	97
28) hexane	8.305	56	76301	61.43	ug/L	97
29) di-isopropyl ether	8.498	45	368167	50.35	ug/L	98
30) 2-butanone	9.094	72	33477	214.03	ug/L	89
31) 1,1-dichloroethane	8.483	63	202583	58.96	ug/L	99
32) chloroprene	8.598	53	142924	46.58	ug/L	95
33) acrylonitrile	7.766	53	30358	56.33	ug/L	93
34) vinyl acetate	8.409	86	19613	52.07	ug/L #	92
35) ethyl tert-butyl ether	8.953	59	357240	49.52	ug/L	98
36) ethyl acetate	9.131	45	12322	55.95	ug/L	95
37) 2,2-dichloropropane	9.246	77	167553	45.46	ug/L	91
38) cis-1,2-dichloroethene	9.189	96	146045	69.15	ug/L	98
39) propionitrile	9.136	54	121750	517.70	ug/L	96
40) methyl acrylate	9.220	85	11727	50.63	ug/L	94
41) methacrylonitrile	9.361	67	32431	52.63	ug/L	96
42) bromochloromethane	9.482	128	48345	50.74	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264056.d
Acq On : 25 Apr 2019 3:10 pm
Operator : thienn
Sample : JC86424-5MSD Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:45:17 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.523	42	22511	49.08	ug/L		98
44) chloroform	9.560	83	157843	45.47	ug/L		98
45) tert-butyl formate	9.612	59	94734	48.40	ug/L		95
47) 1,1,1-trichloroethane	9.863	97	163560	45.94	ug/L		98
48) cyclohexane	10.010	84	204163	57.01	ug/L		94
50) 1,1-dichloropropene	10.031	75	123281	46.88	ug/L		99
51) carbon tetrachloride	10.078	117	137998	45.40	ug/L		100
52) tert-amyl alcohol	10.120	73	24264	225.21	ug/L		94
53) isopropyl acetate	10.156	87	20195	49.47	ug/L		93
56) n-butyl alcohol	10.684	56	119077	1859.99	ug/L		96
57) 2,2,4-trimethylpentane	10.412	57	482012	73.35	ug/L		96
58) benzene	10.277	78	393773	48.93	ug/L		98
59) tert-amyl methyl ether	10.365	73	344306	46.89	ug/L		98
60) heptane	10.559	57	112044	104.21	ug/L		96
61) 1,2-dichloroethane	10.271	62	111240	39.31	ug/L		97
62) ethyl acrylate	10.977	55	96613	46.65	ug/L		99
63) trichloroethene	11.019	95	92943	46.49	ug/L		98
64) 2-chloroethyl vinyl ether	11.814	63	267921	255.57	ug/L		99
65) methyl methacrylate	11.255	100	22381	49.44	ug/L	#	87
66) methylcyclohexane	11.364	83	238455	69.90	ug/L		99
67) 1,2-dichloropropane	11.296	63	98218	49.17	ug/L		98
68) dibromomethane	11.406	93	53249	46.11	ug/L		99
69) bromodichloromethane	11.563	83	123705	46.19	ug/L		99
70) 2-nitropropane	11.746	41	40819	97.72	ug/L		93
71) epichlorohydrin	11.929	57	287420	1488.88	ug/L		58
72) cis-1,3-dichloropropene	12.060	75	152409	47.26	ug/L		93
73) 4-methyl-2-pentanone	12.154	58	141025	202.33	ug/L		98
74) isoamyl alcohol	12.144	70	66537	1218.38	ug/L		91
77) toluene	12.494	92	1823398	365.57	ug/L		94
78) ethyl methacrylate	12.677	69	132539	56.11	ug/L		98
79) trans-1,3-dichloropropene	12.667	75	134118	46.28	ug/L		95
80) 1,1,2-trichloroethane	12.907	83	69150	52.00	ug/L	#	85
81) tetrachloroethene	13.122	164	84700	52.13	ug/L		99
82) 2-hexanone	13.090	58	124747	207.41	ug/L		96
83) 1,3-dichloropropane	13.111	76	132017	46.11	ug/L		94
84) butyl acetate	13.200	56	65793	53.72	ug/L		90
85) dibromochloromethane	13.394	129	89294	47.66	ug/L		99
86) 1,2-dibromoethane	13.571	107	106720	51.62	ug/L		99
87) n-butyl ether	14.100	57	463585	51.00	ug/L		99
88) chlorobenzene	14.126	112	261154	45.21	ug/L		100
89) 1,1,1,2-tetrachloroethane	14.194	131	102505	46.19	ug/L		99
90) ethylbenzene	14.204	91	1312383	132.77	ug/L		99
91) m,p-xylene	14.335	106	1303270	346.05	ug/L		96
92) o-xylene	14.790	91	985816	119.15	ug/L		94
93) styrene	14.801	104	317308	49.46	ug/L		94
94) butyl acrylate	14.586	55	208364	53.72	ug/L		96
95) n-amyl acetate	14.827	70	94218	57.38	ug/L		96
96) isopropylbenzene	15.193	105	528142	54.70	ug/L		99
97) bromoform	15.046	173	65343	48.39	ug/L		97
98) cis-1,4-dichloro-2-butene	15.193	88	39812	44.42	ug/L		95
101) 1,1,2,2-tetrachloroethane	15.470	83	127090	51.28	ug/L		80
102) trans-1,4-dichloro-2-b...	15.507	53	35275	56.87	ug/L		95
103) 1,2,3-trichloropropane	15.569	110	36562	51.18	ug/L		79
104) bromobenzene	15.616	156	127618	45.41	ug/L		98
105) n-propylbenzene	15.664	91	657448	59.20	ug/L		100
106) 2-chlorotoluene	15.810	126	126407	50.79	ug/L		99
107) 4-chlorotoluene	15.930	91	350863	47.86	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264056.d
Acq On : 25 Apr 2019 3:10 pm
Operator : thienn
Sample : JC86424-5MSD Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:45:17 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

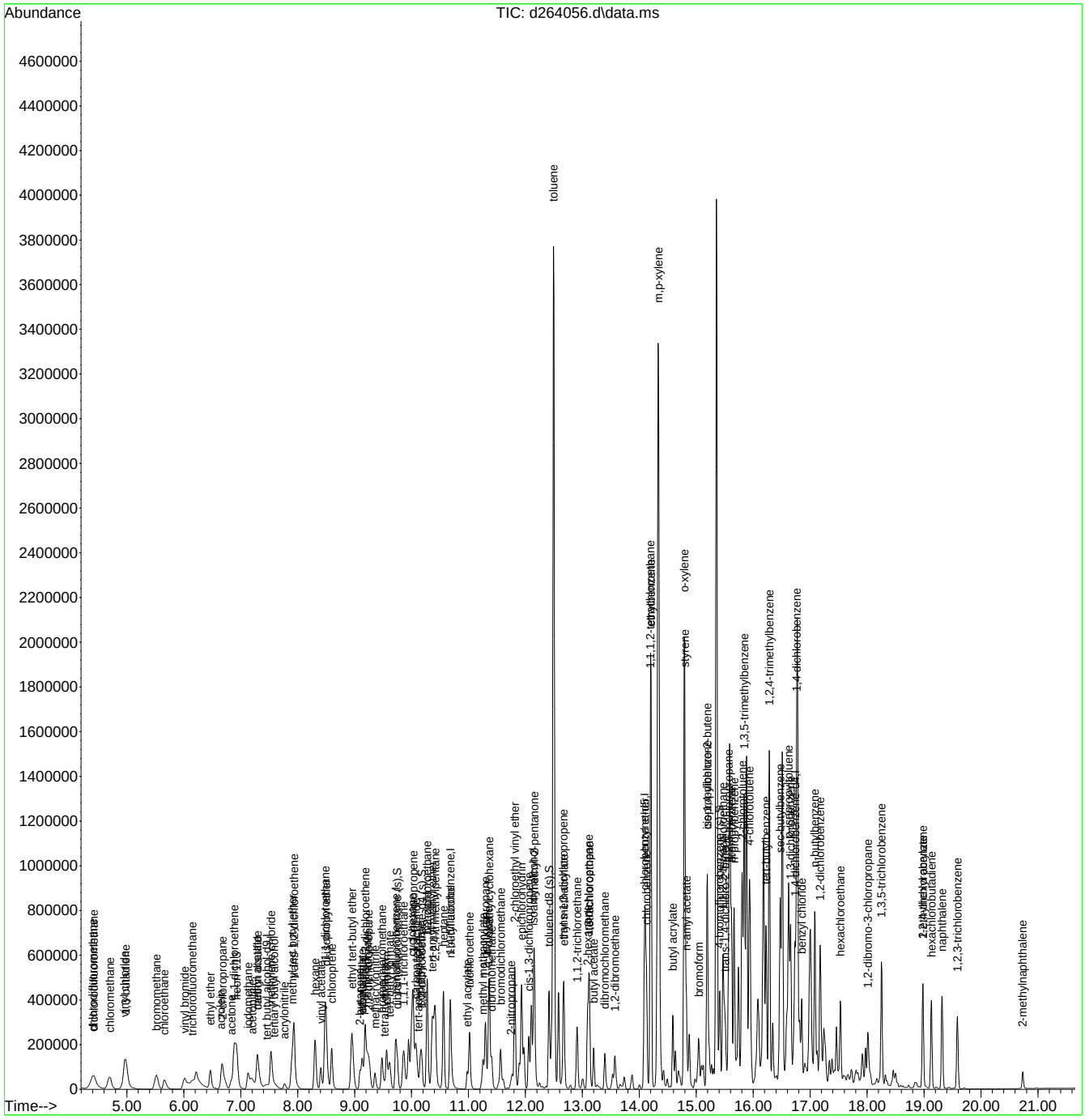
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.841	105	581368	68.50	ug/L	99
109) tert-butylbenzene	16.228	119	355798	54.04	ug/L	97
110) 1,2,4-trimethylbenzene	16.281	105	869613	102.76	ug/L	99
111) sec-butylbenzene	16.474	105	530999	54.76	ug/L	98
112) p-isopropyltoluene	16.621	119	506740	62.78	ug/L	98
113) 1,3-dichlorobenzene	16.657	146	242695	49.43	ug/L	99
114) 1,4-dichlorobenzene	16.762	146	246168	48.35	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	255683	51.96	ug/L	99
116) benzyl chloride	16.851	91	262244	54.88	ug/L	99
117) n-butylbenzene	17.081	92	234630	62.24	ug/L	98
118) 2-ethylhexyl acrylate	18.979	70	13773	17.34	ug/L	85
119) hexachloroethane	17.531	201	74981	59.83	ug/L	95
120) 1,2-dibromo-3-chloropr...	18.012	75	22425	50.49	ug/L	94
121) 1,3,5-trichlorobenzene	18.252	180	194814	58.85	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	155694	51.77	ug/L	97
123) hexachlorobutadiene	19.131	225	102091	67.66	ug/L	98
124) naphthalene	19.314	128	391605	58.23	ug/L	98
125) 1,2,3-trichlorobenzene	19.586	180	127419	48.20	ug/L	99
126) 2-methylnaphthalene	20.732	142	44304	30.92	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264056.d
Acq On : 25 Apr 2019 3:10 pm
Operator : thienn
Sample : JC86424-5MSD Inst : MSD
Misc : ms34050,vd10643,6.4,,10,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:45:17 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184765.d
Acq On : 26 Apr 2019 1:19 pm
Operator : EddieH
Sample : jc86717-12ms Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:29:27 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.736	65	67311	500.00	ug/L	0.00
5) pentafluorobenzene	9.974	168	177944	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	272329	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	275612	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.293	152	162348	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	87571	54.25	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 108.50%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	68849	45.26	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 90.52%			
75) toluene-d8 (s)	12.506	98	315756	45.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.54%			
98) 4-bromofluorobenzene (s)	15.131	95	129806	48.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.44%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.840	59	45663	217.66	ug/L	93
4) 1,4-dioxane	11.543	88	22498	1081.73	ug/L	93
6) chlorodifluoromethane	4.373	51	133537	47.59	ug/L	95
7) dichlorodifluoromethane	4.341	85	124584	35.36	ug/L	93
8) chloromethane	4.744	50	172121	46.40	ug/L	91
9) vinyl chloride	4.985	62	134909	44.22	ug/L	100
10) 1,3-butadiene	5.021	54	86217	45.63	ug/L	98
11) bromomethane	5.628	94	100580	38.93	ug/L	97
12) chloroethane	5.806	64	76413	46.31	ug/L	98
13) vinyl bromide	6.151	106	68276	47.71	ug/L	97
14) trichlorofluoromethane	6.266	101	147160	41.87	ug/L	98
15) ethyl ether	6.632	74	43440	50.44	ug/L	87
16) 2-chloropropane	6.852	63	37543	49.26	ug/L	91
17) acrolein	6.883	56	8081	33.69	ug/L	75
18) freon 113	7.098	151	68469	41.54	ug/L	98
19) 1,1-dichloroethene	7.066	61	127732	46.75	ug/L	95
20) acetone	7.066	43	74280	170.39	ug/L	99
21) acetonitrile	7.490	41	90979	425.30	ug/L	97
22) iodomethane	7.323	142	144136	41.78	ug/L	95
23) carbon disulfide	7.469	76	229754	38.41	ug/L	98
24) methylene chloride	7.772	84	107058	45.07	ug/L	92
25) methyl acetate	7.527	43	56316	55.84	ug/L	97
26) methyl tert butyl ether	8.144	73	255353	46.56	ug/L	98
27) trans-1,2-dichloroethene	8.159	61	109528	40.43	ug/L	98
28) hexane	8.505	57	49875	20.86	ug/L	98
29) di-isopropyl ether	8.724	45	315899	46.28	ug/L	98
30) ethyl tert-butyl ether	9.185	59	291653	46.97	ug/L	98
31) 2-butanone	9.378	72	26667	186.07	ug/L #	80
32) 1,1-dichloroethane	8.735	63	151013	44.45	ug/L	98
33) chloroprene	8.834	53	100045	41.10	ug/L	96
34) acrylonitrile	8.060	53	23316	42.80	ug/L	96
35) vinyl acetate	8.662	86	7038	26.00	ug/L #	71
36) ethyl acetate	9.389	45	6446	33.47	ug/L	87
37) 2,2-dichloropropane	9.488	77	108156	36.85	ug/L	97
38) cis-1,2-dichloroethene	9.446	96	91757	41.08	ug/L	92
39) propionitrile	9.457	54	83703	435.42	ug/L	96
40) bromochloromethane	9.739	130	61359	43.83	ug/L	97
41) tetrahydrofuran	9.765	72	9069	52.92	ug/L	91
42) chloroform	9.823	83	146790	40.64	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184765.d
Acq On : 26 Apr 2019 1:19 pm
Operator : EddieH
Sample : jc86717-12ms Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:29:27 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.865	59	35125	25.77	ug/L		97
46) methacrylonitrile	9.655	67	22245	43.06	ug/L		93
47) 1,1,1-trichloroethane	10.095	97	131837	42.35	ug/L		99
48) cyclohexane	10.205	84	96648	31.23	ug/L		99
49) 1,1-dichloropropene	10.252	75	90011	40.88	ug/L		97
50) tert-amyl alcohol	10.377	55	14650	231.99	ug/L		88
51) carbon tetrachloride	10.288	117	109394	40.37	ug/L		97
54) 2,2,4-trimethylpentane	10.592	57	95789	12.83	ug/L		87
55) tert-amyl methyl ether	10.581	73	265747	43.47	ug/L		95
56) n-butyl alcohol	10.947	41	72621	2150.24	ug/L		98
57) benzene	10.503	78	306824	39.02	ug/L		99
58) heptane	10.748	57	15623	11.64	ug/L		90
59) isopropyl acetate	10.403	87	11139	34.76	ug/L		88
60) 1,2-dichloroethane	10.529	62	94097	37.25	ug/L		95
61) trichloroethene	11.219	130	76942	37.64	ug/L		99
62) ethyl acrylate	11.193	55	55102	32.79	ug/L		97
63) 2-nitropropane	11.951	41	19329	35.33	ug/L	#	64
64) 2-chloroethyl vinyl ether	11.983	63	161615	173.51	ug/L		99
65) methyl methacrylate	11.455	100	16607	44.87	ug/L	#	90
66) 1,2-dichloropropane	11.502	63	79873	39.88	ug/L		96
67) methylcyclohexane	11.512	83	74789	23.04	ug/L		90
68) dibromomethane	11.606	93	44979	38.49	ug/L		95
69) bromodichloromethane	11.758	83	104350	37.25	ug/L		99
70) epichlorohydrin	12.072	57	27608	195.28	ug/L		96
71) cis-1,3-dichloropropene	12.202	75	111098	36.46	ug/L		97
72) 4-methyl-2-pentanone	12.302	58	95312	173.50	ug/L		95
73) 3-methyl-1-butanol	12.297	70	35739	869.70	ug/L		96
76) toluene	12.579	92	163915	30.89	ug/L		97
77) trans-1,3-dichloropropene	12.757	75	92305	30.14	ug/L		99
78) ethyl methacrylate	12.741	69	60965	28.40	ug/L		97
79) 1,1,2-trichloroethane	12.977	83	49616	32.76	ug/L		95
80) 2-hexanone	13.133	58	81207	143.18	ug/L		93
81) tetrachloroethene	13.123	166	64740	26.89	ug/L		95
82) 1,3-dichloropropane	13.154	76	94782	33.59	ug/L		98
83) butyl acetate	13.207	56	27714	25.28	ug/L		89
84) dibromochloromethane	13.395	129	75711	33.33	ug/L		98
85) 1,2-dibromoethane	13.552	107	80287	33.64	ug/L		99
86) n-butyl ether	13.970	57	258082	29.45	ug/L		98
87) chlorobenzene	14.017	112	173866	27.23	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.080	131	73949	29.37	ug/L		95
89) ethylbenzene	14.075	91	266304	26.70	ug/L		99
90) m,p-xylene	14.195	106	205629	52.95	ug/L		97
91) o-xylene	14.593	91	221301	26.49	ug/L		99
92) styrene	14.603	104	177087	26.79	ug/L		99
93) bromoform	14.828	173	46881	30.37	ug/L		98
94) butyl acrylate	14.415	55	95199	26.34	ug/L		98
95) isopropylbenzene	14.933	105	235654	23.46	ug/L		99
96) cis-1,4-dichloro-2-butene	14.969	88	23406	29.09	ug/L		97
99) bromobenzene	15.320	156	76835	23.71	ug/L		88
100) 1,1,2,2-tetrachloroethane	15.210	83	70597	28.41	ug/L		99
101) trans-1,4-dichloro-2-b...	15.241	53	14409	26.04	ug/L		97
102) 1,2,3-trichloropropane	15.294	110	18959	30.04	ug/L		99
103) n-propylbenzene	15.346	91	257652	20.56	ug/L		99
104) 2-chlorotoluene	15.477	126	63063	22.11	ug/L		100
105) 4-chlorotoluene	15.592	91	169384	21.30	ug/L		96
106) 1,3,5-trimethylbenzene	15.498	105	190247	20.63	ug/L		97
107) tert-butylbenzene	15.838	134	33220	20.38	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184765.d
Acq On : 26 Apr 2019 1:19 pm
Operator : EddieH
Sample : jc86717-12ms Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:29:27 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

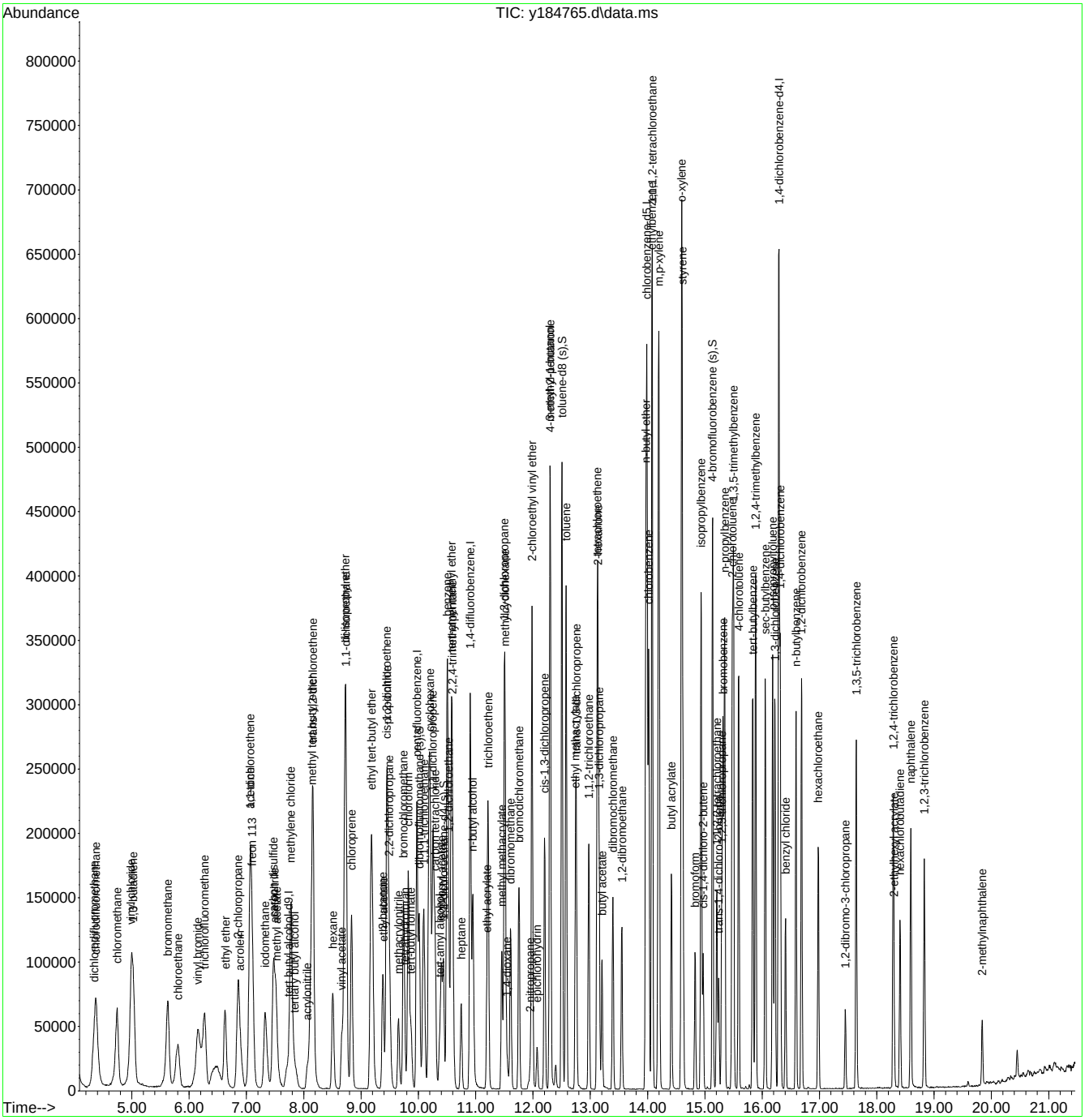
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.885	105	199042	20.96	ug/L	100
109) sec-butylbenzene	16.052	105	200757	17.45	ug/L	99
110) 1,3-dichlorobenzene	16.225	146	122355	20.41	ug/L	97
111) p-isopropyltoluene	16.183	119	177769	17.55	ug/L	98
112) 1,4-dichlorobenzene	16.313	146	123501	20.01	ug/L	100
113) 1,2-dichlorobenzene	16.685	146	123527	20.12	ug/L	99
114) n-butylbenzene	16.591	92	78565	14.87	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.454	157	16867	29.23	ug/L	89
116) 1,3,5-trichlorobenzene	17.642	180	83197	14.34	ug/L	98
117) 1,2,4-trichlorobenzene	18.290	180	67317	13.75	ug/L	97
118) hexachlorobutadiene	18.406	225	27232	9.06	ug/L	95
119) naphthalene	18.594	128	153719	20.24	ug/L	99
120) 1,2,3-trichlorobenzene	18.829	180	58542	13.80	ug/L	98
121) hexachloroethane	16.978	201	30057	16.67	ug/L	95
122) benzyl chloride	16.408	91	86554	19.18	ug/L	97
123) 2-ethylhexyl acrylate	18.301	70	7597	3.22	ug/L	96
124) 2-methylnaphthalene	19.839	142	23722	6.22	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184765.d
Acq On : 26 Apr 2019 1:19 pm
Operator : EddieH
Sample : jc86717-12ms Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:29:27 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184766.d
Acq On : 26 Apr 2019 1:48 pm
Operator : EddieH
Sample : jc86717-12msd Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:30:58 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.736	65	67925	500.00	ug/L	0.00
5) pentafluorobenzene	9.974	168	172680	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	264693	50.00	ug/L	0.00
74) chlorobenzene-d5	13.991	117	264452	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.293	152	157298	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	85776	54.76	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 109.52%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	66718	45.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 90.24%			
75) toluene-d8 (s)	12.506	98	299745	44.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 89.58%			
98) 4-bromofluorobenzene (s)	15.137	95	123688	47.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.861	59	47542	224.57	ug/L	94
4) 1,4-dioxane	11.549	88	24350	1160.19	ug/L	90
6) chlorodifluoromethane	4.378	51	141871	52.10	ug/L	96
7) dichlorodifluoromethane	4.357	85	137296	40.15	ug/L	96
8) chloromethane	4.744	50	159991	44.45	ug/L	95
9) vinyl chloride	4.995	62	147005	49.65	ug/L	98
10) 1,3-butadiene	5.027	54	90642	49.43	ug/L	97
11) bromomethane	5.628	94	105505	42.08	ug/L	95
12) chloroethane	5.801	64	76921	48.04	ug/L	97
13) vinyl bromide	6.156	106	72212	51.99	ug/L	98
14) trichlorofluoromethane	6.271	101	155783	45.67	ug/L	97
15) ethyl ether	6.632	74	45256	54.15	ug/L	91
16) 2-chloropropane	6.857	63	38300	51.78	ug/L	90
17) acrolein	6.862	56	5882	25.27	ug/L #	64
18) freon 113	7.103	151	69725	43.60	ug/L	95
19) 1,1-dichloroethene	7.072	61	130537	49.23	ug/L	96
20) acetone	7.072	43	73479	173.69	ug/L	96
21) acetonitrile	7.501	41	91371	440.15	ug/L	98
22) iodomethane	7.328	142	143805	42.95	ug/L	97
23) carbon disulfide	7.469	76	236485	40.75	ug/L	99
24) methylene chloride	7.783	84	109467	47.49	ug/L	90
25) methyl acetate	7.527	43	60758	62.08	ug/L	94
26) methyl tert butyl ether	8.144	73	256702	48.23	ug/L	99
27) trans-1,2-dichloroethene	8.165	61	108758	41.37	ug/L	98
28) hexane	8.510	57	50385	21.72	ug/L	97
29) di-isopropyl ether	8.724	45	324116	48.93	ug/L	97
30) ethyl tert-butyl ether	9.190	59	298339	49.51	ug/L	99
31) 2-butanone	9.378	72	27306	196.34	ug/L #	63
32) 1,1-dichloroethane	8.735	63	155383	47.13	ug/L	99
33) chloroprene	8.834	53	102641	43.45	ug/L	95
34) acrylonitrile	8.060	53	22554	42.67	ug/L	99
35) vinyl acetate	8.667	86	5548	21.12	ug/L #	85
36) ethyl acetate	9.383	45	5905	31.60	ug/L	88
37) 2,2-dichloropropane	9.493	77	111841	39.27	ug/L	94
38) cis-1,2-dichloroethene	9.446	96	94618	43.65	ug/L	97
39) propionitrile	9.462	54	84405	452.46	ug/L	75
40) bromochloromethane	9.744	130	62803	46.22	ug/L	93
41) tetrahydrofuran	9.765	72	9147	55.00	ug/L #	76
42) chloroform	9.828	83	150978	43.08	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184766.d
Acq On : 26 Apr 2019 1:48 pm
Operator : EddieH
Sample : jc86717-12msd Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:30:58 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.865	59	31540	23.84	ug/L		90
46) methacrylonitrile	9.655	67	21545	42.98	ug/L		94
47) 1,1,1-trichloroethane	10.095	97	137616	45.55	ug/L		99
48) cyclohexane	10.205	84	99754	33.21	ug/L		96
49) 1,1-dichloropropene	10.257	75	92906	43.48	ug/L		98
50) tert-amyl alcohol	10.377	55	15626	254.99	ug/L		87
51) carbon tetrachloride	10.288	117	113597	43.20	ug/L		98
54) 2,2,4-trimethylpentane	10.597	57	99218	13.67	ug/L		88
55) tert-amyl methyl ether	10.581	73	274086	46.13	ug/L		96
56) n-butyl alcohol	10.953	41	74030	2255.19	ug/L		99
57) benzene	10.503	78	316090	41.36	ug/L		99
58) heptane	10.749	57	16972	13.01	ug/L		92
59) isopropyl acetate	10.403	87	10514	33.76	ug/L	#	83
60) 1,2-dichloroethane	10.529	62	98192	39.99	ug/L		97
61) trichloroethene	11.214	130	79996	40.26	ug/L		97
62) ethyl acrylate	11.198	55	47718	29.22	ug/L		98
63) 2-nitropropane	11.962	41	18828	35.41	ug/L	#	61
64) 2-chloroethyl vinyl ether	11.983	63	153920	170.02	ug/L		100
65) methyl methacrylate	11.455	100	17618	48.98	ug/L	#	85
66) 1,2-dichloropropane	11.502	63	82467	42.36	ug/L		98
67) methylcyclohexane	11.512	83	77481	24.56	ug/L		91
68) dibromomethane	11.612	93	46707	41.13	ug/L		97
69) bromodichloromethane	11.758	83	106821	39.24	ug/L		99
70) epichlorohydrin	12.077	57	27318	198.80	ug/L		95
71) cis-1,3-dichloropropene	12.203	75	113340	38.27	ug/L		98
72) 4-methyl-2-pentanone	12.302	58	98944	185.30	ug/L		94
73) 3-methyl-1-butanol	12.297	70	38179	955.87	ug/L		94
76) toluene	12.579	92	165876	32.57	ug/L		98
77) trans-1,3-dichloropropene	12.757	75	93041	31.66	ug/L		98
78) ethyl methacrylate	12.741	69	55587	26.99	ug/L		97
79) 1,1,2-trichloroethane	12.971	83	51649	35.54	ug/L		92
80) 2-hexanone	13.134	58	80496	147.91	ug/L		95
81) tetrachloroethene	13.123	166	67333	29.15	ug/L		96
82) 1,3-dichloropropane	13.154	76	95117	35.13	ug/L		98
83) butyl acetate	13.201	56	24124	22.94	ug/L		97
84) dibromochloromethane	13.395	129	76978	35.32	ug/L		94
85) 1,2-dibromoethane	13.547	107	82164	35.88	ug/L		97
86) n-butyl ether	13.970	57	267082	31.77	ug/L		98
87) chlorobenzene	14.023	112	176601	28.83	ug/L		97
88) 1,1,1,2-tetrachloroethane	14.080	131	78191	32.37	ug/L		94
89) ethylbenzene	14.075	91	274069	28.64	ug/L		99
90) m,p-xylene	14.195	106	208826	56.04	ug/L		99
91) o-xylene	14.593	91	227462	28.37	ug/L		100
92) styrene	14.603	104	182450	28.76	ug/L		97
93) bromoform	14.828	173	48793	32.95	ug/L		97
94) butyl acrylate	14.415	55	86202	24.86	ug/L		96
95) isopropylbenzene	14.933	105	241862	25.10	ug/L		99
96) cis-1,4-dichloro-2-butene	14.969	88	23056	29.87	ug/L		94
99) bromobenzene	15.320	156	81164	25.84	ug/L		85
100) 1,1,2,2-tetrachloroethane	15.210	83	73884	30.69	ug/L		96
101) trans-1,4-dichloro-2-b...	15.241	53	14922	27.84	ug/L		95
102) 1,2,3-trichloropropane	15.294	110	20678	33.81	ug/L		99
103) n-propylbenzene	15.346	91	263262	21.69	ug/L		99
104) 2-chlorotoluene	15.477	126	64253	23.25	ug/L		98
105) 4-chlorotoluene	15.586	91	172993	22.45	ug/L		98
106) 1,3,5-trimethylbenzene	15.498	105	193747	21.68	ug/L		97
107) tert-butylbenzene	15.838	134	33584	21.27	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184766.d
Acq On : 26 Apr 2019 1:48 pm
Operator : EddieH
Sample : jc86717-12msd Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:30:58 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

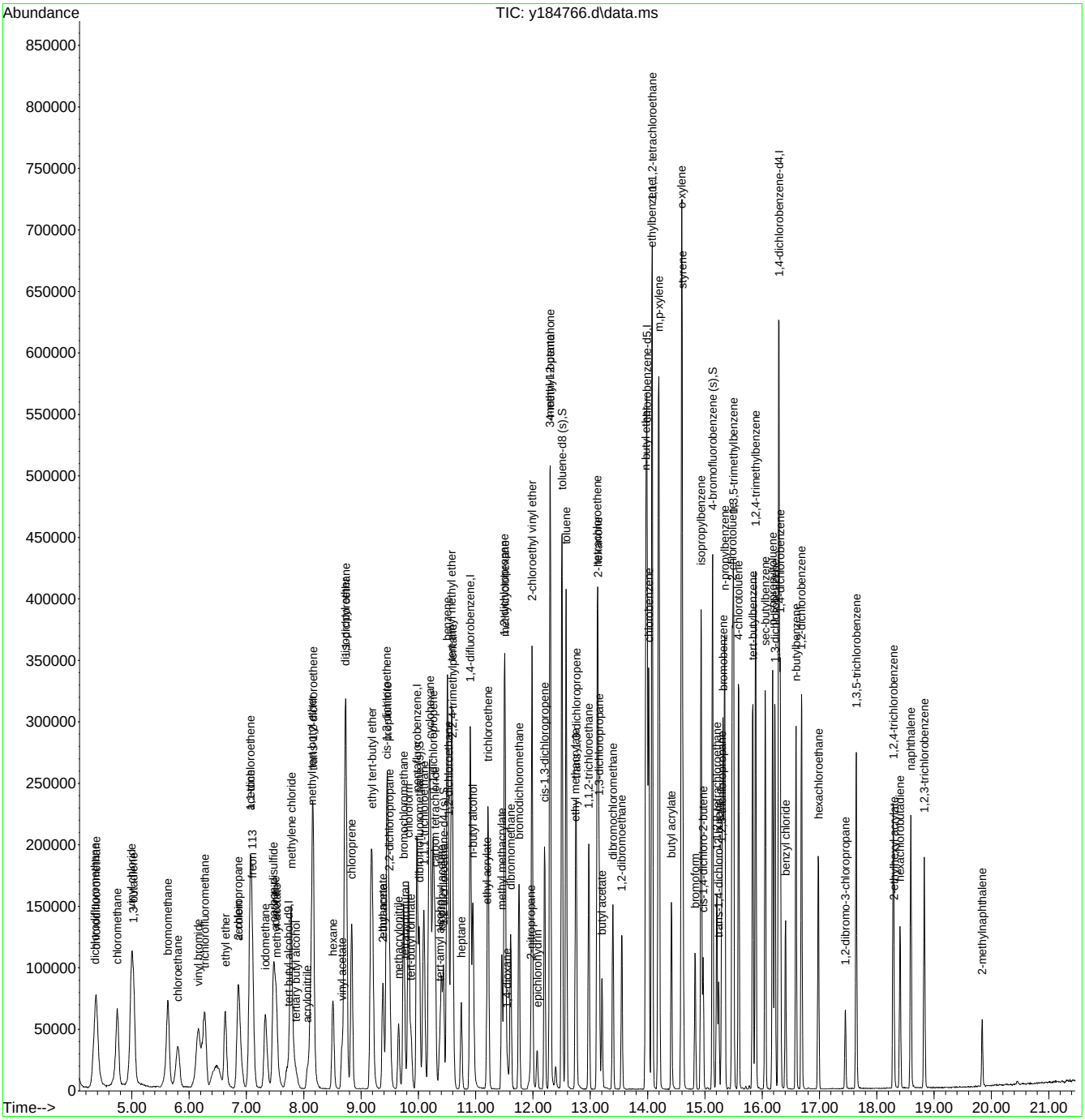
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.885	105	206342	22.43	ug/L	98
109) sec-butylbenzene	16.052	105	207083	18.58	ug/L	99
110) 1,3-dichlorobenzene	16.225	146	124802	21.49	ug/L	99
111) p-isopropyltoluene	16.183	119	185155	18.86	ug/L	99
112) 1,4-dichlorobenzene	16.314	146	126724	21.19	ug/L	97
113) 1,2-dichlorobenzene	16.685	146	127176	21.38	ug/L	99
114) n-butylbenzene	16.591	92	79890	15.61	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.454	157	18181	32.52	ug/L	91
116) 1,3,5-trichlorobenzene	17.642	180	82634	14.70	ug/L	98
117) 1,2,4-trichlorobenzene	18.291	180	69497	14.65	ug/L	97
118) hexachlorobutadiene	18.406	225	27988	9.61	ug/L	98
119) naphthalene	18.594	128	165247	22.46	ug/L	99
120) 1,2,3-trichlorobenzene	18.829	180	59811	14.56	ug/L	96
121) hexachloroethane	16.983	201	30907	17.69	ug/L	98
122) benzyl chloride	16.408	91	89442	20.46	ug/L	99
123) 2-ethylhexyl acrylate	18.301	70	6650	3.00	ug/L	91
124) 2-methylnaphthalene	19.839	142	24934	6.75	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184766.d
Acq On : 26 Apr 2019 1:48 pm
Operator : EddieH
Sample : jc86717-12msd Inst : MSY
Misc : MS34202,VY8016,3.8,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:30:58 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
04/30/19 16:08

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:53:03 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.464	65	94958	500.00	ug/L		0.00
5) pentafluorobenzene	9.713	168	164021	50.00	ug/L		-0.01
54) 1,4-difluorobenzene	10.670	114	252436	50.00	ug/L		-0.01
75) chlorobenzene-d5	14.085	117	264296	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.732	152	176252	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.744	113	77632	50.16	ug/L		-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.32%				
55) 1,2-dichloroethane-d4 (s)	10.173	65	81403	43.02	ug/L		-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.04%				
76) toluene-d8 (s)	12.406	98	305568	47.41	ug/L		-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.82%				
100) 4-bromofluorobenzene (s)	15.403	95	143716	44.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 88.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.569	59	53039	210.68	ug/L		99
4) 1,4-dioxane	11.340	88	27603	1202.65	ug/L		97
6) chlorodifluoromethane	4.394	51	138739	40.09	ug/L		98
7) dichlorodifluoromethane	4.399	85	185894	39.04	ug/L		99
8) chloromethane	4.692	50	177340	44.48	ug/L		98
9) 1,3-butadiene	4.969	54	91915	41.61	ug/L		94
10) vinyl chloride	4.948	62	188311	46.41	ug/L		100
11) bromomethane	5.482	94	45487	21.77	ug/L		98
12) chloroethane	5.628	64	38916	21.90	ug/L		98
13) trichlorofluoromethane	6.125	101	145922	39.93	ug/L		97
14) vinyl bromide	5.984	106	71524	38.38	ug/L		97
15) ethyl ether	6.460	74	46182	51.07	ug/L		92
16) 2-chloropropane	6.653	43	161423	41.38	ug/L		95
17) acrolein	6.648	56	18447	61.45	ug/L		97
18) freon 113	6.904	151	90984	42.42	ug/L		98
19) 1,1-dichloroethene	6.868	96	97420	48.17	ug/L		92
20) acetone	6.836	58	30932	243.30	ug/L	#	73
21) acetonitrile	7.208	41	137231	511.63	ug/L		95
22) iodomethane	7.114	142	156721	49.27	ug/L		98
23) carbon disulfide	7.276	76	1277788	193.79	ug/L		99
24) methylene chloride	7.522	84	107137	50.41	ug/L		100
25) methyl acetate	7.286	43	69879	62.08	ug/L		97
26) methyl tert butyl ether	7.903	73	287515	46.79	ug/L		96
27) trans-1,2-dichloroethene	7.924	96	91128	49.14	ug/L		95
28) hexane	8.296	56	56831	47.62	ug/L		97
29) di-isopropyl ether	8.489	45	328343	46.73	ug/L		98
30) 2-butanone	9.096	72	33230	221.10	ug/L		90
31) 1,1-dichloroethane	8.473	63	155796	47.19	ug/L		99
32) chloroprene	8.589	53	124664	42.28	ug/L		93
33) acrylonitrile	7.767	53	28190	54.44	ug/L		93
34) vinyl acetate	8.400	86	16866	46.60	ug/L		93
35) ethyl tert-butyl ether	8.944	59	325062	46.89	ug/L		99
36) ethyl acetate	9.127	45	11472	54.21	ug/L	#	91
37) 2,2-dichloropropane	9.237	77	152306	43.01	ug/L		92
38) cis-1,2-dichloroethene	9.180	96	99632	49.10	ug/L		95
39) propionitrile	9.132	54	121983	539.82	ug/L		97
40) methyl acrylate	9.211	85	10127	45.68	ug/L	#	79
41) methacrylonitrile	9.352	67	29472	49.78	ug/L		94
42) bromochloromethane	9.472	128	45364	49.55	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:53:03 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.514	42	20814	47.23	ug/L		98
44) chloroform	9.556	83	146649	43.97	ug/L		97
45) tert-butyl formate	9.608	59	85655	45.55	ug/L		94
47) 1,1,1-trichloroethane	9.854	97	151501	44.28	ug/L		96
48) cyclohexane	10.001	84	168626	49.01	ug/L		97
50) 1,1-dichloropropene	10.022	75	109527	43.34	ug/L		98
51) carbon tetrachloride	10.069	117	126115	43.18	ug/L		98
52) tert-amyl alcohol	10.105	73	24830	239.85	ug/L		96
53) isopropyl acetate	10.152	87	18667	47.59	ug/L	#	85
56) n-butyl alcohol	10.686	56	139171	2282.54	ug/L		99
57) 2,2,4-trimethylpentane	10.403	57	382096	61.05	ug/L		96
58) benzene	10.267	78	358160	46.73	ug/L		97
59) tert-amyl methyl ether	10.362	73	312475	44.68	ug/L		99
60) heptane	10.550	57	56884	55.55	ug/L		96
61) 1,2-dichloroethane	10.262	62	101370	37.61	ug/L		98
62) ethyl acrylate	10.973	55	84793	42.99	ug/L		99
63) trichloroethene	11.010	95	83222	43.70	ug/L		99
64) 2-chloroethyl vinyl ether	11.805	63	247409	247.81	ug/L		99
65) methyl methacrylate	11.251	100	19808	45.94	ug/L	#	82
66) methylcyclohexane	11.355	83	159784	49.18	ug/L		99
67) 1,2-dichloropropane	11.292	63	87876	46.19	ug/L		98
68) dibromomethane	11.402	93	49445	44.96	ug/L		97
69) bromodichloromethane	11.559	83	112283	44.02	ug/L		98
70) 2-nitropropane	11.737	41	17129	43.06	ug/L		99
71) epichlorohydrin	11.884	57	55994	304.56	ug/L		99
72) cis-1,3-dichloropropene	12.051	75	136862	44.56	ug/L		94
73) 4-methyl-2-pentanone	12.150	58	128809	194.05	ug/L	#	85
74) isoamyl alcohol	12.145	70	58920	1132.85	ug/L	#	79
77) toluene	12.490	92	239630	47.40	ug/L		96
78) ethyl methacrylate	12.668	69	103305	43.14	ug/L		95
79) trans-1,3-dichloropropene	12.663	75	119974	40.84	ug/L		89
80) 1,1,2-trichloroethane	12.903	83	59753	44.33	ug/L		96
81) tetrachloroethene	13.118	164	70426	42.77	ug/L		97
82) 2-hexanone	13.086	58	114310	187.51	ug/L		94
83) 1,3-dichloropropane	13.107	76	121060	41.71	ug/L		93
84) butyl acetate	13.196	56	60685	48.89	ug/L		87
85) dibromochloromethane	13.390	129	82916	43.66	ug/L		99
86) 1,2-dibromoethane	13.568	107	98369	46.94	ug/L		100
87) n-butyl ether	14.096	57	383475	41.62	ug/L		100
88) chlorobenzene	14.122	112	240701	41.11	ug/L		99
89) 1,1,1,2-tetrachloroethane	14.190	131	98302	43.70	ug/L		99
90) ethylbenzene	14.195	91	522702	52.17	ug/L		99
91) m,p-xylene	14.331	106	366599	96.04	ug/L		98
92) o-xylene	14.786	91	470151	56.06	ug/L		96
93) styrene	14.797	104	283406	43.58	ug/L		96
94) butyl acrylate	14.587	55	179856	45.75	ug/L		98
95) n-amyl acetate	14.823	70	81403	48.91	ug/L		93
96) isopropylbenzene	15.189	105	534840	54.65	ug/L		98
97) bromoform	15.037	173	60359	44.10	ug/L		100
98) cis-1,4-dichloro-2-butene	15.189	88	35811	39.42	ug/L		90
101) 1,1,2,2-tetrachloroethane	15.466	83	113449	41.65	ug/L		99
102) trans-1,4-dichloro-2-b...	15.503	53	29454	43.20	ug/L		95
103) 1,2,3-trichloropropane	15.566	110	31912m	40.64	ug/L		
104) bromobenzene	15.613	156	120458	38.99	ug/L		99
105) n-propylbenzene	15.660	91	539366	44.19	ug/L		99
106) 2-chlorotoluene	15.806	126	114050	41.70	ug/L		99
107) 4-chlorotoluene	15.926	91	326473	40.52	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:53:03 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

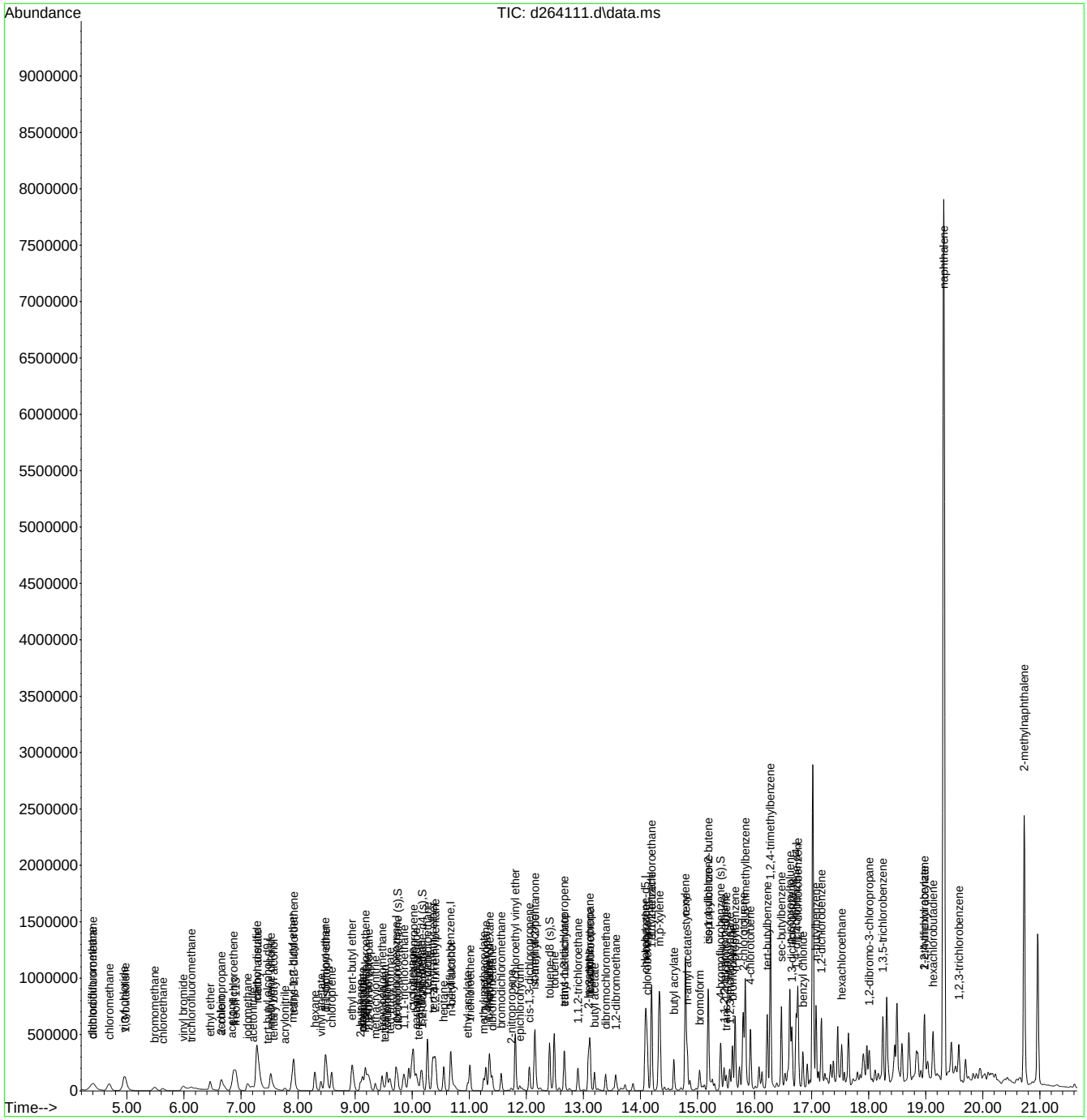
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) 1,3,5-trimethylbenzene	15.837	105	553111	59.29	ug/L		99
109) tert-butylbenzene	16.224	119	343245	47.43	ug/L		97
110) 1,2,4-trimethylbenzene	16.277	105	870367	93.58	ug/L		100
111) sec-butylbenzene	16.470	105	527168	49.46	ug/L		98
112) p-isopropyltoluene	16.617	119	505340	56.96	ug/L		99
113) 1,3-dichlorobenzene	16.653	146	239436	44.37	ug/L		99
114) 1,4-dichlorobenzene	16.758	146	246540	44.05	ug/L		100
115) 1,2-dichlorobenzene	17.171	146	246471	45.57	ug/L		99
116) benzyl chloride	16.847	91	244868	46.62	ug/L		99
117) n-butylbenzene	17.077	92	237842	57.40	ug/L		98
118) 2-ethylhexyl acrylate	18.976	70	25512	29.22	ug/L	#	74
119) hexachloroethane	17.527	201	76875	55.81	ug/L		93
120) 1,2-dibromo-3-chloropr...	18.008	75	24926	51.06	ug/L		96
121) 1,3,5-trichlorobenzene	18.249	180	199096	54.72	ug/L		99
122) 1,2,4-trichlorobenzene	18.976	180	156050	47.33	ug/L		98
123) hexachlorobutadiene	19.127	225	102870	62.03	ug/L		99
124) naphthalene	19.316	128	7627015	1001.31	ug/L		89
125) 1,2,3-trichlorobenzene	19.582	180	122754	42.47	ug/L		99
126) 2-methylnaphthalene	20.728	142	1370146	870.07	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:53:03 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Manual Integration Approval Summary

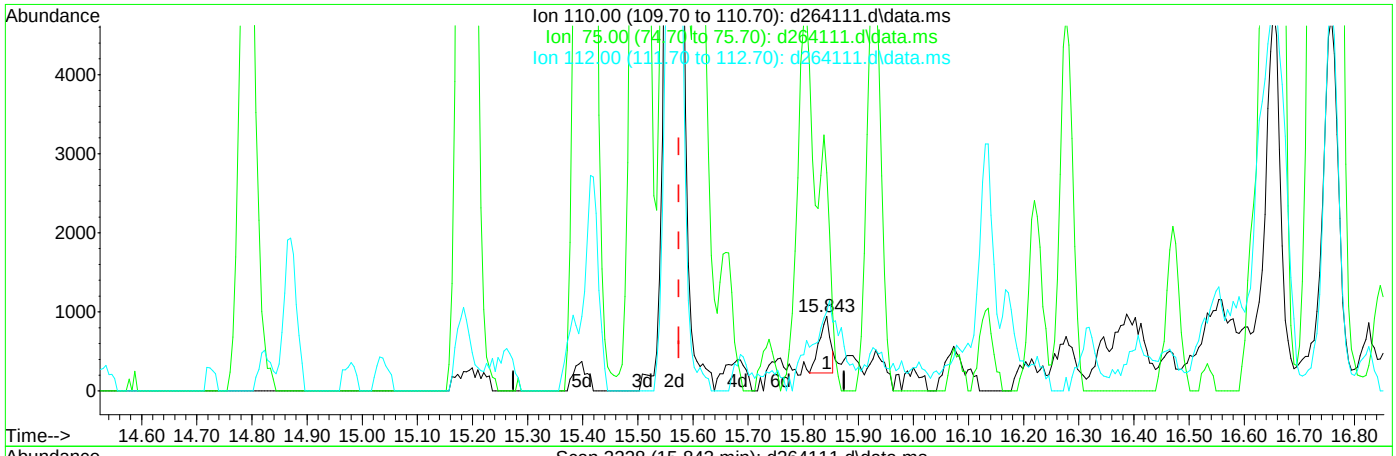
Sample Number:	JC86406-3MS	**Method:**	SW846 8260C
Lab FileID:	D264111.D	**Analyst approved:**	04/30/19 15:41 Lotus Acosta
Injection Time:	04/29/19 12:48	**Supervisor approved:**	04/30/19 16:08 Mei Chen

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,2,3-Trichloropropane	96-18-4		15.57	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 13:10:46 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



TIC: d264111.d\data.ms

(103) 1,2,3-trichloropropane

15.843min (+0.269) 1.27ug/L

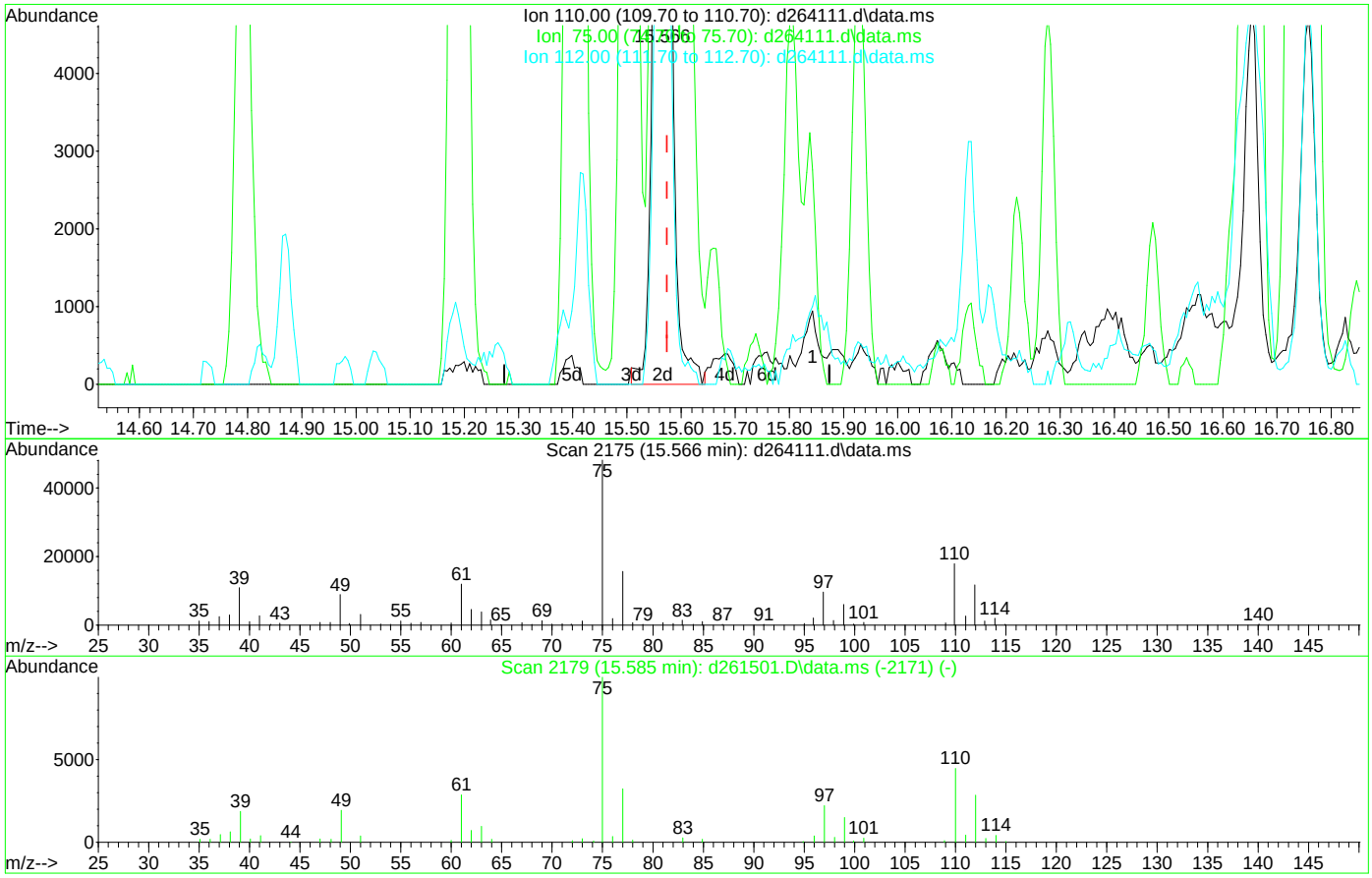
response 994

Ion	Exp%	Act%
110.00	100	100
75.00	227.10	248.67
112.00	62.80	62.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264111.d
Acq On : 29 Apr 2019 12:48 pm
Operator : thienn
Sample : JC86406-3MS Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 13:10:46 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



TIC: d264111.d\data.ms

(103) 1,2,3-trichloropropane

15.566min (-0.009) 40.64ug/L m

response 31912

Ion	Exp%	Act%
110.00	100	100
75.00	227.10	268.85#
112.00	62.80	65.15
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264112.d
Acq On : 29 Apr 2019 1:16 pm
Operator : thienn
Sample : JC86406-3MSD Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 15:02:01 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.463	65	92143	500.00	ug/L	0.00
5) pentafluorobenzene	9.717	168	166303	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	255554	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	258937	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	171743	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.743	113	77641	49.48	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.96%			
55) 1,2-dichloroethane-d4 (s)	10.172	65	79765	41.64	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 83.28%			
76) toluene-d8 (s)	12.405	98	303053	48.00	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.00%			
100) 4-bromofluorobenzene (s)	15.408	95	142870	44.89	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 89.78%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	56703	232.12	ug/L	97
4) 1,4-dioxane	11.339	88	29717	1334.32	ug/L	90
6) chlorodifluoromethane	4.398	51	130152	37.10	ug/L	98
7) dichlorodifluoromethane	4.403	85	171409	35.50	ug/L	99
8) chloromethane	4.696	50	167925	41.54	ug/L	98
9) 1,3-butadiene	4.968	54	92949	41.51	ug/L	95
10) vinyl chloride	4.947	62	182881	44.46	ug/L	99
11) bromomethane	5.496	94	51154	24.15	ug/L	96
12) chloroethane	5.632	64	45026	24.99	ug/L	98
13) trichlorofluoromethane	6.124	101	154287	41.64	ug/L	99
14) vinyl bromide	5.993	106	77041	40.77	ug/L	97
15) ethyl ether	6.459	74	51329	55.98	ug/L	94
16) 2-chloropropane	6.658	43	173645	43.91	ug/L	94
17) acrolein	6.647	56	21205	69.67	ug/L	98
18) freon 113	6.909	151	100388	46.16	ug/L	99
19) 1,1-dichloroethene	6.872	96	106763	52.06	ug/L	88
20) acetone	6.841	58	33622	260.83	ug/L #	69
21) acetonitrile	7.202	41	141977	522.06	ug/L	99
22) iodomethane	7.118	142	175557	54.43	ug/L	97
23) carbon disulfide	7.280	76	1281152	191.63	ug/L	98
24) methylene chloride	7.521	84	116491	54.05	ug/L	99
25) methyl acetate	7.285	43	72902	63.88	ug/L	96
26) methyl tert butyl ether	7.902	73	317373	50.94	ug/L	97
27) trans-1,2-dichloroethene	7.923	96	100325	53.35	ug/L	95
28) hexane	8.295	56	59199	48.92	ug/L	96
29) di-isopropyl ether	8.493	45	354751	49.80	ug/L	97
30) 2-butanone	9.095	72	36224	237.72	ug/L #	84
31) 1,1-dichloroethane	8.472	63	167127	49.92	ug/L	99
32) chloroprene	8.587	53	136327	45.60	ug/L	93
33) acrylonitrile	7.766	53	31357	59.72	ug/L	91
34) vinyl acetate	8.399	86	18728	51.03	ug/L	95
35) ethyl tert-butyl ether	8.948	59	356996	50.79	ug/L	98
36) ethyl acetate	9.121	45	12176	56.74	ug/L #	64
37) 2,2-dichloropropane	9.241	77	167127	46.54	ug/L	91
38) cis-1,2-dichloroethene	9.178	96	109043	53.00	ug/L	95
39) propionitrile	9.137	54	129589	565.61	ug/L	97
40) methyl acrylate	9.210	85	11583	51.31	ug/L	96
41) methacrylonitrile	9.351	67	32460	54.07	ug/L	93
42) bromochloromethane	9.471	128	49624	53.46	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264112.d
Acq On : 29 Apr 2019 1:16 pm
Operator : thienn
Sample : JC86406-3MSD Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 15:02:01 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.524	42	23043	51.57	ug/L		96
44) chloroform	9.555	83	158863	46.98	ug/L		96
45) tert-butyl formate	9.613	59	96945	50.84	ug/L		97
47) 1,1,1-trichloroethane	9.858	97	165764	47.79	ug/L		97
48) cyclohexane	10.005	84	176105	50.48	ug/L		96
50) 1,1-dichloropropene	10.021	75	120113	46.88	ug/L		99
51) carbon tetrachloride	10.073	117	139901	47.24	ug/L		96
52) tert-amyl alcohol	10.115	73	27355	260.62	ug/L		95
53) isopropyl acetate	10.157	87	20567	51.72	ug/L	#	85
56) n-butyl alcohol	10.685	56	149362	2419.80	ug/L		93
57) 2,2,4-trimethylpentane	10.402	57	402365	63.51	ug/L		96
58) benzene	10.272	78	387752	49.97	ug/L		97
59) tert-amyl methyl ether	10.361	73	345058	48.74	ug/L		98
60) heptane	10.554	57	59785	57.67	ug/L		99
61) 1,2-dichloroethane	10.266	62	108973	39.94	ug/L		97
62) ethyl acrylate	10.972	55	92671	46.41	ug/L		99
63) trichloroethene	11.009	95	90638	47.02	ug/L		97
64) 2-chloroethyl vinyl ether	11.809	63	264156	261.35	ug/L		100
65) methyl methacrylate	11.255	100	22314	51.13	ug/L	#	74
66) methylcyclohexane	11.354	83	172033	52.30	ug/L		98
67) 1,2-dichloropropane	11.291	63	96041	49.86	ug/L		99
68) dibromomethane	11.401	93	53532	48.08	ug/L		98
69) bromodichloromethane	11.558	83	121217	46.94	ug/L		99
70) 2-nitropropane	11.736	41	18350	45.56	ug/L		99
71) epichlorohydrin	11.882	57	59419	319.25	ug/L		98
72) cis-1,3-dichloropropene	12.055	75	149786	48.17	ug/L		92
73) 4-methyl-2-pentanone	12.154	58	140487	209.06	ug/L	#	84
74) isoamyl alcohol	12.144	70	63221	1200.71	ug/L	#	81
77) toluene	12.489	92	258665	52.22	ug/L		97
78) ethyl methacrylate	12.672	69	112013	47.75	ug/L		96
79) trans-1,3-dichloropropene	12.662	75	129484	44.99	ug/L		88
80) 1,1,2-trichloroethane	12.908	83	63904	48.39	ug/L		95
81) tetrachloroethene	13.117	164	77597	48.10	ug/L		96
82) 2-hexanone	13.085	58	123093	206.10	ug/L		94
83) 1,3-dichloropropane	13.106	76	128814	45.30	ug/L		93
84) butyl acetate	13.195	56	64350	52.91	ug/L		88
85) dibromochloromethane	13.389	129	89988	48.37	ug/L		99
86) 1,2-dibromoethane	13.567	107	106044	51.65	ug/L		100
87) n-butyl ether	14.100	57	413441	45.80	ug/L		99
88) chlorobenzene	14.121	112	259802	45.29	ug/L		100
89) 1,1,1,2-tetrachloroethane	14.189	131	110198	50.01	ug/L		100
90) ethylbenzene	14.199	91	555210	56.56	ug/L		98
91) m,p-xylene	14.335	106	391050	104.56	ug/L		98
92) o-xylene	14.785	91	499844	60.84	ug/L		96
93) styrene	14.796	104	303729	47.67	ug/L		98
94) butyl acrylate	14.586	55	195258	50.69	ug/L		97
95) n-amyl acetate	14.822	70	87131	53.43	ug/L		95
96) isopropylbenzene	15.188	105	576038	60.08	ug/L		98
97) bromoform	15.041	173	66331	49.47	ug/L		99
98) cis-1,4-dichloro-2-butene	15.193	88	38024	42.72	ug/L		95
101) 1,1,2,2-tetrachloroethane	15.465	83	121316	45.71	ug/L		100
102) trans-1,4-dichloro-2-b...	15.502	53	29153	43.88	ug/L		89
103) 1,2,3-trichloropropane	15.564	110	34809	45.50	ug/L		87
104) bromobenzene	15.612	156	130058	43.21	ug/L		99
105) n-propylbenzene	15.659	91	572413	48.13	ug/L		99
106) 2-chlorotoluene	15.805	126	122604	46.00	ug/L		97
107) 4-chlorotoluene	15.931	91	349650	44.54	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264112.d
Acq On : 29 Apr 2019 1:16 pm
Operator : thienn
Sample : JC86406-3MSD Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 15:02:01 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

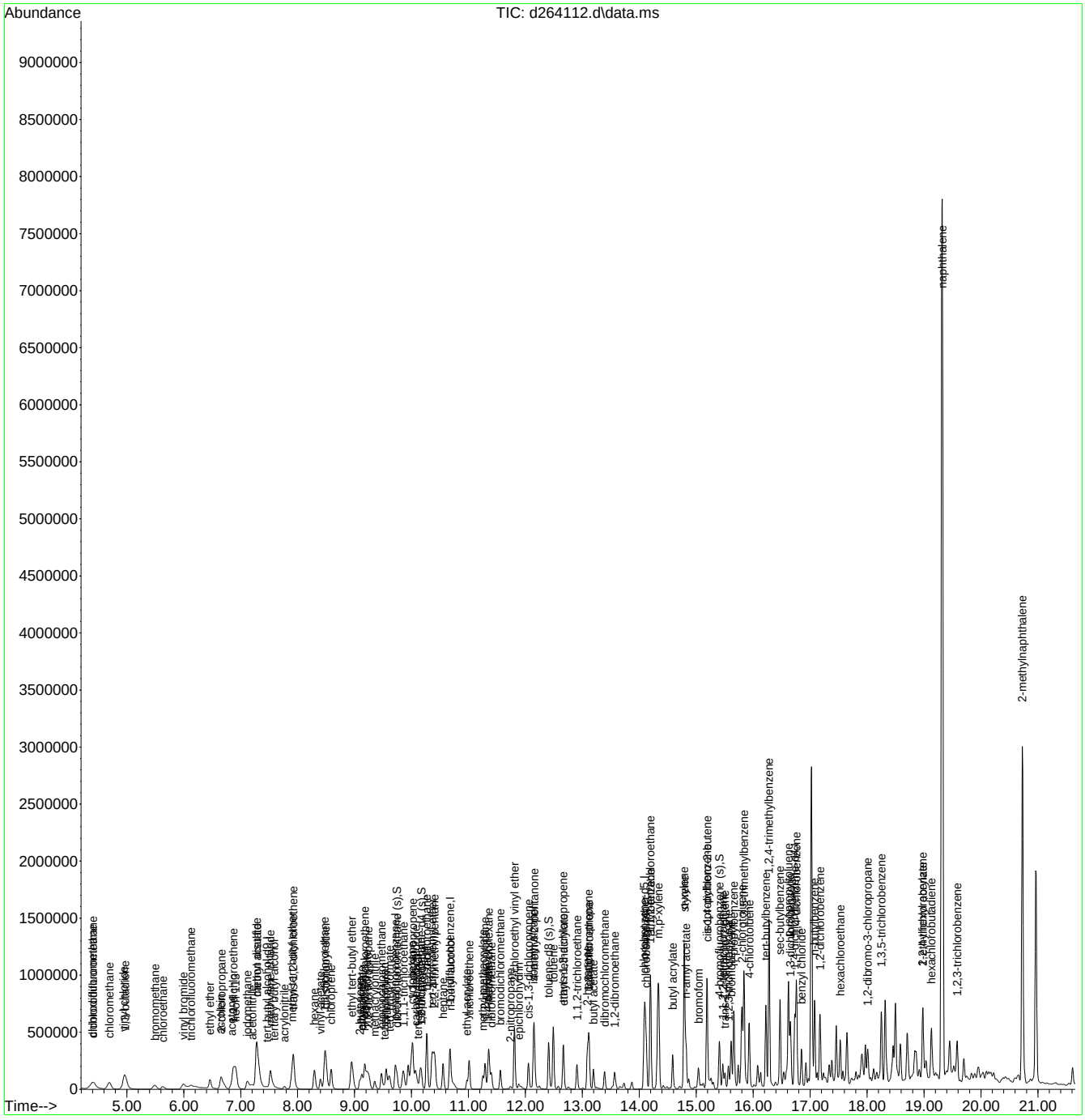
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) 1,3,5-trimethylbenzene	15.836	105	584518	64.31	ug/L		99
109) tert-butylbenzene	16.223	119	376232	53.36	ug/L		98
110) 1,2,4-trimethylbenzene	16.276	105	898177	99.10	ug/L		99
111) sec-butylbenzene	16.469	105	570244	54.90	ug/L		98
112) p-isopropyltoluene	16.621	119	540017	62.47	ug/L		99
113) 1,3-dichlorobenzene	16.652	146	254728	48.44	ug/L		98
114) 1,4-dichlorobenzene	16.757	146	262742	48.18	ug/L		98
115) 1,2-dichlorobenzene	17.175	146	264096	50.11	ug/L		100
116) benzyl chloride	16.846	91	258186	50.45	ug/L		100
117) n-butylbenzene	17.076	92	253414	62.76	ug/L		98
118) 2-ethylhexyl acrylate	18.975	70	28974	34.05	ug/L	#	70
119) hexachloroethane	17.531	201	85544	63.73	ug/L		93
120) 1,2-dibromo-3-chloropr...	18.007	75	26216	55.11	ug/L		94
121) 1,3,5-trichlorobenzene	18.253	180	215594	60.81	ug/L		100
122) 1,2,4-trichlorobenzene	18.975	180	166517	51.70	ug/L		98
123) hexachlorobutadiene	19.126	225	112214	69.44	ug/L		99
124) naphthalene	19.320	128	7603905	1024.44	ug/L		89
125) 1,2,3-trichlorobenzene	19.581	180	131832	46.63	ug/L		99
126) 2-methylnaphthalene	20.727	142	1688061	1100.09	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264112.d
Acq On : 29 Apr 2019 1:16 pm
Operator : thienn
Sample : JC86406-3MSD Inst : MSD
Misc : ms34034,vd10644,3.8,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 15:02:01 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225709.d
Acq On : 25 Apr 2019 12:11 pm
Operator : thienn
Sample : jc86863-1dup Inst : GCMSI
Misc : MS34257,VI9093,6.1,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:53:01 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

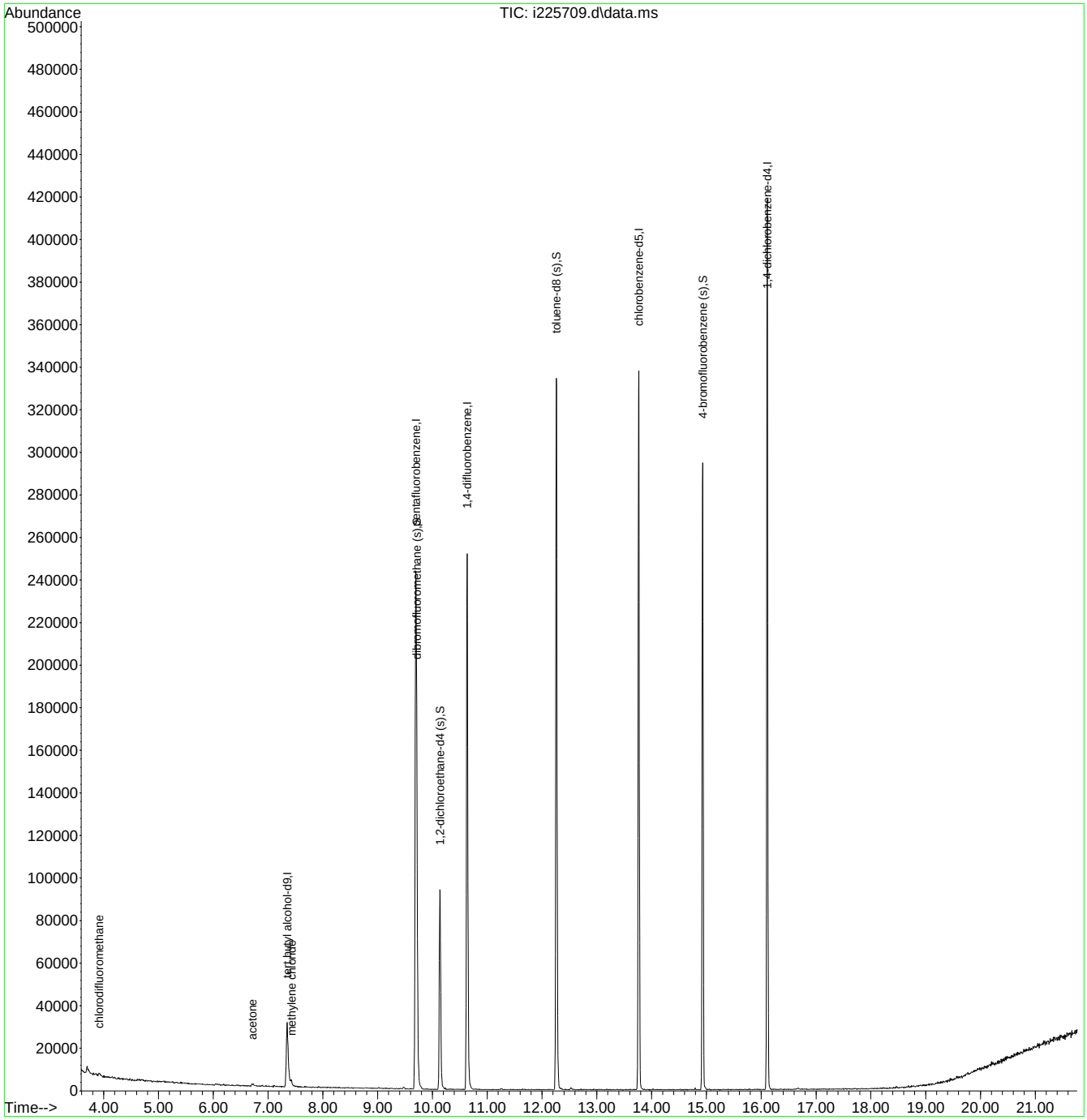
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.348	65	44848	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	150336	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	195051	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.765	117	168860	50.00	ug/L	-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	98190	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	61808	52.32	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.64%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	68153	55.98	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 111.96%			
74) toluene-d8 (s)	12.259	98	206688	47.75	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.50%			
97) 4-bromofluorobenzene (s)	14.932	95	78231	52.25	ug/L	-0.02
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.50%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.917	51	2771	2.23	ug/L	89
19) acetone	6.715	43	2574	10.16	ug/L #	44
24) methylene chloride	7.431	84	986	0.95	ug/L #	76

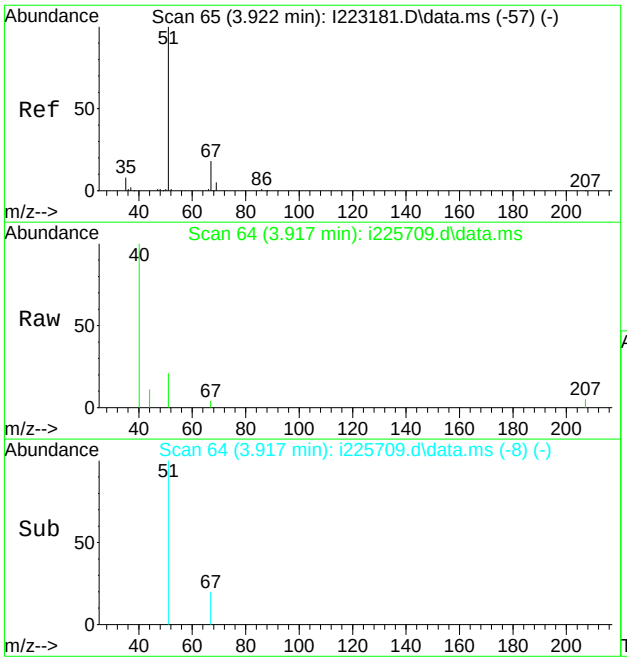
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225709.d
Acq On : 25 Apr 2019 12:11 pm
Operator : thienn
Sample : jc86863-1dup Inst : GCMSI
Misc : MS34257,VI9093,6.1,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:53:01 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

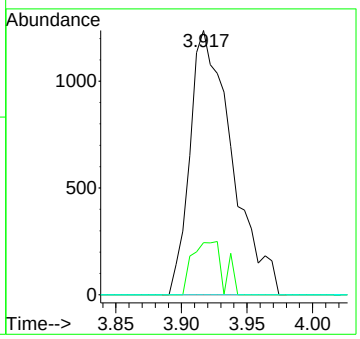


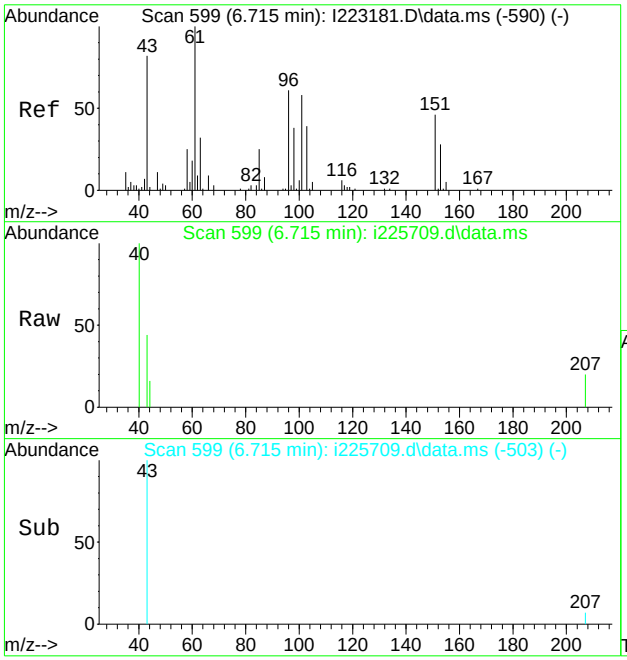


#6
chlorodifluoromethane
Concen: 2.23 ug/L
RT: 3.917 min Scan# 64
Delta R.T. -0.005 min
Lab File: i225709.d
Acq: 25 Apr 2019 12:11 pm

Tgt Ion: 51 Resp: 2771

Ion	Ratio	Lower	Upper
51	100		
67	19.7	0.0	47.8
50	0.0	0.0	39.2

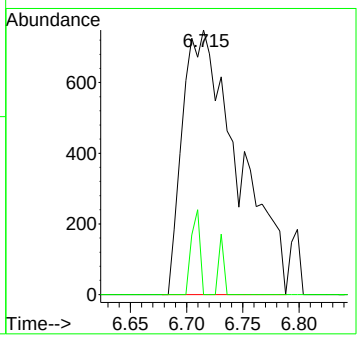


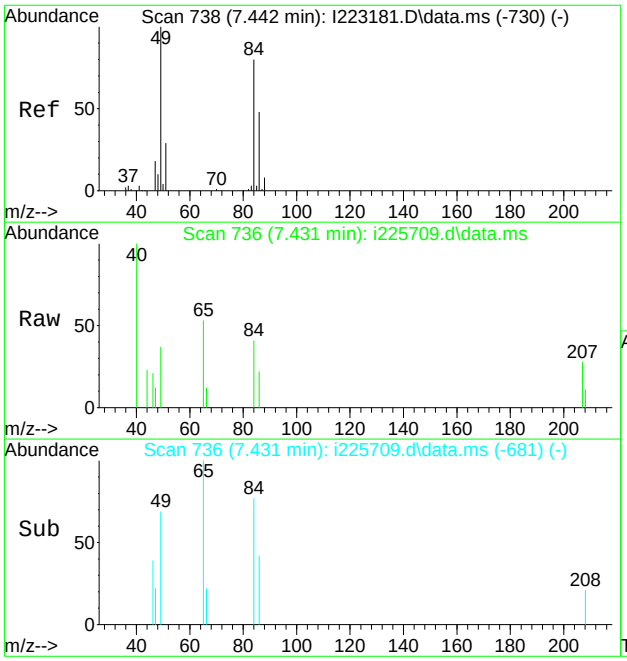


#19
acetone
Concen: 10.16 ug/L
RT: 6.715 min Scan# 599
Delta R.T. -0.000 min
Lab File: i225709.d
Acq: 25 Apr 2019 12:11 pm

Tgt Ion: 43 Resp: 2574

Ion	Ratio	Lower	Upper
43	100		
58	0.0	0.2	60.2#

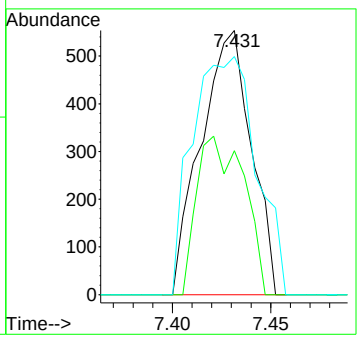




#24
methylene chloride
Concen: 0.95 ug/L
RT: 7.431 min Scan# 736
Delta R.T. -0.011 min
Lab File: i225709.d
Acq: 25 Apr 2019 12:11 pm

Tgt Ion: 84 Resp: 986

Ion	Ratio	Lower	Upper
84	100		
86	54.5	30.4	90.4
49	90.1	95.7	155.7#



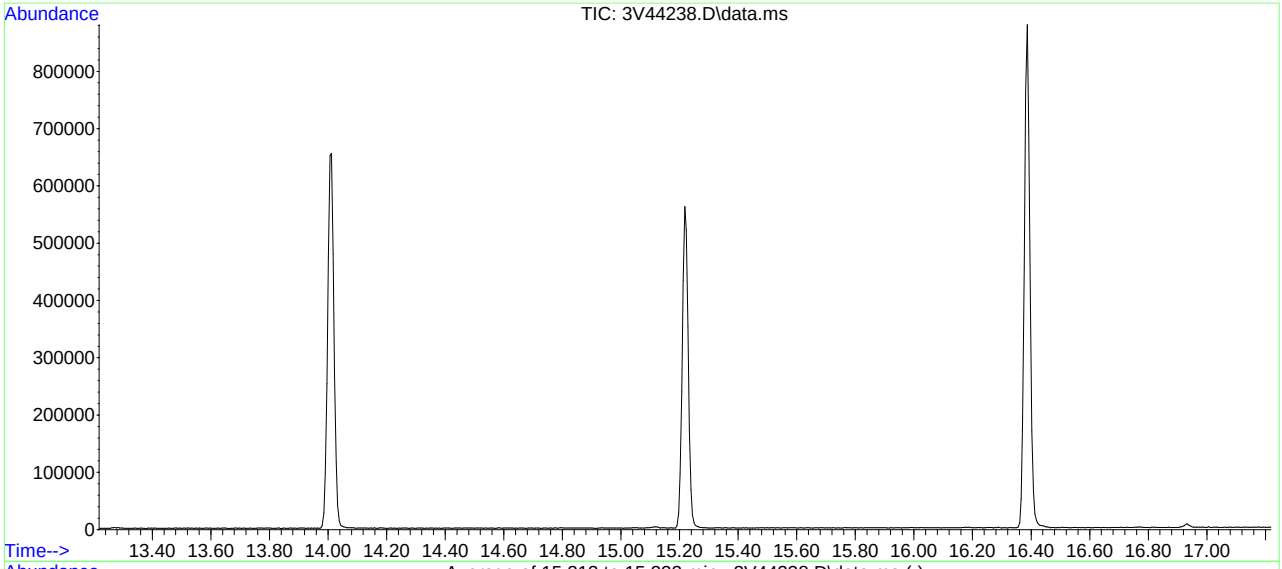
7.5.1

7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\v3v1775\3V44238.D Vial: 3
Acq On : 22 Apr 2019 2:30 pm Operator: roberts
Sample : BFB Inst : MS3V
Misc : MS31723,V3V1775,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2246, 2247, 2248; Background Corrected with Scan 2239

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	18939	PASS
75	95	30	60	47.5	50821	PASS
95	95	100	100	100.0	107059	PASS
96	95	5	9	7.0	7528	PASS
173	174	0.00	2	0.3	246	PASS
174	95	50	120	79.6	85189	PASS
175	174	5	9	7.6	6483	PASS
176	174	95	101	96.2	81992	PASS
177	176	5	9	6.6	5450	PASS

3V44238.D M3V1775.M Thu Apr 25 15:08:37 2019 GCMS3V

Average of 15.213 to 15.223 min.: 3V44238.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	864	51.05	5884	67.00	283	78.95	3619
37.05	4834	52.00	288	68.00	10599	80.00	1063
38.05	4364	55.00	298	69.00	10269	80.95	3653
39.05	1718	56.00	1535	70.05	809	81.95	823
40.00	55	57.00	2835	72.00	530	87.00	5090
44.00	475	60.00	876	73.00	4572	88.00	4760
45.00	1003	61.00	4639	74.00	16848	90.85	429
47.05	1409	62.00	4639	75.00	50821	92.00	2858
48.05	502	63.00	3649	76.05	4294	93.00	4493
49.00	4136	64.05	472	76.95	672	94.00	11564
50.05	18939	65.05	497	77.95	520	95.00	107059

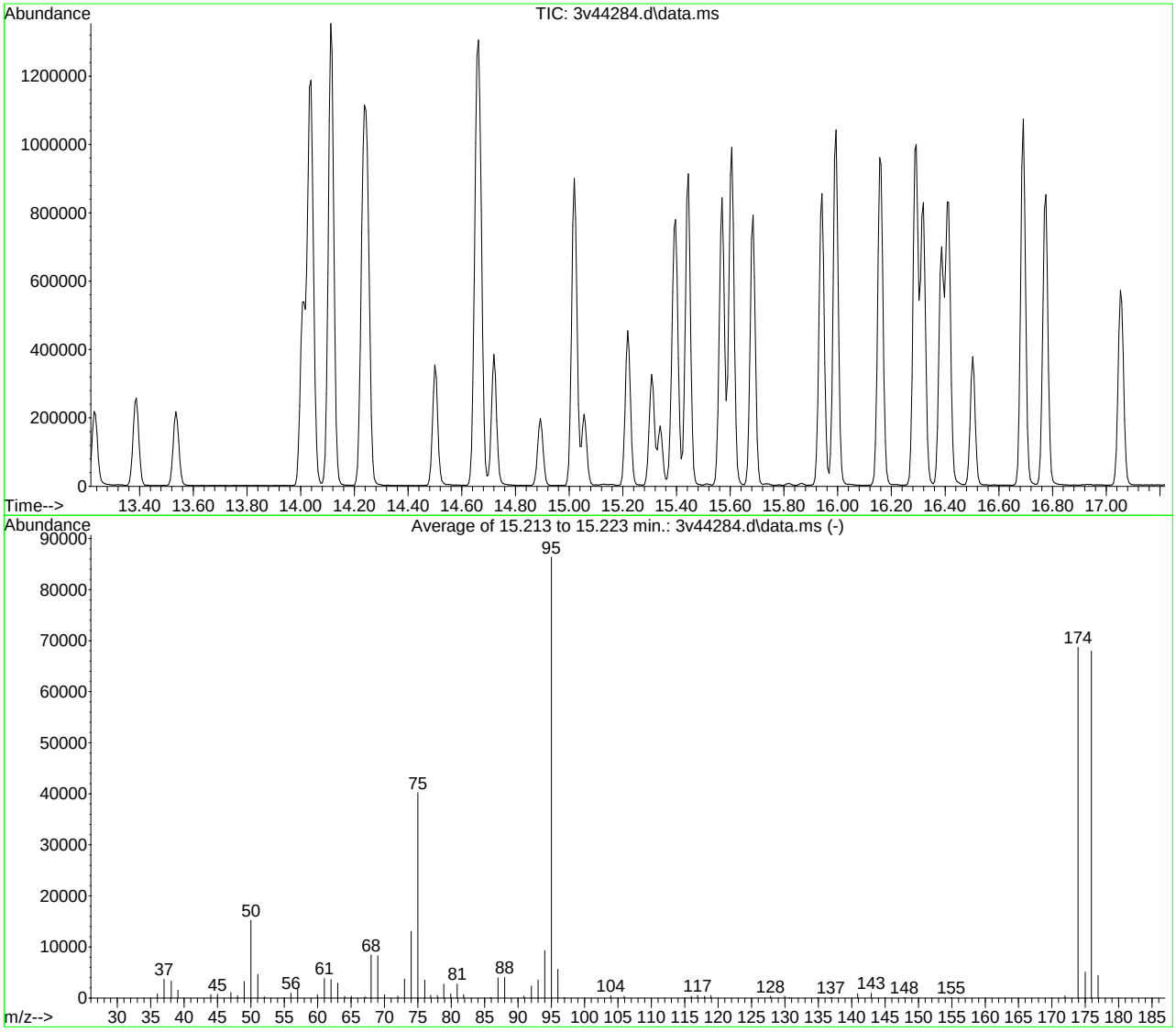
Average of 15.213 to 15.223 min.: 3V44238.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	7528	129.90	394	173.00	246		
97.00	84	130.90	68	173.95	85189		
103.95	523	134.90	140	175.00	6483		
105.95	477	136.90	70	175.90	81992		
106.90	128	140.90	1024	176.90	5450		
115.85	448	142.90	1072	177.90	142		
116.90	698	144.95	170	206.95	36		
117.95	443	147.95	263				
118.90	636	154.95	247				
127.90	364	156.90	150				
128.90	65	171.95	635				

SW-846 Method 8260

Data File : C:\msdchem\1\data\kenrickb\v3v1778\3v44284.d Vial: 1
Acq On : 24 Apr 2019 12:21 pm Operator: roberts
Sample : BFB Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3V1775.M (RTE Integrator)
Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2246, 2247, 2248; Background Corrected with Scan 2238

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	15249	PASS
75	95	30	60	46.6	40251	PASS
95	95	100	100	100.0	86368	PASS
96	95	5	9	6.5	5623	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	79.6	68723	PASS
175	174	5	9	7.4	5086	PASS
176	174	95	101	98.9	67952	PASS
177	176	5	9	6.5	4390	PASS

3v44284.d M3V1775.M Fri Apr 26 14:01:07 2019

Average of 15.213 to 15.223 min.: 3v44284.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	763	52.00	234	68.00	8415	79.95	765
37.00	3654	54.95	29	69.00	8259	80.90	2750
38.05	3307	56.00	931	70.00	651	81.85	616
39.05	1543	57.00	1840	72.00	384	85.90	66
44.00	652	59.95	655	73.00	3691	87.00	3966
45.00	720	61.00	3801	74.00	13054	88.00	3996
47.00	1106	62.00	3622	75.00	40251	90.90	368
48.00	457	63.00	2922	76.05	3498	92.00	2334
49.00	3175	64.05	321	76.95	526	93.00	3490
50.00	15249	65.05	320	77.95	464	94.00	9294
51.05	4588	67.15	244	78.90	2708	95.00	86368

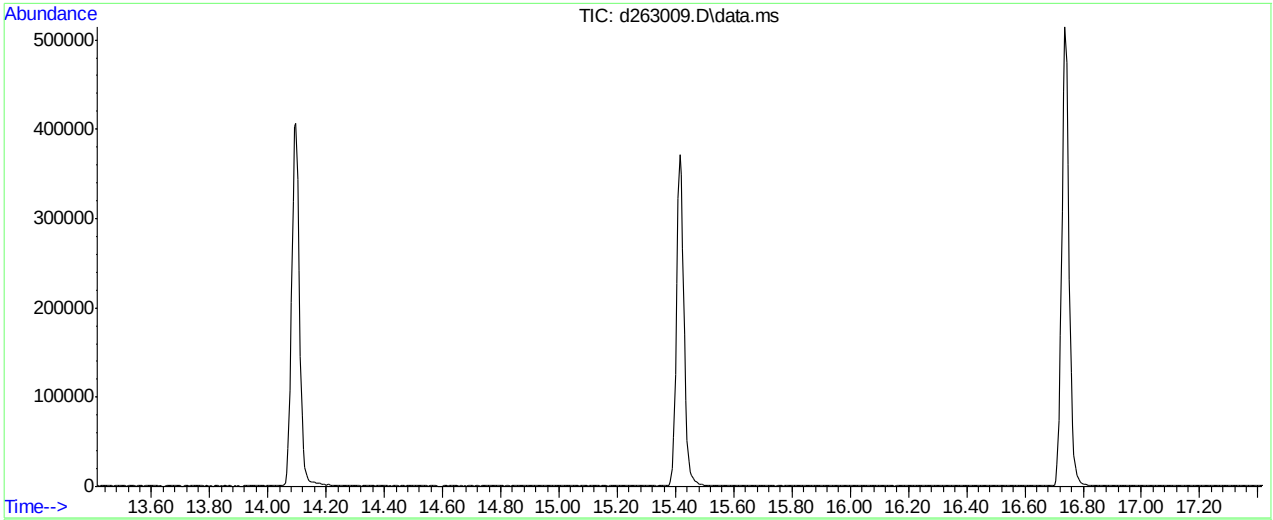
Average of 15.213 to 15.223 min.: 3v44284.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	5623	134.90	71	176.90	4390		
97.00	130	136.90	78				
103.90	411	140.90	809				
105.90	348	142.95	928				
115.95	337	145.00	65				
116.90	525	147.90	69				
117.95	316	154.90	72				
118.90	490	171.95	413				
127.85	338	173.90	68723				
129.95	322	175.00	5086				
130.70	64	175.90	67952				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VD10606\d263009.D Vial: 1
Acq On : 14 Mar 2019 5:27 pm Operator: juntaep
Sample : bfb Inst : MSD
Misc : ms33018,vd10606,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2145, 2146, 2147; Background Corrected with Scan 2136

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.5	14132	PASS
75	95	30	60	49.8	36037	PASS
95	95	100	100	100.0	72394	PASS
96	95	5	9	6.7	4865	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	82.0	59349	PASS
175	174	5	9	7.2	4244	PASS
176	174	95	101	98.1	58248	PASS
177	176	5	9	6.6	3842	PASS

d263009.D MD10606.M Fri Mar 15 14:39:40 2019 RPT1

Average of 15.409 to 15.419 min.: d263009.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	631	51.00	4436	68.00	7382	79.90	497
37.00	3812	52.00	190	69.00	7174	80.90	1748
38.00	3294	54.95	216	70.00	514	81.85	347
39.00	1353	56.00	1007	71.95	399	86.95	2746
39.90	34	57.00	2002	73.00	3221	87.95	2623
44.00	309	60.00	622	74.00	11864	90.90	267
45.00	692	61.00	3296	75.00	36037	91.95	2091
47.00	833	62.00	3294	76.00	3063	93.00	2761
47.95	458	63.00	2546	77.00	416	94.00	8038
49.00	2990	64.00	228	78.00	261	95.00	72394
50.00	14132	67.05	124	78.85	1742	96.00	4865

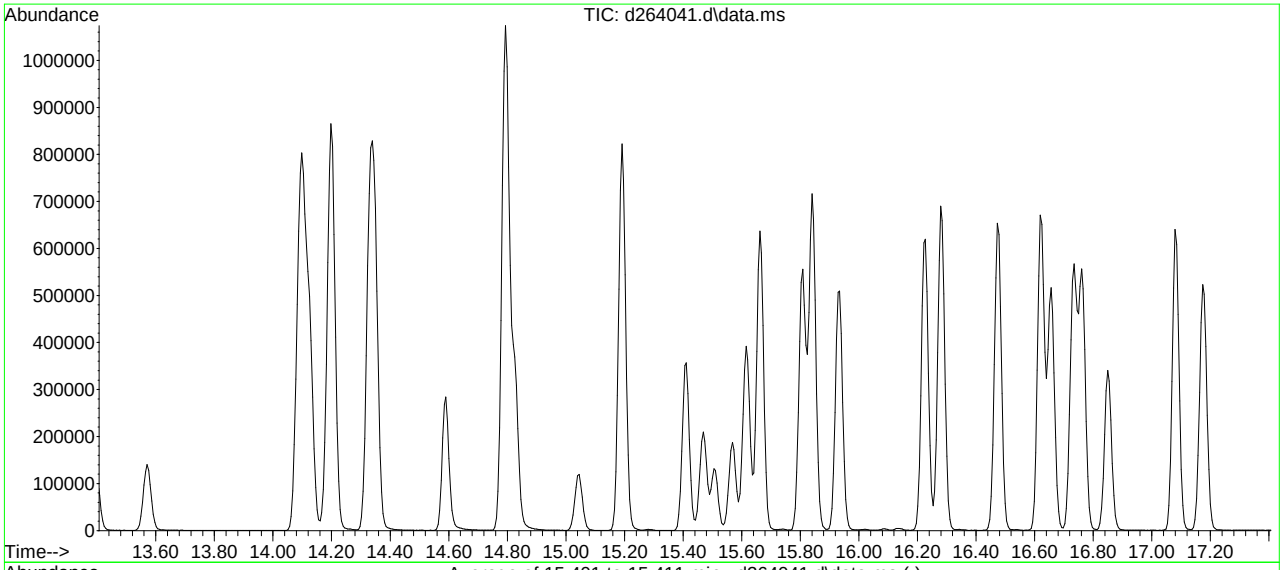
Average of 15.409 to 15.419 min.: d263009.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	58	147.85	190				
103.90	324	154.90	174				
105.85	269	156.90	121				
115.85	212	173.90	59349				
116.90	399	174.90	4244				
117.85	230	175.90	58248				
118.85	306	176.90	3842				
127.90	270	207.00	5				
129.95	218						
140.90	584						
142.90	641						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ja...-19\vd10643\d264041.d Vial: 3
Acq On : 25 Apr 2019 7:36 am Operator: thienn
Sample : BFB Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2144, 2145, 2146; Background Corrected with Scan 2135

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	12537	PASS
75	95	30	60	48.0	33813	PASS
95	95	100	100	100.0	70395	PASS
96	95	5	9	7.1	4987	PASS
173	174	0.00	2	0.5	299	PASS
174	95	50	150	80.9	56963	PASS
175	174	5	9	7.3	4185	PASS
176	174	95	101	96.8	55131	PASS
177	176	5	9	6.5	3598	PASS

d264041.d MD10606.M Thu Apr 25 21:07:55 2019

Average of 15.401 to 15.411 min.: d264041.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	619	51.00	3846	67.05	145	78.90	1324
37.00	3190	51.95	166	68.00	6529	79.85	468
38.00	2797	54.95	211	69.00	6529	80.90	1420
39.00	1100	56.00	922	69.95	496	81.90	324
39.95	32	57.00	1723	72.00	365	86.90	2949
43.95	280	59.95	601	73.00	2785	87.90	2819
45.00	492	61.00	2896	74.00	10712	90.90	231
47.00	948	62.00	2911	75.00	33813	91.95	1708
47.90	362	63.00	2214	76.00	2864	93.00	2585
49.00	2633	64.00	240	77.00	409	94.00	7570
50.00	12537	65.00	105	77.90	321	95.00	70395

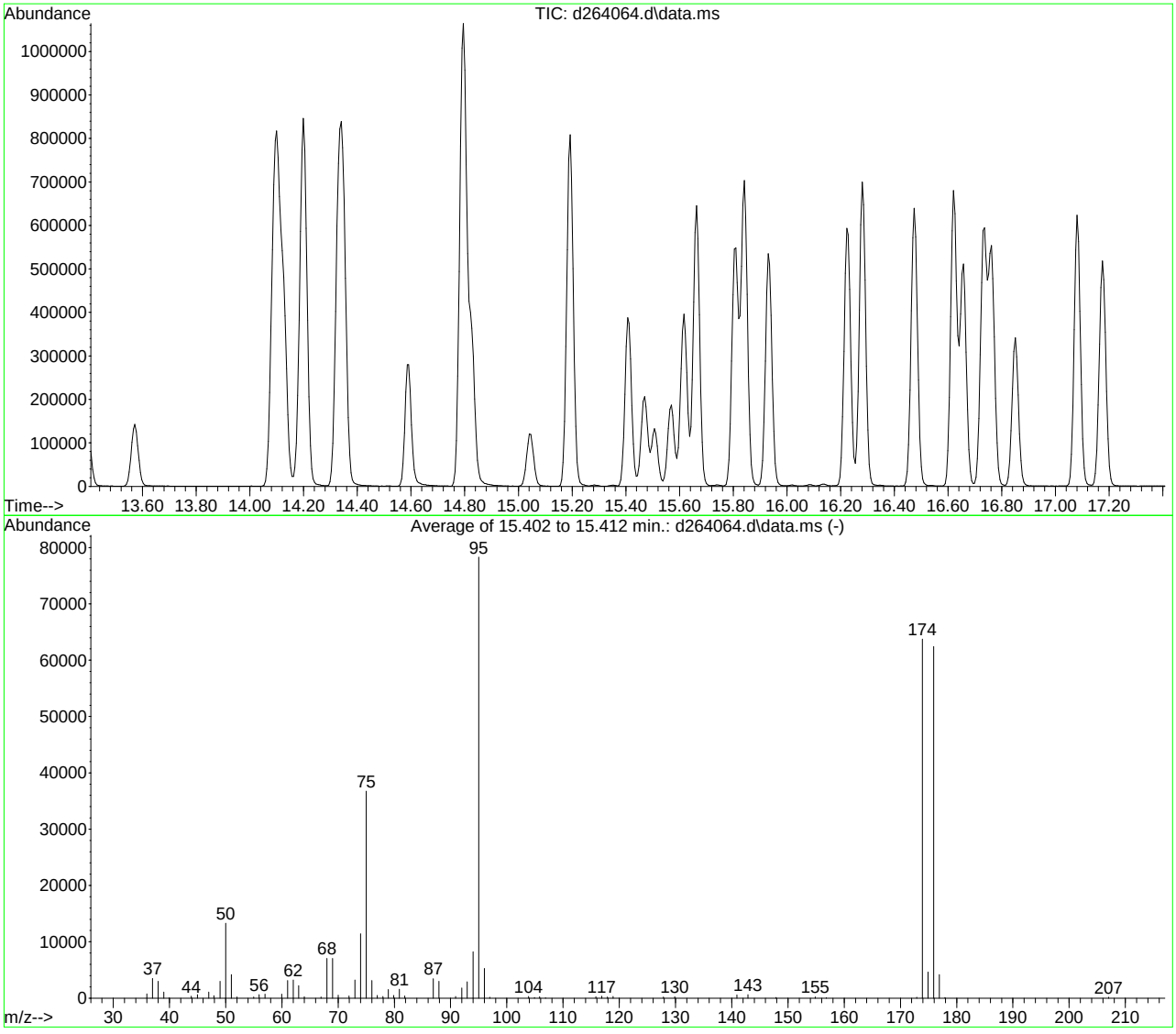
Average of 15.401 to 15.411 min.: d264041.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	4987	140.90	510				
96.95	117	142.90	512				
103.90	272	147.90	57				
104.90	77	154.85	114				
105.90	259	171.85	136				
115.90	206	172.90	299				
116.85	374	173.90	56963				
117.90	252	174.90	4185				
118.90	365	175.90	55131				
127.85	222	176.90	3598				
129.80	233						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ke... 29\vd10644\d264064.d Vial: 3
Acq On : 26 Apr 2019 7:54 am Operator: juntaep
Sample : BFB Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2144, 2145, 2146; Background Corrected with Scan 2135

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	13297	PASS
75	95	30	60	46.9	36739	PASS
95	95	100	100	100.0	78291	PASS
96	95	5	9	6.7	5258	PASS
173	174	0.00	2	0.3	163	PASS
174	95	50	150	81.4	63749	PASS
175	174	5	9	7.2	4619	PASS
176	174	95	101	97.9	62424	PASS
177	176	5	9	6.7	4170	PASS

d264064.d MD10606.M Mon Apr 29 01:44:35 2019

Average of 15.402 to 15.412 min.: d264064.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	737	51.00	4157	68.00	7062	79.90	493
37.00	3495	52.00	202	69.00	7040	80.90	1589
38.00	2982	55.00	209	70.00	547	81.85	397
39.00	1098	55.95	620	71.95	372	86.90	3425
39.95	47	57.00	707	73.00	3210	87.90	2971
43.90	352	59.95	695	74.00	11432	90.90	280
45.00	610	61.00	3104	75.00	36739	92.00	1804
47.00	1069	62.00	3231	76.00	3148	92.95	2892
47.90	459	63.00	2226	76.95	494	94.00	8232
49.00	3011	64.00	247	77.95	319	95.00	78291
50.00	13297	66.95	216	78.90	1519	96.00	5258

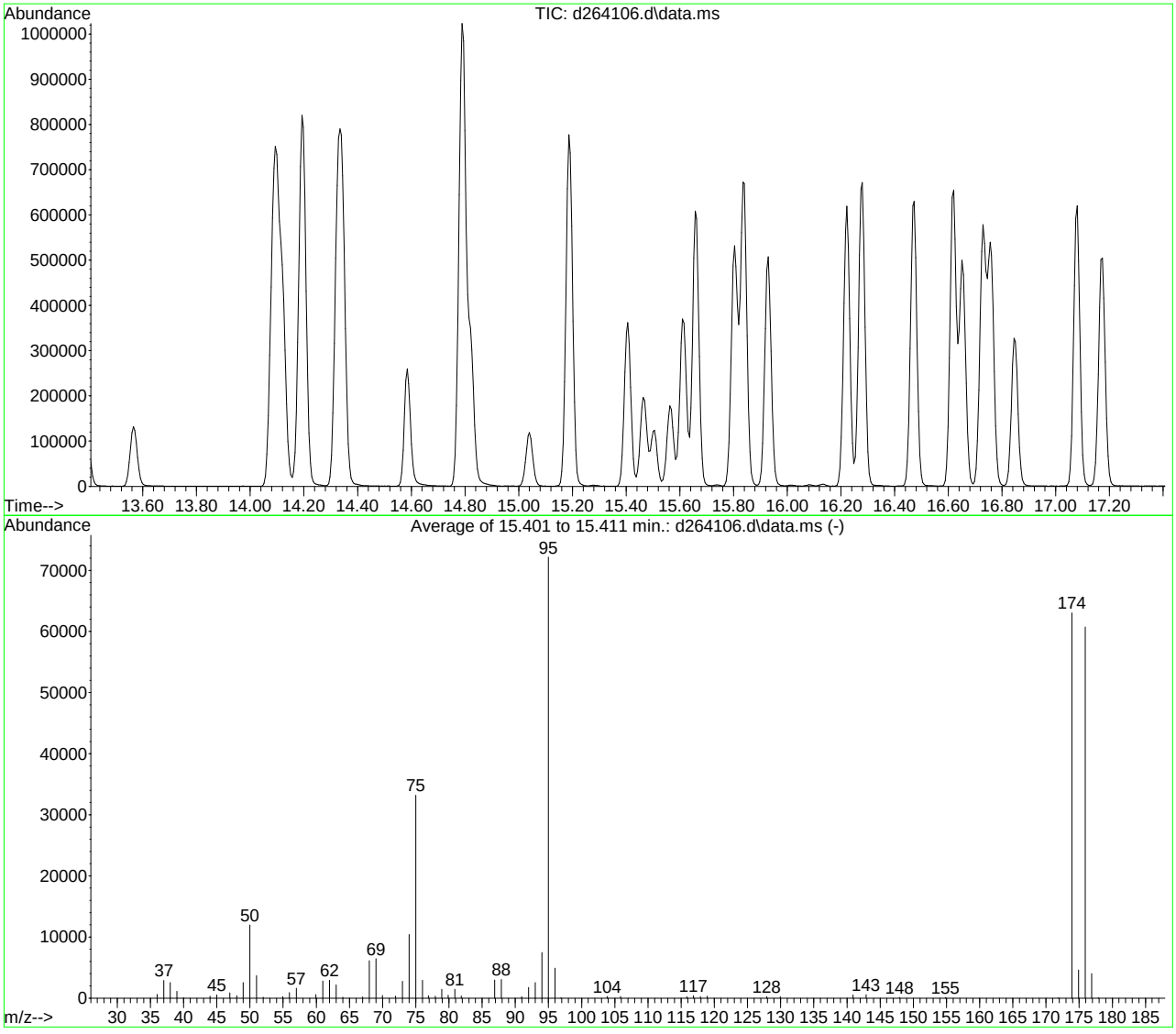
Average of 15.402 to 15.412 min.: d264064.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.95	140	140.90	571	207.00	158		
103.85	295	142.90	621				
104.90	119	147.85	122				
105.85	271	154.85	210				
106.90	52	156.80	56				
115.85	239	172.90	163				
116.90	364	173.90	63749				
117.90	221	174.90	4619				
118.90	316	175.90	62424				
127.85	229	176.90	4170				
129.85	237	177.90	123				

SW-846 Method 8260

Data File : C:\msdchem\1\data\lo...5-1\vd10645\d264106.d Vial: 9
Acq On : 29 Apr 2019 10:24 am Operator: thienn
Sample : bfb Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10606.M (RTE Integrator)
Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2144, 2145, 2146; Background Corrected with Scan 2135

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.6	11967	PASS
75	95	30	60	46.0	33200	PASS
95	95	100	100	100.0	72157	PASS
96	95	5	9	6.8	4881	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	87.4	63056	PASS
175	174	5	9	7.3	4611	PASS
176	174	95	101	96.4	60755	PASS
177	176	5	9	6.6	4004	PASS

d264106.d MD10606.M Tue Apr 30 14:30:27 2019

Average of 15.401 to 15.411 min.: d264106.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	597	51.00	3701	68.00	6106	79.90	493
37.00	2891	52.00	166	69.00	6446	80.90	1472
38.00	2533	54.95	218	69.95	431	81.85	350
39.00	1120	55.95	926	71.95	325	86.90	2961
40.00	63	57.00	1608	73.00	2745	87.90	3038
44.00	310	59.95	587	74.00	10404	90.95	236
45.00	514	61.00	2815	75.00	33200	92.00	1747
46.95	882	62.00	2927	76.00	2918	93.00	2531
48.00	385	63.00	2149	76.90	390	94.00	7456
49.00	2524	64.00	150	77.95	301	95.00	72157
50.00	11967	67.00	191	78.90	1437	96.00	4881

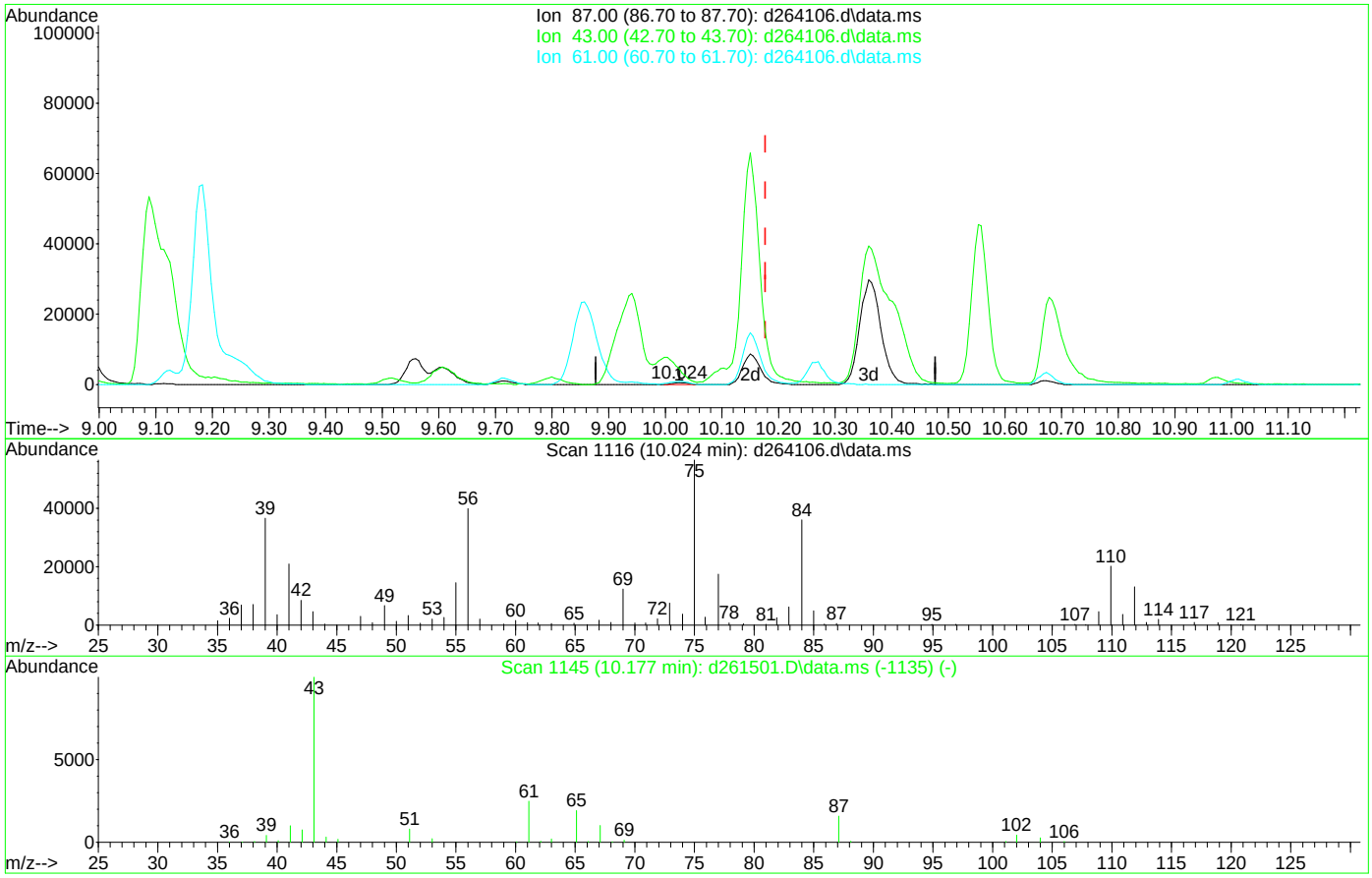
Average of 15.401 to 15.411 min.: d264106.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.90	61	147.90	120				
103.85	284	154.85	111				
105.85	258	171.90	61				
115.85	227	173.90	63056				
116.85	386	174.90	4611				
117.90	233	175.90	60755				
118.90	316	176.90	4004				
127.90	244	177.90	55				
129.95	234						
140.90	525						
142.90	562						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:29:13 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



TIC: d264106.d\data.ms

(53) isopropyl acetate

10.024min (-0.153) 2.21ug/L

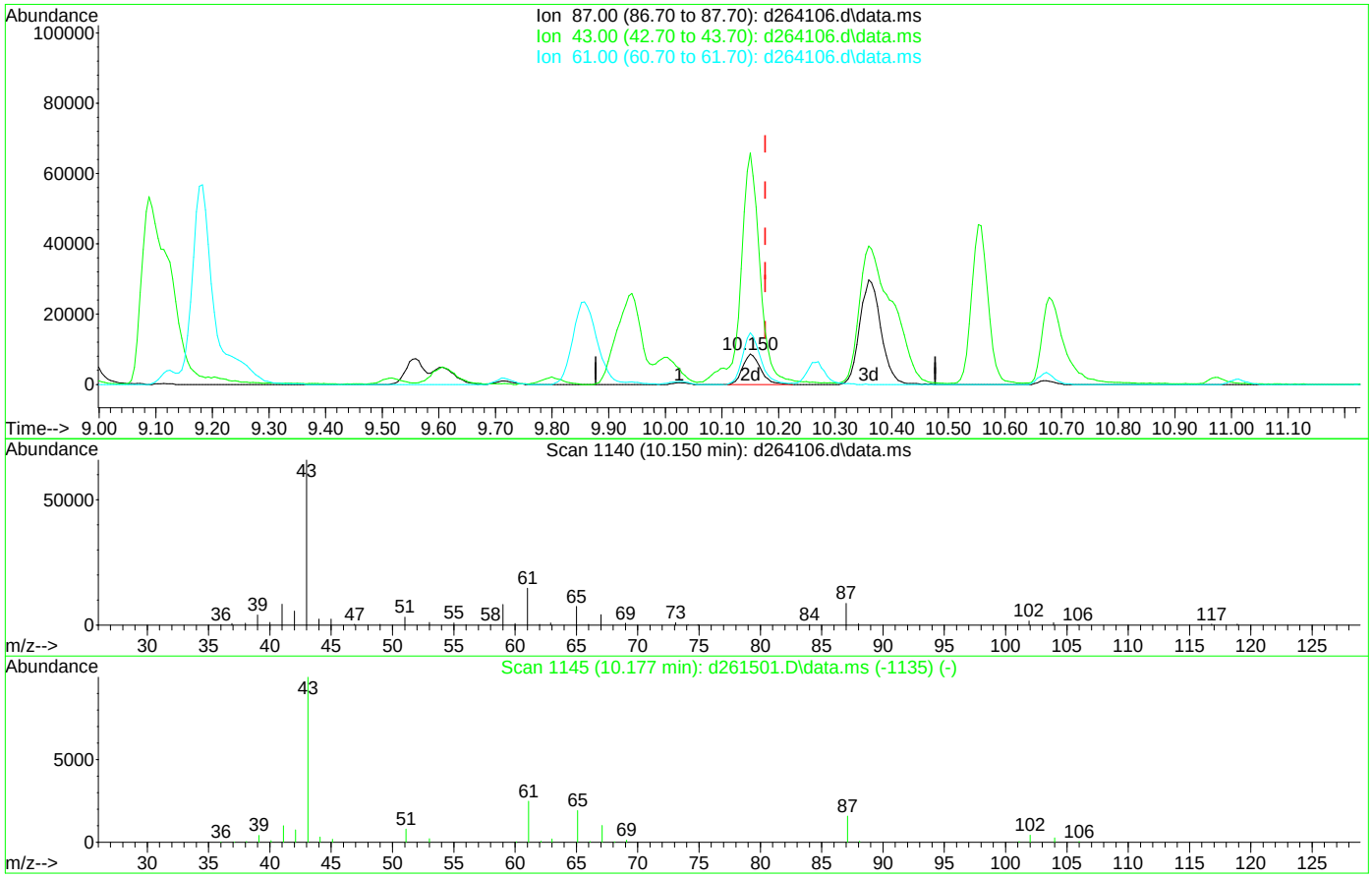
response 854

Ion	Exp%	Act%
87.00	100	100
43.00	797.10	792.15
61.00	162.10	168.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:29:13 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



TIC: d264106.d\data.ms

(53) isopropyl acetate

10.150min (-0.027) 48.89ug/L m

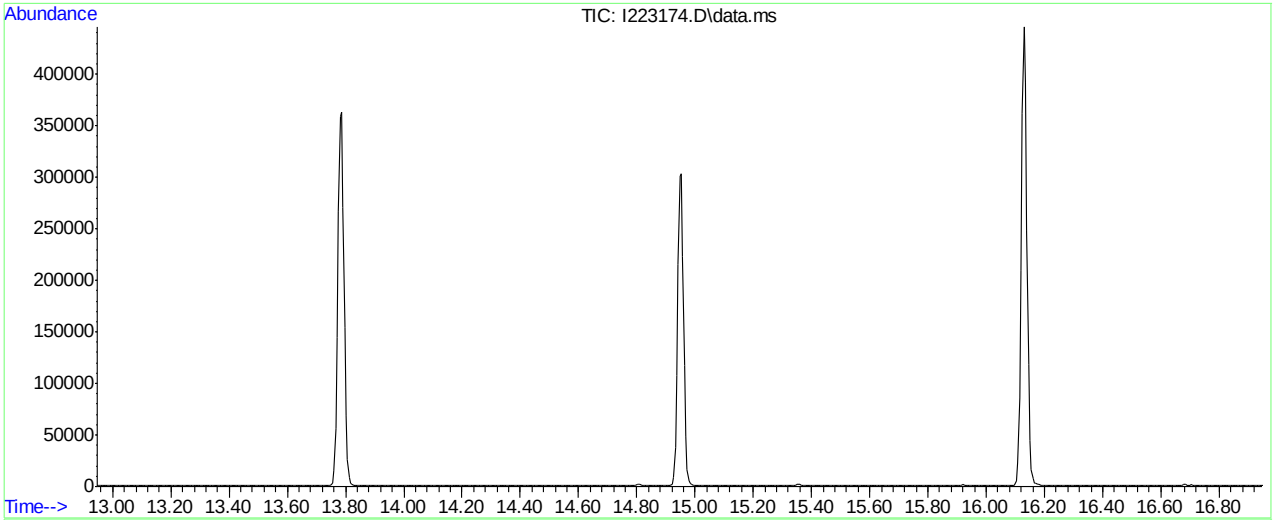
response 18861

Ion	Exp%	Act%
87.00	100	100
43.00	797.10	758.39#
61.00	162.10	168.99
0.00	0.00	0.00

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VI8986\I223174.D Vial: 1
Acq On : 27 Nov 2018 5:41 pm Operator: thienn
Sample : BFB Inst : GCMSI
Misc : MS30885,VI8986,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um



AutoFind: Scans 2172, 2173, 2174; Background Corrected with Scan 2165

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.4	9909	PASS
75	95	30	60	47.3	25472	PASS
95	95	100	100	100.0	53864	PASS
96	95	5	9	6.6	3552	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.2	52357	PASS
175	174	5	9	8.2	4272	PASS
176	174	95	101	98.5	51597	PASS
177	176	5	9	6.9	3571	PASS

I223174.D MI8986.M Wed Nov 28 14:05:27 2018

Average of 14.942 to 14.952 min.: I223174.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	461	55.00	51	72.00	308	87.00	2457
37.10	2623	56.05	764	73.10	2349	88.00	2420
38.10	2222	57.10	1362	74.10	8690	90.95	125
39.10	855	60.05	490	75.10	25472	92.00	1448
44.10	291	61.05	2449	76.05	2058	93.05	2005
45.10	447	62.10	2360	77.05	361	94.10	5755
47.10	646	63.10	1727	78.05	222	95.10	53864
48.05	318	64.00	122	79.00	1289	96.05	3552
49.10	2190	68.10	5234	80.00	359	103.95	231
50.10	9909	69.05	5171	80.95	1313	105.95	258
51.10	2973	70.05	377	81.95	278	116.00	185

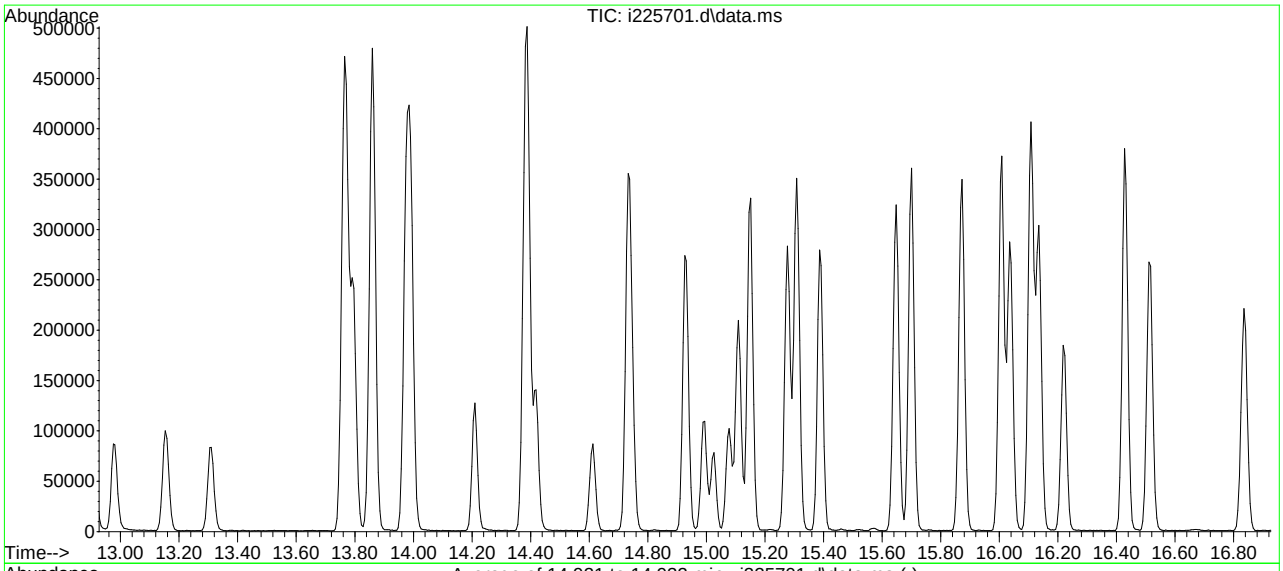
Average of 14.942 to 14.952 min.: I223174.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.95	290	175.00	4272				
117.95	191	176.00	51597				
118.95	274	176.95	3571				
127.90	139	207.00	61				
129.90	242						
130.95	102						
137.00	51						
141.00	503						
142.90	521						
154.95	122						
174.00	52357						

SW-846 Method 8260

Data File : C:\msdchem\1\data\lo...4-26\vi9093\i225701.d Vial: 3
Acq On : 25 Apr 2019 7:44 am Operator: juntaep
Sample : bfb Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um



AutoFind: Scans 2168, 2169, 2170; Background Corrected with Scan 2161

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	9129	PASS
75	95	30	60	50.7	23536	PASS
95	95	100	100	100.0	46459	PASS
96	95	5	9	7.3	3379	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	99.2	46072	PASS
175	174	5	9	7.5	3453	PASS
176	174	95	101	97.0	44672	PASS
177	176	5	9	6.5	2912	PASS

i225701.d MI8986.M Fri Apr 26 09:24:59 2019

Average of 14.921 to 14.932 min.: i225701.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	548	51.10	2899	67.05	116	78.95	1260
37.10	2740	52.05	105	68.05	4743	79.95	417
38.10	2302	55.05	131	69.10	4654	81.00	1332
39.10	915	56.05	752	70.10	379	81.95	300
40.00	49	57.10	1135	72.05	269	87.05	1634
44.10	251	60.10	487	73.05	1958	88.00	1647
45.10	402	61.10	2344	74.10	7973	91.00	146
47.10	487	62.10	2254	75.10	23536	92.05	1191
48.05	298	63.10	1884	76.10	1986	93.05	1748
49.10	2070	64.10	225	77.05	299	94.10	5148
50.10	9129	65.15	121	78.05	240	95.10	46459

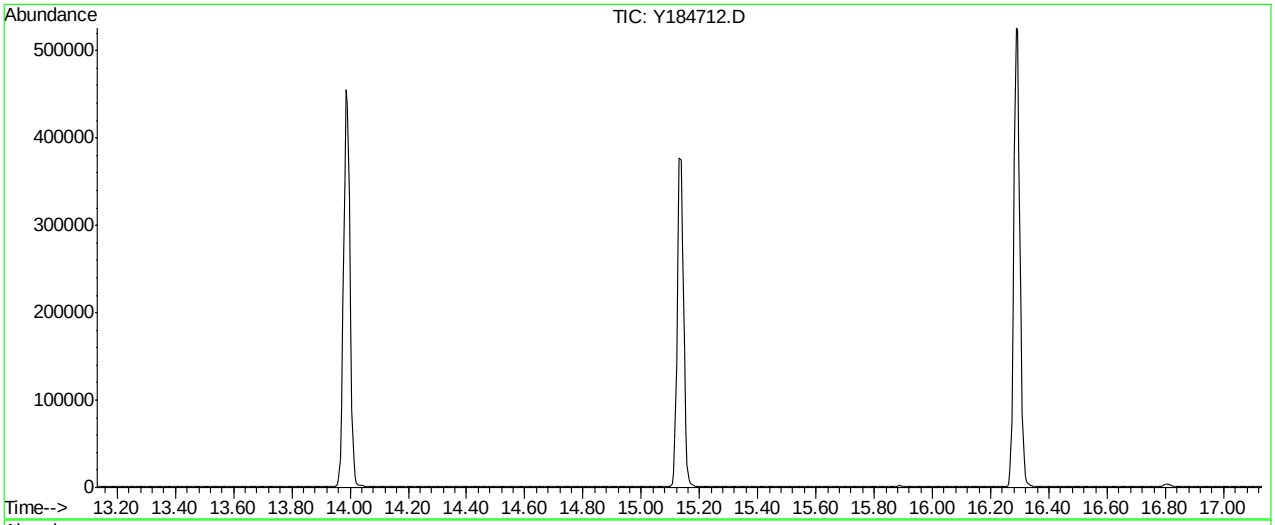
Average of 14.921 to 14.932 min.: i225701.d\data.ms
bfb
Modified:subtracted

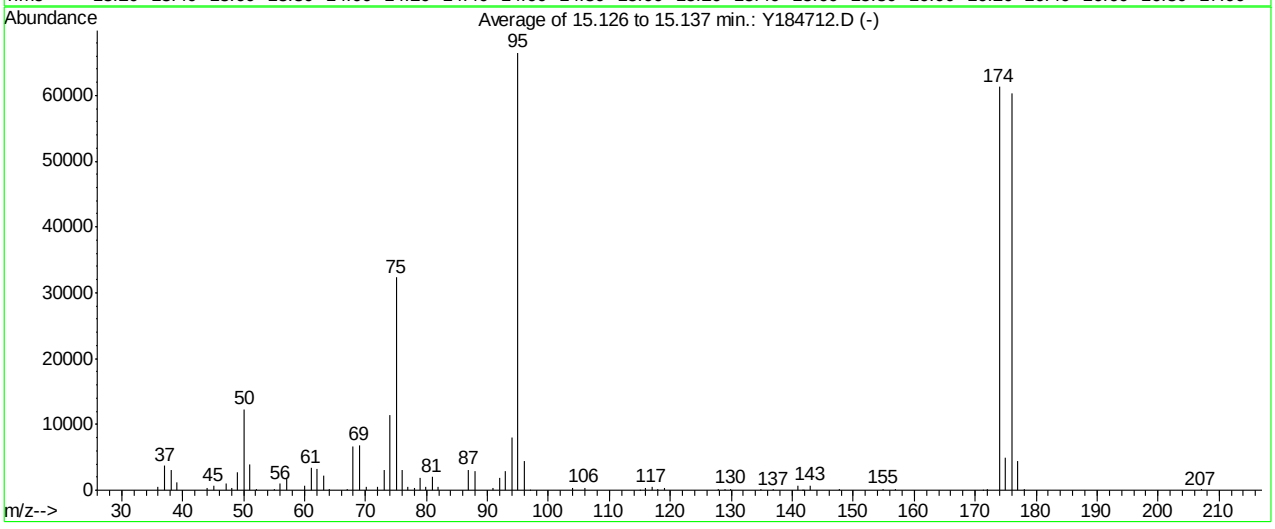
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	3379	142.95	498				
103.90	155	155.00	82				
106.05	259	171.90	296				
115.95	207	174.00	46072				
116.95	301	175.00	3453				
118.00	143	176.00	44672				
118.90	237	177.00	2912				
127.95	114	206.95	46				
129.95	188						
137.00	52						
140.90	462						

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\VY8014\Y184712.D Vial: 2
Acq On : 24 Apr 2019 2:32 pm Operator: ROBERTS
Sample : BFB Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um





AutoFind: Scans 2112, 2113, 2114; Background Corrected with Scan 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	12333	PASS
75	95	30	60	48.6	32341	PASS
95	95	100	100	100.0	66517	PASS
96	95	5	9	6.6	4405	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.1	61248	PASS
175	174	5	9	8.0	4917	PASS
176	174	95	101	98.5	60341	PASS
177	176	5	9	7.4	4460	PASS

Y184712.D MYS8014.M Fri Apr 26 15:43:27 2019 RPT1

Average of 15.126 to 15.137 min.: Y184712.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	595	52.05	259	69.00	6865	80.95	2001
37.10	3673	55.00	173	70.05	543	81.95	443
38.10	3024	56.00	973	72.00	487	86.95	3092
39.05	1165	57.00	1710	73.00	3109	88.00	2905
44.00	313	60.05	736	74.00	11382	90.95	322
45.05	624	61.05	3333	75.00	32341	92.00	1868
47.05	1037	62.05	3223	76.05	3010	93.00	2892
48.00	380	63.10	2225	76.95	471	94.00	8059
49.05	2738	64.05	159	77.95	344	95.00	66517
50.10	12333	66.95	122	78.90	1843	96.00	4405
51.05	3937	68.00	6699	79.95	557	97.00	72

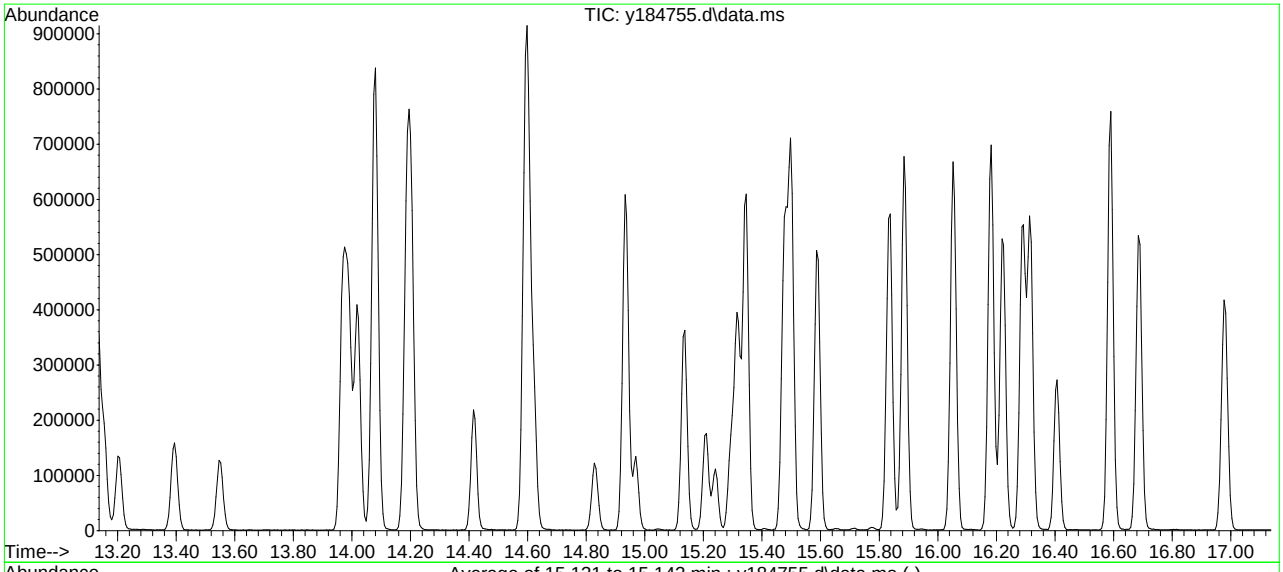
Average of 15.126 to 15.137 min.: Y184712.D
BFB
Modified:subtracted

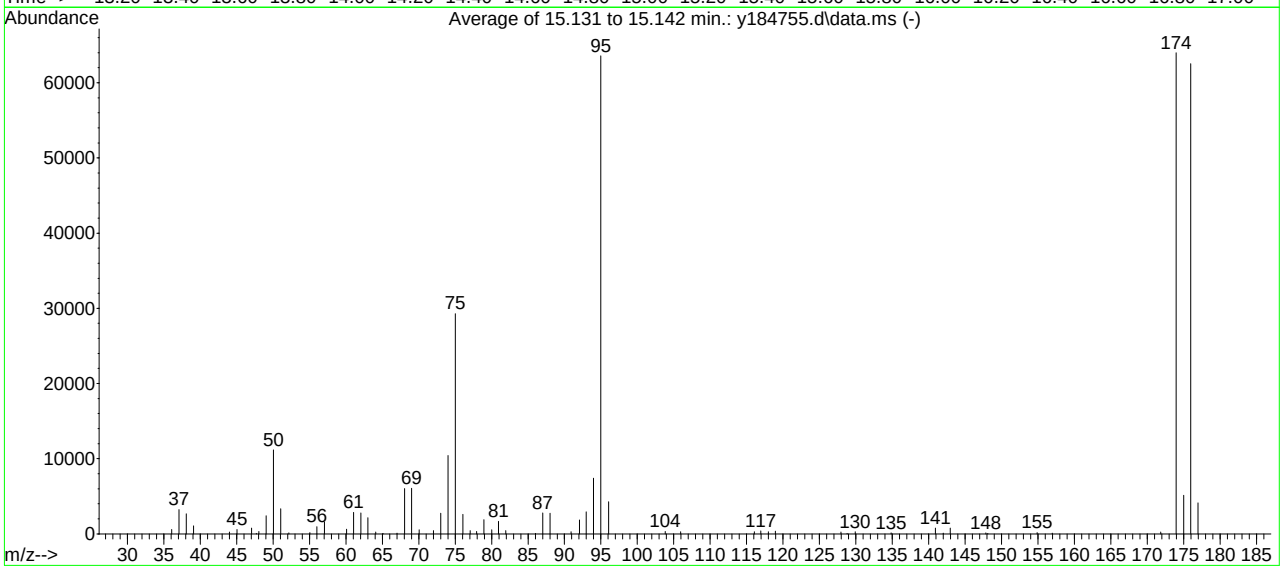
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.90	287	136.90	147	175.00	4917		
105.95	387	140.95	664	175.95	60341		
114.90	54	141.70	59	176.95	4460		
115.95	282	141.90	62	178.00	169		
116.95	449	142.95	716	207.05	141		
117.90	262	147.80	116				
118.95	422	154.95	252				
127.90	180	156.90	142				
128.95	127	171.30	58				
129.95	248	172.05	186				
134.90	125	173.95	61248				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...9-19\vy8016\y184755.d Vial: 3
Acq On : 26 Apr 2019 8:08 am Operator: EddieH
Sample : bfb Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um





AutoFind: Scans 2113, 2114, 2115; Background Corrected with Scan 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	11158	PASS
75	95	30	60	46.1	29301	PASS
95	95	100	100	100.0	63581	PASS
96	95	5	9	6.7	4276	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	100.6	63984	PASS
175	174	5	9	8.0	5135	PASS
176	174	95	101	97.7	62531	PASS
177	176	5	9	6.6	4118	PASS

y184755.d MYS8014.M Mon Apr 29 04:09:28 2019

Average of 15.131 to 15.142 min.: y184755.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	594	51.05	3349	67.00	105	78.95	1871
37.10	3246	52.15	122	68.05	6025	80.00	551
38.10	2686	55.05	162	69.00	6072	80.95	1663
39.10	1051	56.00	965	70.05	554	81.95	433
44.00	245	57.05	1604	72.00	415	86.00	71
45.05	582	60.10	611	73.00	2739	87.00	2792
47.05	775	61.05	2851	74.00	10416	88.00	2743
47.70	54	62.05	2792	75.00	29301	90.90	274
48.05	320	63.00	2148	76.05	2603	92.05	1864
49.05	2396	64.10	242	77.05	417	93.00	2932
50.05	11158	65.10	51	77.95	327	94.00	7413

Average of 15.131 to 15.142 min.: y184755.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	63581	134.85	130	175.95	62531		
96.05	4276	140.90	773	176.95	4118		
103.85	309	142.00	92				
105.95	297	142.95	760				
116.05	298	147.85	126				
116.95	390	148.10	51				
118.00	291	154.90	185				
118.95	360	156.95	113				
127.95	230	171.85	250				
128.80	64	173.95	63984				
129.90	291	175.00	5135				

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44239.D
Acq On : 22 Apr 2019 3:02 pm
Operator : roberts
Sample : IC1775-2
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 15:23:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.296	65	134696	500.00	ug/L		0.00
5) pentafluorobenzene	9.828	168	231698	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	323031	50.00	ug/L		0.00
74) chlorobenzene-d5	14.012	117	284390	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	165652	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	125521	51.53	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.06%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	120571	52.72	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 105.44%				
75) toluene-d8 (s)	12.465	98	365299	51.68	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.36%				
98) 4-bromofluorobenzene (s)	15.218	95	146257	50.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.427	59	4409	10.00	ug/L		69
4) 1,4-dioxane	11.475	88	1410	43.27	ug/L		98
6) chlorodifluoromethane	3.689	51	14725	2.23	ug/L		92
7) dichlorodifluoromethane	3.662	85	16809	2.21	ug/L		93
8) chloromethane	4.019	50	18533	2.27	ug/L		98
9) vinyl chloride	4.260	62	15069	2.23	ug/L		94
11) bromomethane	4.910	96	11514	2.28	ug/L	#	91
12) chloroethane	5.094	64	7075	2.24	ug/L		84
13) trichlorofluoromethane	5.602	101	14861	2.29	ug/L		90
14) vinyl bromide	5.455	106	6442	2.17	ug/L		89
15) ethyl ether	6.022	74	2931	2.30	ug/L	#	78
17) acrolein	6.268	56	669	1.78	ug/L	#	35
18) freon 113	6.515	151	6097	2.27	ug/L		92
19) 1,1-dichloroethene	6.483	96	7366	2.47	ug/L		89
20) acetone	6.499	58	2562	8.15	ug/L	#	66
22) iodomethane	6.740	142	13086	2.21	ug/L		99
23) carbon disulfide	6.892	76	26656	2.31	ug/L		98
24) methylene chloride	7.291	84	9532	2.30	ug/L		95
26) methyl tert butyl ether	7.731	73	20114	2.09	ug/L		93
27) trans-1,2-dichloroethene	7.731	96	7358	2.32	ug/L		95
28) hexane	8.161	57	7949	2.36	ug/L		97
29) di-isopropyl ether	8.428	45	22555	2.08	ug/L		97
30) ethyl tert-butyl ether	8.932	59	21436	2.06	ug/L		94
31) 2-butanone	9.147	72	1881	8.90	ug/L	#	82
32) 1,1-dichloroethane	8.392	63	12853	2.30	ug/L		97
33) chloroprene	8.507	53	7672	2.30	ug/L		95
34) acrylonitrile	7.631	52	1456	2.26	ug/L	#	74
37) 2,2-dichloropropane	9.230	77	12976	2.27	ug/L		94
38) cis-1,2-dichloroethene	9.204	96	7546	2.31	ug/L		87
39) propionitrile	9.220	54	6351	22.60	ug/L		91
41) bromochloromethane	9.519	128	3436	2.26	ug/L		98
43) chloroform	9.629	83	13165	2.33	ug/L		99
45) methacrylonitrile	9.435	67	1489	2.03	ug/L	#	72
46) 1,1,1-trichloroethane	9.896	97	12823	2.25	ug/L		95
47) cyclohexane	10.006	84	9041	2.17	ug/L		93
48) 1,1-dichloropropene	10.080	75	7177	2.26	ug/L		96
49) carbon tetrachloride	10.101	117	11130	2.32	ug/L		95
51) tert-amyl alcohol	10.284	55	1464	11.41	ug/L	#	78
54) iso-octane	10.463	57	21336	2.08	ug/L		93
55) benzene	10.337	78	22940	2.24	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44239.D
Acq On : 22 Apr 2019 3:02 pm
Operator : roberts
Sample : IC1775-2
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 15:23:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
56) tert-amyl methyl ether	10.463	73	19057	2.11	ug/L	89
57) heptane	10.651	57	3599	2.27	ug/L	97
59) 1,2-dichloroethane	10.373	62	8585	2.31	ug/L	98
60) n-butyl alcohol	10.908	56	6868	108.42	ug/L	93
61) ethyl acrylate	11.139	55	4338	1.90	ug/L	94
62) trichloroethene	11.118	95	5841	2.31	ug/L	94
64) 2-chloroethyl vinyl ether	11.952	63	10945	9.52	ug/L	99
66) 1,2-dichloropropane	11.412	63	6066	2.12	ug/L	96
67) methylcyclohexane	11.417	83	9465	2.22	ug/L	93
68) dibromomethane	11.516	93	3817	2.27	ug/L	92
69) bromodichloromethane	11.689	83	8460	2.19	ug/L	98
70) epichlorohydrin	12.025	57	1961	10.89	ug/L	88
71) cis-1,3-dichloropropene	12.156	75	8177	2.07	ug/L	99
72) 4-methyl-2-pentanone	12.277	58	6645	8.56	ug/L	98
73) 3-methyl-1-butanol	12.303	70	2146	37.75	ug/L	95
76) toluene	12.544	92	12145	2.24	ug/L	98
77) ethyl methacrylate	12.754	69	4471	1.99	ug/L	97
78) trans-1,3-dichloropropene	12.738	75	6881	2.18	ug/L	99
79) 1,1,2-trichloroethane	12.964	83	4084	2.35	ug/L	95
80) tetrachloroethene	13.105	166	5375	2.35	ug/L	90
81) 2-hexanone	13.147	58	5319	8.53	ug/L	98
82) 1,3-dichloropropane	13.142	76	7048	2.20	ug/L	93
83) butyl acetate	13.236	56	2999	2.43	ug/L	91
84) dibromochloromethane	13.388	129	5438	2.15	ug/L	92
85) 1,2-dibromoethane	13.535	107	6051	2.24	ug/L	96
86) n-butyl ether	14.033	57	19002	2.03	ug/L	99
87) chlorobenzene	14.044	112	14468	2.16	ug/L	98
88) 1,1,1,2-tetrachloroethane	14.117	131	6257	2.24	ug/L	89
89) ethylbenzene	14.112	91	23011	2.16	ug/L	97
90) m,p-xylene	14.243	106	16238	4.18	ug/L	98
91) o-xylene	14.657	106	8649	2.10	ug/L	94
92) styrene	14.668	104	12359	1.90	ug/L	95
93) bromoform	14.893	173	3622	2.15	ug/L	99
94) butyl acrylate	14.500	55	7681	1.97	ug/L	94
95) isopropylbenzene	15.019	105	21761	2.11	ug/L	97
96) cis-1,4-dichloro-2-butene	15.061	88	1819	2.00	ug/L	90
99) bromobenzene	15.396	156	6549	2.14	ug/L	94
100) 1,1,2,2-tetrachloroethane	15.307	83	7216	2.35	ug/L	93
101) trans-1,4-dichloro-2-b...	15.339	53	1141	1.86	ug/L	95
102) 1,2,3-trichloropropane	15.391	110	1703	2.33	ug/L	90
103) n-propylbenzene	15.443	91	27192	2.16	ug/L	100
104) 2-chlorotoluene	15.569	126	5830	2.14	ug/L	99
105) 4-chlorotoluene	15.685	91	17238	2.14	ug/L	93
106) 1,3,5-trimethylbenzene	15.606	105	19258	2.11	ug/L	97
107) tert-butylbenzene	15.942	119	14154	2.05	ug/L	99
108) 1,2,4-trimethylbenzene	15.994	105	19161	1.99	ug/L	97
109) sec-butylbenzene	16.162	105	23565	2.12	ug/L	98
110) 1,3-dichlorobenzene	16.319	146	13178	2.16	ug/L	95
111) p-isopropyltoluene	16.293	119	19058	2.03	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	13435	2.16	ug/L	97
113) 1,2-dichlorobenzene	16.775	146	13614	2.16	ug/L	96
114) n-butylbenzene	16.691	92	11038	2.08	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.504	157	1562	2.08	ug/L	94
116) 1,3,5-trichlorobenzene	17.682	180	13208	2.15	ug/L	95
119) 1,2,4-trichlorobenzene	18.264	180	11784	2.07	ug/L	97
120) hexachlorobutadiene	18.374	225	5931	2.14	ug/L	96
121) naphthalene	18.526	128	21001	1.86	ug/L	98
122) 1,2,3-trichlorobenzene	18.736	180	12412	2.10	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44239.D
Acq On : 22 Apr 2019 3:02 pm
Operator : roberts
Sample : IC1775-2
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 15:23:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

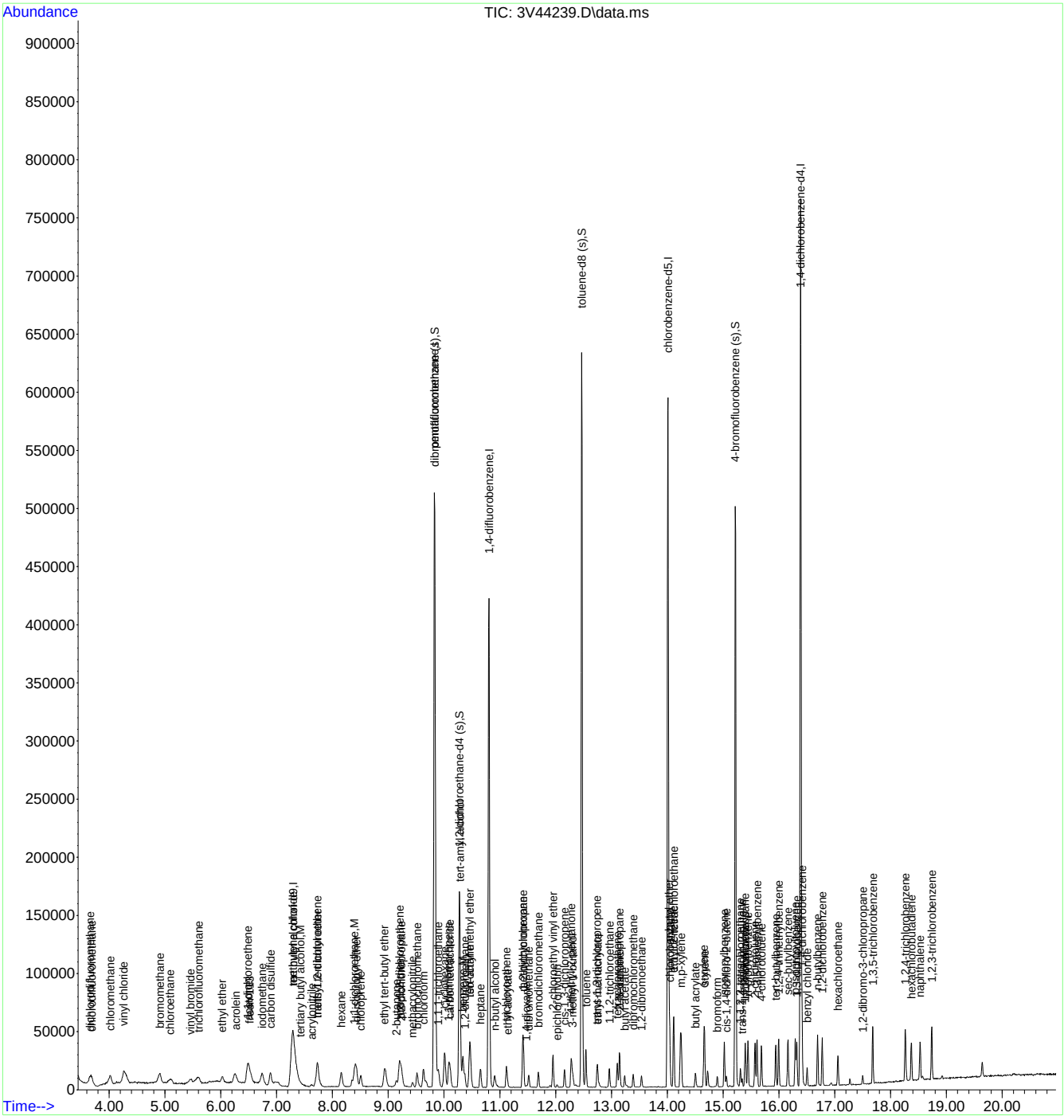
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) hexachloroethane	17.053	119	4268	2.14	ug/L	97
124) benzyl chloride	16.503	91	9977	2.11	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44239.D
Acq On : 22 Apr 2019 3:02 pm
Operator : roberts
Sample : IC1775-2
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 15:23:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44240.D
Acq On : 22 Apr 2019 3:28 pm
Operator : roberts
Sample : IC1775-0.5
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 15:14:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.280	65	117586	500.00	ug/L		-0.02
5) pentafluorobenzene	9.828	168	224759	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	319965	50.00	ug/L		0.00
74) chlorobenzene-d5	14.012	117	313475	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	194275	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	118491	50.14	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.28%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	115312	50.90	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.80%				
75) toluene-d8 (s)	12.465	98	377533	48.45	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.90%				
98) 4-bromofluorobenzene (s)	15.218	95	172233	50.21	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.42%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.673	51	3347	0.52	ug/L		63
7) dichlorodifluoromethane	3.647	85	3659	0.50	ug/L		84
8) chloromethane	4.024	50	4700	0.59	ug/L		86
9) vinyl chloride	4.249	62	3452	0.53	ug/L		92
12) chloroethane	5.078	64	1540	0.50	ug/L	#	45
13) trichlorofluoromethane	5.592	101	3500	0.56	ug/L		95
22) iodomethane	6.745	142	2961	0.52	ug/L		90
23) carbon disulfide	6.887	76	6206	0.55	ug/L		87
26) methyl tert butyl ether	7.715	73	4808	0.52	ug/L		91
27) trans-1,2-dichloroethene	7.731	96	1849	0.60	ug/L	#	67
28) hexane	8.161	57	1925	0.59	ug/L		87
29) di-isopropyl ether	8.423	45	5194	0.49	ug/L		94
30) ethyl tert-butyl ether	8.937	59	4750	0.47	ug/L		99
32) 1,1-dichloroethane	8.386	63	2625	0.48	ug/L		92
33) chloroprene	8.507	53	1516	0.47	ug/L		66
37) 2,2-dichloropropane	9.225	77	3196	0.58	ug/L		91
39) propionitrile	9.220	54	1379	5.06	ug/L		69
43) chloroform	9.624	83	3097	0.57	ug/L		91
46) 1,1,1-trichloroethane	9.891	97	3105	0.56	ug/L		82
47) cyclohexane	10.006	84	2102	0.52	ug/L	#	75
48) 1,1-dichloropropene	10.080	75	1566	0.51	ug/L		97
49) carbon tetrachloride	10.095	117	2577	0.55	ug/L	#	83
54) iso-octane	10.462	57	4628	0.46	ug/L		93
55) benzene	10.342	78	5324	0.53	ug/L		93
56) tert-amyl methyl ether	10.457	73	4431	0.49	ug/L		98
62) trichloroethene	11.118	95	1314	0.52	ug/L		89
66) 1,2-dichloropropane	11.411	63	1521	0.54	ug/L		95
67) methylcyclohexane	11.422	83	2013	0.48	ug/L		96
68) dibromomethane	11.511	93	803	0.48	ug/L		92
69) bromodichloromethane	11.689	83	1977	0.52	ug/L		95
71) cis-1,3-dichloropropene	12.156	75	1882	0.48	ug/L		76
72) 4-methyl-2-pentanone	12.282	58	1486	1.93	ug/L		93
76) toluene	12.544	92	3267	0.55	ug/L		96
77) ethyl methacrylate	12.754	69	1188	0.48	ug/L	#	72
78) trans-1,3-dichloropropene	12.743	75	1599	0.46	ug/L		81
79) 1,1,2-trichloroethane	12.958	83	855	0.45	ug/L	#	78
80) tetrachloroethene	13.105	166	1318	0.52	ug/L		83
81) 2-hexanone	13.147	58	1171	1.70	ug/L	#	64
82) 1,3-dichloropropane	13.142	76	1868	0.53	ug/L		83
83) butyl acetate	13.241	56	619	0.46	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44240.D
Acq On : 22 Apr 2019 3:28 pm
Operator : roberts
Sample : IC1775-0.5
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 15:14:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

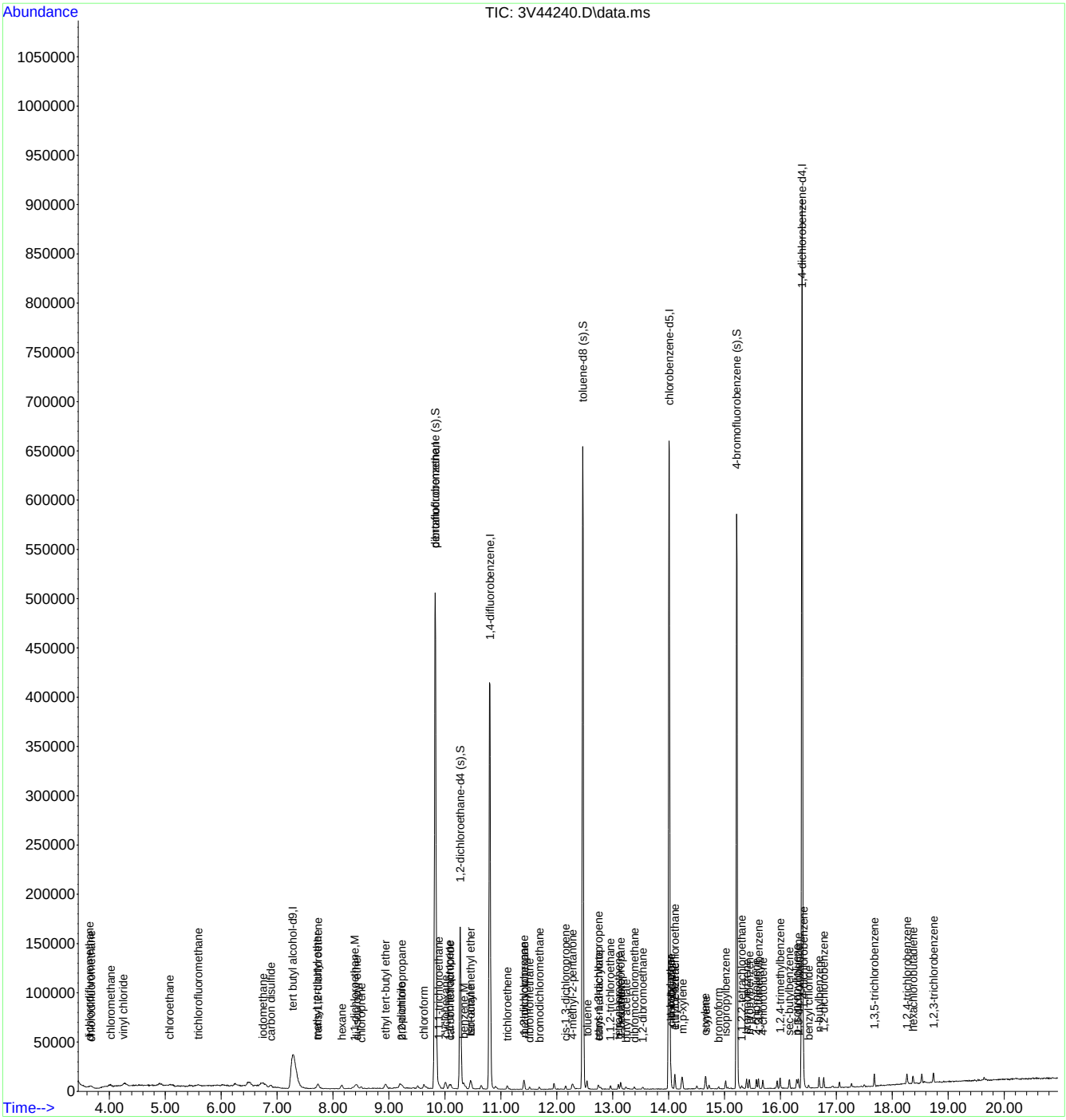
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
84) dibromochloromethane	13.388	129	1325	0.48	ug/L	87
85) 1,2-dibromoethane	13.535	107	1467	0.49	ug/L	89
86) n-butyl ether	14.038	57	4991	0.48	ug/L	92
87) chlorobenzene	14.043	112	3911	0.53	ug/L	94
88) 1,1,1,2-tetrachloroethane	14.112	131	1542	0.50	ug/L	87
89) ethylbenzene	14.112	91	5885	0.50	ug/L	95
90) m,p-xylene	14.248	106	4294	1.00	ug/L	92
91) o-xylene	14.652	106	1976	0.44	ug/L	84
92) styrene	14.667	104	3347	0.47	ug/L	94
93) bromoform	14.893	173	861	0.46	ug/L	85
95) isopropylbenzene	15.019	105	5249	0.46	ug/L	98
99) bromobenzene	15.396	156	1844	0.51	ug/L	86
100) 1,1,2,2-tetrachloroethane	15.307	83	1807	0.50	ug/L	96
103) n-propylbenzene	15.443	91	7199	0.49	ug/L	97
104) 2-chlorotoluene	15.564	126	1437	0.45	ug/L	90
105) 4-chlorotoluene	15.685	91	4719	0.50	ug/L	94
106) 1,3,5-trimethylbenzene	15.606	105	4856	0.45	ug/L	94
108) 1,2,4-trimethylbenzene	15.994	105	5503	0.49	ug/L	94
109) sec-butylbenzene	16.156	105	5831	0.45	ug/L	97
110) 1,3-dichlorobenzene	16.319	146	3803	0.53	ug/L	93
111) p-isopropyltoluene	16.293	119	4769	0.43	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	4107	0.56	ug/L	92
113) 1,2-dichlorobenzene	16.775	146	3810	0.52	ug/L	95
114) n-butylbenzene	16.691	92	2748	0.44	ug/L	89
116) 1,3,5-trichlorobenzene	17.677	180	3654	0.51	ug/L	98
119) 1,2,4-trichlorobenzene	18.264	180	3022	0.45	ug/L	93
120) hexachlorobutadiene	18.369	225	1709	0.53	ug/L	85
122) 1,2,3-trichlorobenzene	18.736	180	3260	0.47	ug/L	96
124) benzyl chloride	16.502	91	2648	0.48	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44240.D
Acq On : 22 Apr 2019 3:28 pm
Operator : roberts
Sample : IC1775-0.5
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 15:14:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44241.D
Acq On : 22 Apr 2019 3:54 pm
Operator : roberts
Sample : IC1775-1
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 25 15:19:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.280	65	124812	500.00	ug/L		-0.02
5) pentafluorobenzene	9.828	168	246743	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	353791	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	336393	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	204608	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	132057	50.90	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.80%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	125772	50.21	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.42%				
75) toluene-d8 (s)	12.465	98	414669	49.60	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.20%				
98) 4-bromofluorobenzene (s)	15.218	95	180939	50.09	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.18%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.678	51	6829	0.97	ug/L		96
7) dichlorodifluoromethane	3.662	85	8053	0.99	ug/L		97
8) chloromethane	4.024	50	9173	1.06	ug/L		98
9) vinyl chloride	4.260	62	7255	1.01	ug/L		87
12) chloroethane	5.094	64	3385	1.01	ug/L		59
13) trichlorofluoromethane	5.576	101	7261	1.05	ug/L		88
15) ethyl ether	6.022	74	1187	0.87	ug/L	#	52
18) freon 113	6.535	151	2840	0.99	ug/L	#	89
19) 1,1-dichloroethene	6.488	96	3641	1.15	ug/L	#	61
22) iodomethane	6.740	142	5886	0.93	ug/L		91
23) carbon disulfide	6.892	76	12297	1.00	ug/L		97
24) methylene chloride	7.280	84	4441	1.01	ug/L		97
26) methyl tert butyl ether	7.726	73	9051	0.89	ug/L		90
27) trans-1,2-dichloroethene	7.731	96	3337	0.99	ug/L	#	81
28) hexane	8.150	57	3587	1.00	ug/L		91
29) di-isopropyl ether	8.413	45	10082	0.87	ug/L		96
30) ethyl tert-butyl ether	8.942	59	9583	0.86	ug/L		95
32) 1,1-dichloroethane	8.397	63	5722	0.96	ug/L		95
33) chloroprene	8.502	53	3321	0.93	ug/L		93
37) 2,2-dichloropropane	9.236	77	6371	1.05	ug/L		94
38) cis-1,2-dichloroethene	9.199	96	3473	1.00	ug/L		79
39) propionitrile	9.220	54	2555	8.54	ug/L		85
41) bromochloromethane	9.514	128	1398	0.86	ug/L		91
43) chloroform	9.624	83	5712	0.95	ug/L		92
46) 1,1,1-trichloroethane	9.891	97	5739	0.94	ug/L		92
47) cyclohexane	10.017	84	4402	0.99	ug/L	#	78
48) 1,1-dichloropropene	10.075	75	3390	1.00	ug/L		95
49) carbon tetrachloride	10.106	117	5194	1.02	ug/L		95
54) iso-octane	10.463	57	9648	0.86	ug/L		94
55) benzene	10.337	78	10545	0.94	ug/L		99
56) tert-amyl methyl ether	10.463	73	8481	0.86	ug/L		91
57) heptane	10.651	57	1569	0.91	ug/L		87
59) 1,2-dichloroethane	10.373	62	4015	0.99	ug/L		86
62) trichloroethene	11.118	95	2545	0.92	ug/L		86
64) 2-chloroethyl vinyl ether	11.952	63	4933	3.92	ug/L		94
66) 1,2-dichloropropane	11.406	63	2862	0.91	ug/L		92
67) methylcyclohexane	11.422	83	4284	0.92	ug/L		93
68) dibromomethane	11.511	93	1630	0.88	ug/L		89
69) bromodichloromethane	11.684	83	3808	0.90	ug/L		95
71) cis-1,3-dichloropropene	12.156	75	3943	0.91	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44241.D
Acq On : 22 Apr 2019 3:54 pm
Operator : roberts
Sample : IC1775-1
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 25 15:19:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

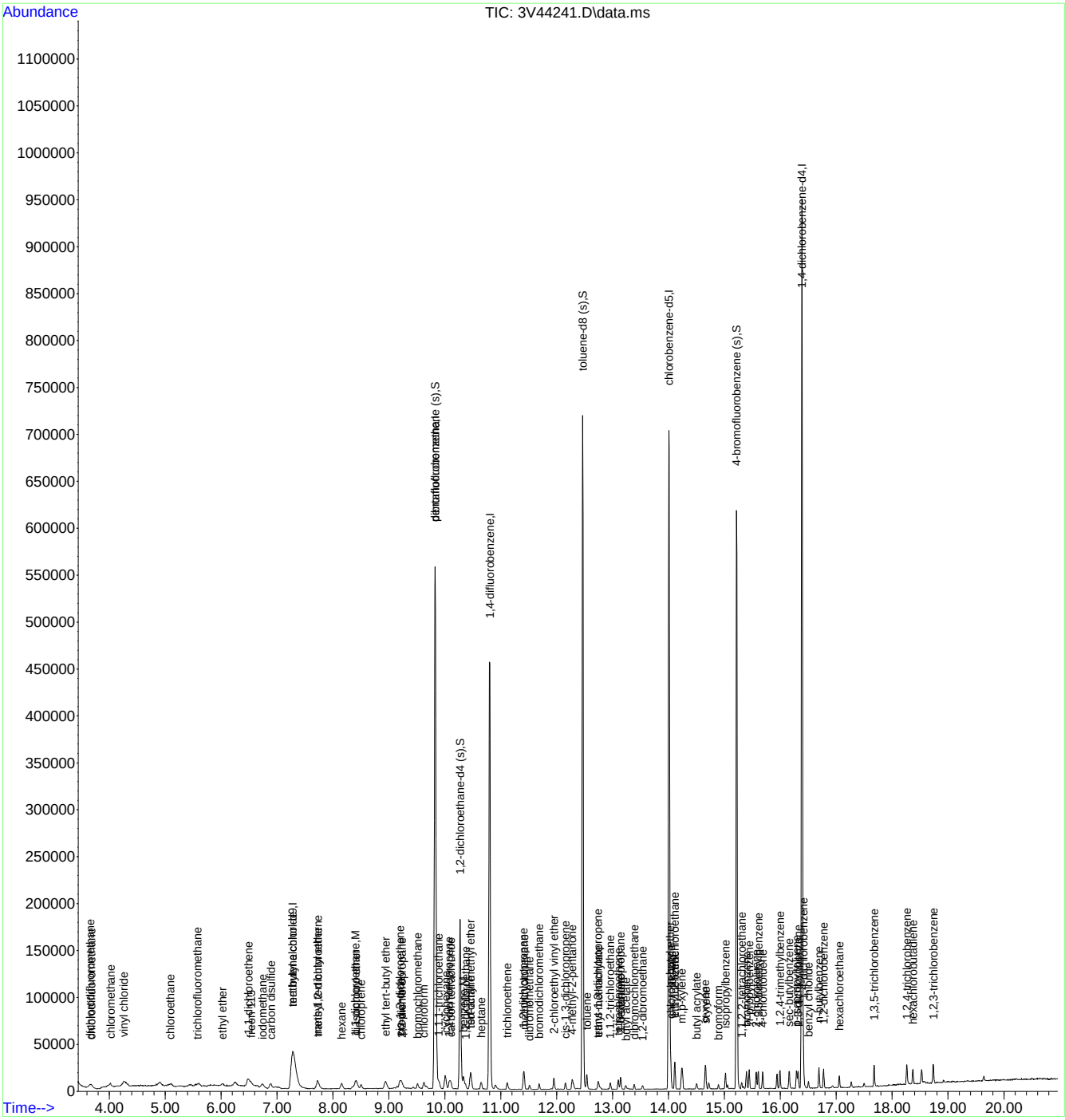
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
72) 4-methyl-2-pentanone	12.277	58	2765	3.25	ug/L	#	81
76) toluene	12.539	92	5873	0.92	ug/L		99
77) ethyl methacrylate	12.749	69	2108	0.79	ug/L		96
78) trans-1,3-dichloropropene	12.738	75	3123	0.84	ug/L		95
79) 1,1,2-trichloroethane	12.958	83	1845	0.90	ug/L		87
80) tetrachloroethene	13.105	166	2391	0.88	ug/L		98
81) 2-hexanone	13.147	58	2343	3.18	ug/L		95
82) 1,3-dichloropropane	13.142	76	3349	0.88	ug/L		93
83) butyl acetate	13.241	56	1209	0.83	ug/L	#	77
84) dibromochloromethane	13.388	129	2694	0.90	ug/L		97
85) 1,2-dibromoethane	13.535	107	2752	0.86	ug/L		96
86) n-butyl ether	14.033	57	9520	0.86	ug/L		93
87) chlorobenzene	14.044	112	7326	0.93	ug/L		96
88) 1,1,1,2-tetrachloroethane	14.112	131	2673	0.81	ug/L		95
89) ethylbenzene	14.112	91	11668	0.93	ug/L		94
90) m,p-xylene	14.238	106	7904	1.72	ug/L		97
91) o-xylene	14.657	106	4053	0.83	ug/L		88
92) styrene	14.667	104	6447	0.84	ug/L		93
93) bromoform	14.893	173	1778	0.89	ug/L		92
94) butyl acrylate	14.505	55	3647	0.79	ug/L		88
95) isopropylbenzene	15.019	105	10270	0.84	ug/L		93
99) bromobenzene	15.396	156	3359	0.89	ug/L		99
100) 1,1,2,2-tetrachloroethane	15.312	83	3542	0.93	ug/L		96
103) n-propylbenzene	15.443	91	13885	0.89	ug/L		98
104) 2-chlorotoluene	15.569	126	2997	0.89	ug/L		92
105) 4-chlorotoluene	15.685	91	8906	0.89	ug/L		96
106) 1,3,5-trimethylbenzene	15.606	105	9223	0.82	ug/L		96
108) 1,2,4-trimethylbenzene	15.994	105	10017	0.84	ug/L		93
109) sec-butylbenzene	16.156	105	11392	0.83	ug/L		98
110) 1,3-dichlorobenzene	16.319	146	7069	0.94	ug/L		95
111) p-isopropyltoluene	16.293	119	9663	0.83	ug/L		94
112) 1,4-dichlorobenzene	16.413	146	7018	0.91	ug/L		87
113) 1,2-dichlorobenzene	16.775	146	7101	0.91	ug/L		95
114) n-butylbenzene	16.691	92	5420	0.83	ug/L	#	79
116) 1,3,5-trichlorobenzene	17.677	180	6368	0.84	ug/L		97
119) 1,2,4-trichlorobenzene	18.264	180	5680	0.81	ug/L		94
120) hexachlorobutadiene	18.374	225	3266	0.95	ug/L		96
122) 1,2,3-trichlorobenzene	18.736	180	6138	0.84	ug/L		93
123) hexachloroethane	17.053	119	2261	0.92	ug/L		98
124) benzyl chloride	16.503	91	4720	0.81	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44241.D
Acq On : 22 Apr 2019 3:54 pm
Operator : roberts
Sample : IC1775-1
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 25 15:19:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44242.D
Acq On : 22 Apr 2019 4:20 pm
Operator : roberts
Sample : IC1775-4
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 15:19:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.285	65	106636	500.00	ug/L		-0.02
5) pentafluorobenzene	9.828	168	217139	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	305650	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	273722	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	163666	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	116216	50.90	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.80%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	108646	50.21	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.42%				
75) toluene-d8 (s)	12.465	98	346238	50.89	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.78%				
98) 4-bromofluorobenzene (s)	15.218	95	144525	50.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.416	59	6730	19.28	ug/L		85
4) 1,4-dioxane	11.469	88	2451	95.00	ug/L		90
6) chlorodifluoromethane	3.678	51	26300	4.26	ug/L		91
7) dichlorodifluoromethane	3.657	85	29883	4.19	ug/L		99
8) chloromethane	4.008	50	31611	4.13	ug/L		94
9) vinyl chloride	4.255	62	26118	4.12	ug/L		100
10) 1,3-butadiene	4.302	54	13036	4.30	ug/L		95
11) bromomethane	4.900	96	19753	4.17	ug/L	#	98
12) chloroethane	5.083	64	12344	4.18	ug/L		93
13) trichlorofluoromethane	5.597	101	24898	4.10	ug/L		99
14) vinyl bromide	5.445	106	11429	4.11	ug/L		98
15) ethyl ether	6.016	74	4590	3.84	ug/L	#	79
16) 2-chloropropane	6.252	43	22607	4.58	ug/L		98
17) acrolein	6.263	56	1360	3.86	ug/L		89
18) freon 113	6.509	151	11022	4.37	ug/L		93
19) 1,1-dichloroethene	6.478	96	11993	4.30	ug/L		95
20) acetone	6.509	58	3292	13.21	ug/L	#	65
21) acetonitrile	6.976	41	16037	44.65	ug/L		83
22) iodomethane	6.740	142	22295	4.02	ug/L		99
23) carbon disulfide	6.882	76	44476	4.10	ug/L		97
24) methylene chloride	7.291	84	15459	3.98	ug/L		90
25) methyl acetate	7.023	43	6460	4.33	ug/L		95
26) methyl tert butyl ether	7.715	73	34942	3.88	ug/L		95
27) trans-1,2-dichloroethene	7.731	96	12128	4.08	ug/L		98
28) hexane	8.150	57	12564	3.97	ug/L		98
29) di-isopropyl ether	8.428	45	39205	3.86	ug/L		95
30) ethyl tert-butyl ether	8.937	59	36837	3.77	ug/L		99
31) 2-butanone	9.147	72	2905	14.66	ug/L	#	79
32) 1,1-dichloroethane	8.392	63	21602	4.12	ug/L		98
33) chloroprene	8.507	53	12684	4.05	ug/L		92
34) acrylonitrile	7.626	52	2272	3.76	ug/L		80
35) vinyl acetate	8.350	86	1059	3.30	ug/L	#	82
36) ethyl acetate	9.173	45	995	3.76	ug/L	#	1
37) 2,2-dichloropropane	9.230	77	21905	4.09	ug/L		95
38) cis-1,2-dichloroethene	9.194	96	13183	4.30	ug/L		93
39) propionitrile	9.220	54	11019	41.85	ug/L		92
40) methyl acrylate	9.257	85	735	2.91	ug/L		95
41) bromochloromethane	9.514	128	5821	4.08	ug/L		89
42) tetrahydrofuran	9.556	72	728	3.53	ug/L	#	43
43) chloroform	9.624	83	21678	4.10	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44242.D
Acq On : 22 Apr 2019 4:20 pm
Operator : roberts
Sample : IC1775-4
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 15:19:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) methacrylonitrile	9.430	67	2715	3.96	ug/L		96
46) 1,1,1-trichloroethane	9.896	97	21976	4.11	ug/L		97
47) cyclohexane	10.012	84	15915	4.07	ug/L		93
48) 1,1-dichloropropene	10.080	75	12554	4.22	ug/L		95
49) carbon tetrachloride	10.106	117	19294	4.30	ug/L		96
50) isobutyl alcohol	10.101	43	4172	42.98	ug/L	#	82
51) tert-amyl alcohol	10.269	55	2291	19.05	ug/L		100
54) iso-octane	10.463	57	37783	3.90	ug/L		99
55) benzene	10.337	78	39776	4.11	ug/L		100
56) tert-amyl methyl ether	10.457	73	32948	3.85	ug/L		93
57) heptane	10.646	57	6219	4.15	ug/L		95
58) isopropyl acetate	10.300	87	1570	3.88	ug/L	#	78
59) 1,2-dichloroethane	10.373	62	14604	4.16	ug/L		98
60) n-butyl alcohol	10.908	56	11063	184.57	ug/L		97
61) ethyl acrylate	11.134	55	8232	3.81	ug/L		97
62) trichloroethene	11.113	95	9669	4.04	ug/L		94
63) 2-nitropropane	11.894	41	1588	4.04	ug/L	#	78
64) 2-chloroethyl vinyl ether	11.946	63	19778	18.19	ug/L		98
65) methyl methacrylate	11.406	100	1479	3.52	ug/L	#	49
66) 1,2-dichloropropane	11.406	63	11079	4.09	ug/L		93
67) methylcyclohexane	11.417	83	16804	4.16	ug/L		100
68) dibromomethane	11.516	93	6759	4.25	ug/L		96
69) bromodichloromethane	11.689	83	14720	4.02	ug/L		98
70) epichlorohydrin	12.025	57	3076	18.05	ug/L		89
71) cis-1,3-dichloropropene	12.156	75	14345	3.83	ug/L		96
72) 4-methyl-2-pentanone	12.277	58	10831	14.75	ug/L		93
73) 3-methyl-1-butanol	12.303	70	3644	67.75	ug/L		93
76) toluene	12.539	92	21470	4.12	ug/L		99
77) ethyl methacrylate	12.749	69	8187	3.79	ug/L		99
78) trans-1,3-dichloropropene	12.738	75	12210	4.02	ug/L		98
79) 1,1,2-trichloroethane	12.958	83	7060	4.23	ug/L		93
80) tetrachloroethene	13.105	166	9559	4.34	ug/L		92
81) 2-hexanone	13.142	58	9185	15.30	ug/L		96
82) 1,3-dichloropropane	13.142	76	12779	4.14	ug/L		95
83) butyl acetate	13.236	56	4773	4.02	ug/L		99
84) dibromochloromethane	13.388	129	9895	4.07	ug/L		96
85) 1,2-dibromoethane	13.535	107	10399	3.99	ug/L		97
86) n-butyl ether	14.033	57	35170	3.90	ug/L		97
87) chlorobenzene	14.038	112	26577	4.13	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.112	131	11130	4.14	ug/L		98
89) ethylbenzene	14.117	91	42080	4.11	ug/L		99
90) m,p-xylene	14.243	106	30860	8.25	ug/L		94
91) o-xylene	14.657	106	15644	3.95	ug/L		96
92) styrene	14.668	104	24230	3.87	ug/L		98
93) bromoform	14.893	173	6579	4.06	ug/L		97
94) butyl acrylate	14.500	55	13716	3.65	ug/L		95
95) isopropylbenzene	15.019	105	39541	3.98	ug/L		96
96) cis-1,4-dichloro-2-butene	15.056	88	3229	3.68	ug/L		96
99) bromobenzene	15.396	156	12340	4.07	ug/L		97
100) 1,1,2,2-tetrachloroethane	15.307	83	12322	4.07	ug/L		97
101) trans-1,4-dichloro-2-b...	15.339	53	2460	4.06	ug/L		83
102) 1,2,3-trichloropropane	15.391	110	2968	4.11	ug/L		86
103) n-propylbenzene	15.443	91	51259	4.12	ug/L		97
104) 2-chlorotoluene	15.569	126	11242	4.19	ug/L		89
105) 4-chlorotoluene	15.685	91	31922	4.01	ug/L		98
106) 1,3,5-trimethylbenzene	15.606	105	36329	4.03	ug/L		97
107) tert-butylbenzene	15.942	119	25898	3.80	ug/L		94
108) 1,2,4-trimethylbenzene	15.994	105	37616	3.94	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44242.D
Acq On : 22 Apr 2019 4:20 pm
Operator : roberts
Sample : IC1775-4
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 15:19:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

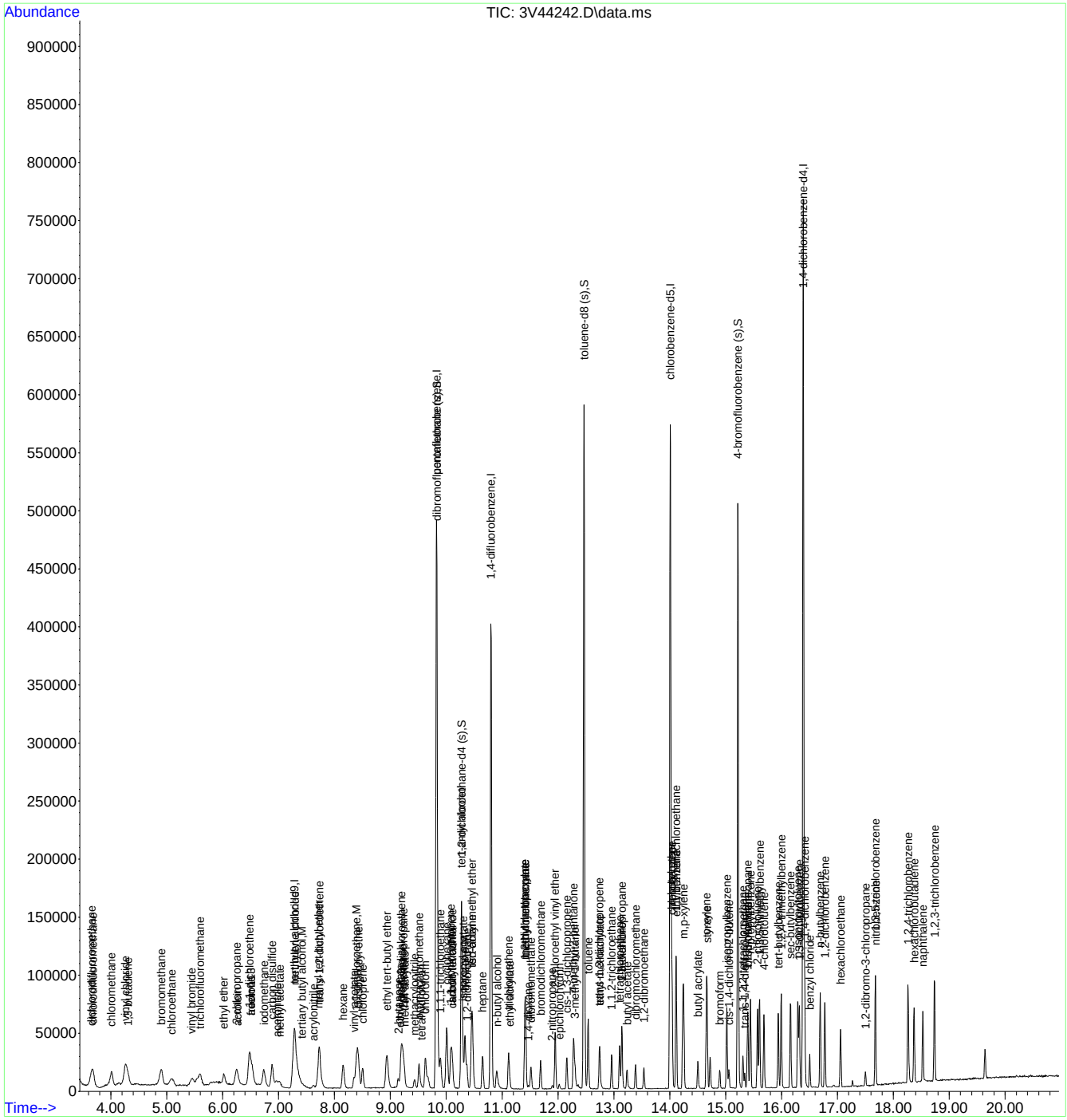
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
109) sec-butylbenzene	16.157	105	45052	4.10	ug/L		97
110) 1,3-dichlorobenzene	16.319	146	24717	4.10	ug/L		98
111) p-isopropyltoluene	16.293	119	36366	3.93	ug/L		98
112) 1,4-dichlorobenzene	16.413	146	25493	4.14	ug/L		97
113) 1,2-dichlorobenzene	16.775	146	25463	4.09	ug/L		97
114) n-butylbenzene	16.691	92	20731	3.96	ug/L		95
115) 1,2-dibromo-3-chloropr...	17.504	157	2799	3.77	ug/L		96
116) 1,3,5-trichlorobenzene	17.677	180	24040	3.96	ug/L		94
118) nitrobenzene	17.682	77	691	4.10	ug/L	#	70
119) 1,2,4-trichlorobenzene	18.264	180	22189	3.94	ug/L		97
120) hexachlorobutadiene	18.369	225	11586	4.23	ug/L		96
121) naphthalene	18.526	128	39739	3.56	ug/L		99
122) 1,2,3-trichlorobenzene	18.736	180	24618	4.22	ug/L		98
123) hexachloroethane	17.053	119	7786	3.95	ug/L		96
124) benzyl chloride	16.503	91	17649	3.77	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44242.D
Acq On : 22 Apr 2019 4:20 pm
Operator : roberts
Sample : IC1775-4
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 15:19:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44243.D
Acq On : 22 Apr 2019 4:45 pm
Operator : roberts
Sample : IC1775-8
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 15:19:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:18:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.280	65	107203	500.00	ug/L		-0.02
5) pentafluorobenzene	9.828	168	219225	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	312311	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	309895	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	193280	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	116065	50.58	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.16%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	109851	49.92	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.84%				
75) toluene-d8 (s)	12.465	98	375972	48.50	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.00%				
98) 4-bromofluorobenzene (s)	15.218	95	171369	50.65	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.30%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.416	59	14579	43.07	ug/L		79
4) 1,4-dioxane	11.469	88	5656	213.09	ug/L		99
6) chlorodifluoromethane	3.688	51	49767	8.65	ug/L		99
7) dichlorodifluoromethane	3.657	85	55257	7.82	ug/L		90
8) chloromethane	4.019	50	61298	8.19	ug/L		98
9) vinyl chloride	4.260	62	49853	7.84	ug/L		99
10) 1,3-butadiene	4.307	54	24960	8.77	ug/L		94
11) bromomethane	4.910	96	39416	8.71	ug/L	#	98
12) chloroethane	5.104	64	24744	8.39	ug/L		97
13) trichlorofluoromethane	5.597	101	48251	8.32	ug/L		98
14) vinyl bromide	5.466	106	22809	8.03	ug/L		99
15) ethyl ether	6.027	74	9988	8.51	ug/L		96
16) 2-chloropropane	6.258	43	39476	8.58	ug/L		100
17) acrolein	6.263	56	3289	9.62	ug/L		88
18) freon 113	6.515	151	20595	8.76	ug/L		98
19) 1,1-dichloroethene	6.478	96	22350	8.88	ug/L		89
20) acetone	6.488	58	7038	36.43	ug/L		87
21) acetonitrile	6.965	41	31985	90.50	ug/L		91
22) iodomethane	6.740	142	48317	8.56	ug/L		98
23) carbon disulfide	6.887	76	88148	8.61	ug/L		99
24) methylene chloride	7.290	84	34312	9.23	ug/L		97
25) methyl acetate	7.018	43	12821	8.81	ug/L		95
26) methyl tert butyl ether	7.731	73	74255	8.14	ug/L		100
27) trans-1,2-dichloroethene	7.731	96	23984	8.66	ug/L		91
28) hexane	8.156	57	22385	7.89	ug/L		96
29) di-isopropyl ether	8.423	45	82391	7.80	ug/L		93
30) ethyl tert-butyl ether	8.942	59	79618	7.78	ug/L		96
31) 2-butanone	9.136	72	6359	31.03	ug/L	#	79
32) 1,1-dichloroethane	8.392	63	43968	8.51	ug/L		99
33) chloroprene	8.502	53	24295	7.66	ug/L		95
34) acrylonitrile	7.621	52	4811	7.96	ug/L		92
35) vinyl acetate	8.344	86	2437	7.15	ug/L	#	73
36) ethyl acetate	9.178	45	2184	7.82	ug/L	#	76
37) 2,2-dichloropropane	9.230	77	42890	8.53	ug/L		98
38) cis-1,2-dichloroethene	9.194	96	25652	8.91	ug/L		99
39) propionitrile	9.215	54	22987	87.16	ug/L		99
40) methyl acrylate	9.262	85	2149	7.83	ug/L	#	57
41) bromochloromethane	9.514	128	12067	8.52	ug/L		82
42) tetrahydrofuran	9.540	72	1729	7.72	ug/L		91
43) chloroform	9.629	83	43408	8.73	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44243.D
Acq On : 22 Apr 2019 4:45 pm
Operator : roberts
Sample : IC1775-8
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 15:19:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:18:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) methacrylonitrile	9.435	67	5290	7.56	ug/L		93
46) 1,1,1-trichloroethane	9.896	97	42781	8.30	ug/L		97
47) cyclohexane	10.017	84	30365	7.80	ug/L	#	87
48) 1,1-dichloropropene	10.080	75	24103	8.28	ug/L		96
49) carbon tetrachloride	10.101	117	34847	8.36	ug/L		98
50) isobutyl alcohol	10.106	43	8328	89.14	ug/L		97
51) tert-amyl alcohol	10.274	55	4867	40.28	ug/L	#	86
54) iso-octane	10.468	57	72604	7.06	ug/L		97
55) benzene	10.337	78	79619	8.40	ug/L		98
56) tert-amyl methyl ether	10.463	73	69937	7.85	ug/L		95
57) heptane	10.651	57	11119	7.51	ug/L		99
58) isopropyl acetate	10.300	87	3304	8.02	ug/L	#	76
59) 1,2-dichloroethane	10.373	62	28785	8.49	ug/L		100
60) n-butyl alcohol	10.903	56	23565	379.92	ug/L		99
61) ethyl acrylate	11.134	55	17562	7.75	ug/L		97
62) trichloroethene	11.118	95	19639	8.25	ug/L		97
63) 2-nitropropane	11.899	41	3286	8.45	ug/L		93
64) 2-chloroethyl vinyl ether	11.952	63	45726	37.45	ug/L		99
65) methyl methacrylate	11.406	100	3199	7.10	ug/L	#	91
66) 1,2-dichloropropane	11.412	63	22687	8.47	ug/L		97
67) methylcyclohexane	11.417	83	29756	7.31	ug/L		93
68) dibromomethane	11.516	93	13600	8.52	ug/L		98
69) bromodichloromethane	11.689	83	30509	8.30	ug/L		98
70) epichlorohydrin	12.025	57	7182	40.57	ug/L		99
71) cis-1,3-dichloropropene	12.161	75	31137	7.85	ug/L		97
72) 4-methyl-2-pentanone	12.277	58	24753	30.60	ug/L		98
73) 3-methyl-1-butanol	12.303	70	8539	141.30	ug/L		95
76) toluene	12.539	92	45291	7.89	ug/L		93
77) ethyl methacrylate	12.748	69	19123	7.19	ug/L		97
78) trans-1,3-dichloropropene	12.743	75	27539	7.73	ug/L		99
79) 1,1,2-trichloroethane	12.958	83	15597	8.30	ug/L		97
80) tetrachloroethene	13.100	166	18729	7.72	ug/L		93
81) 2-hexanone	13.142	58	23487	31.27	ug/L		98
82) 1,3-dichloropropane	13.142	76	28355	8.17	ug/L		99
83) butyl acetate	13.236	56	11391	8.06	ug/L		95
84) dibromochloromethane	13.388	129	21891	7.84	ug/L		98
85) 1,2-dibromoethane	13.535	107	24855	8.38	ug/L		95
86) n-butyl ether	14.033	57	80294	7.47	ug/L		99
87) chlorobenzene	14.044	112	60589	8.48	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.112	131	23563	7.73	ug/L		97
89) ethylbenzene	14.112	91	93707	7.94	ug/L		98
90) m,p-xylene	14.243	106	69550	15.78	ug/L		99
91) o-xylene	14.657	106	36073	7.47	ug/L		97
92) styrene	14.667	104	59443	7.63	ug/L		98
93) bromoform	14.893	173	15317	8.24	ug/L		99
94) butyl acrylate	14.505	55	33639	7.31	ug/L		96
95) isopropylbenzene	15.019	105	85910	7.12	ug/L		100
96) cis-1,4-dichloro-2-butene	15.061	88	7783	7.50	ug/L		98
99) bromobenzene	15.396	156	29578	8.44	ug/L		97
100) 1,1,2,2-tetrachloroethane	15.307	83	28732	8.42	ug/L		98
101) trans-1,4-dichloro-2-b...	15.339	53	5674	7.93	ug/L		97
102) 1,2,3-trichloropropane	15.386	110	6963	8.59	ug/L		99
103) n-propylbenzene	15.443	91	114378	7.68	ug/L		98
104) 2-chlorotoluene	15.569	126	25224	7.87	ug/L		99
105) 4-chlorotoluene	15.685	91	77508	8.24	ug/L		99
106) 1,3,5-trimethylbenzene	15.606	105	83955	7.50	ug/L		97
107) tert-butylbenzene	15.941	119	53210	6.52	ug/L		97
108) 1,2,4-trimethylbenzene	15.994	105	88928	7.49	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44243.D
Acq On : 22 Apr 2019 4:45 pm
Operator : roberts
Sample : IC1775-8
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 15:19:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:18:39 2019
Response via : Initial Calibration

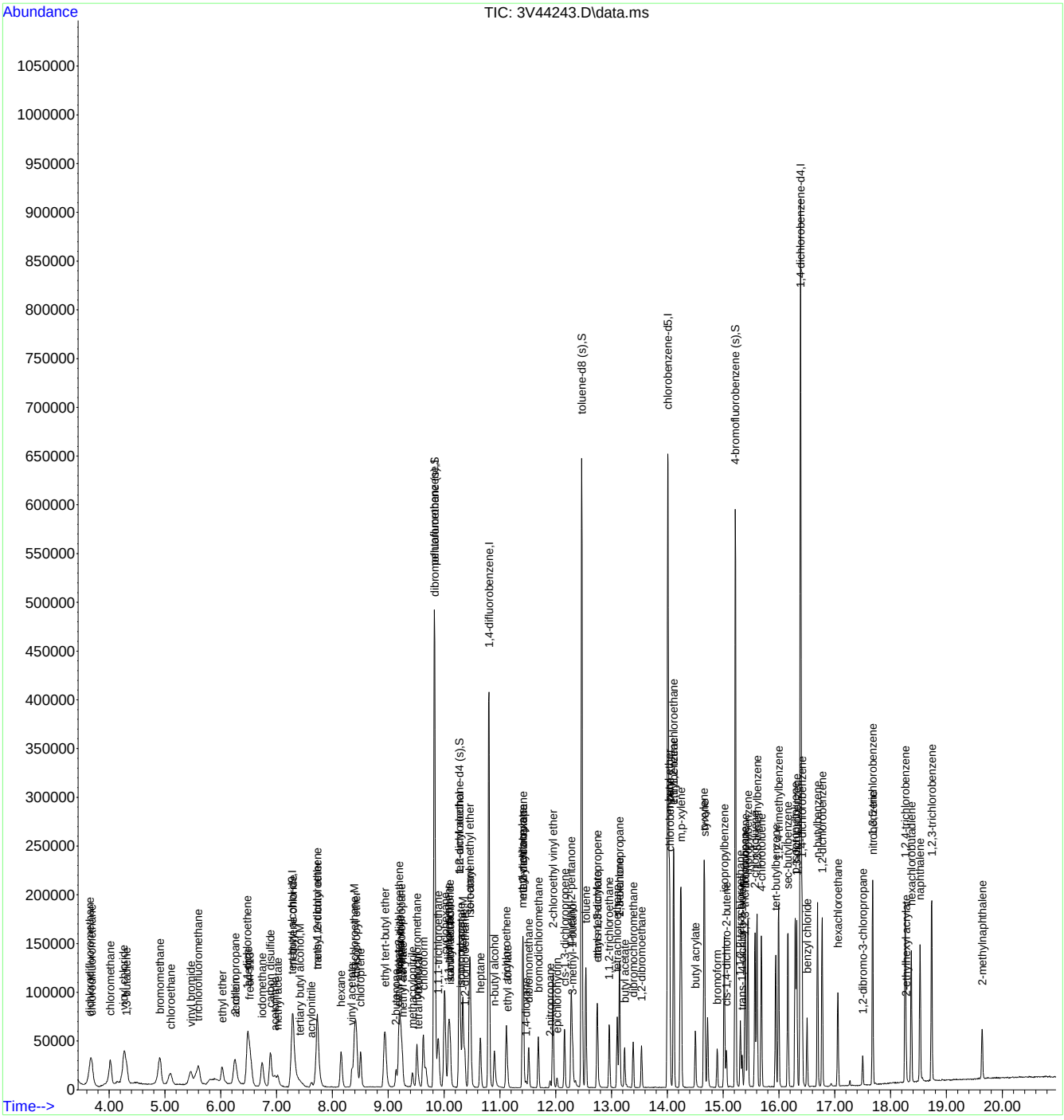
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	16.156	105	95100	6.96	ug/L	99
110) 1,3-dichlorobenzene	16.319	146	58791	8.68	ug/L	99
111) p-isopropyltoluene	16.293	119	82939	7.03	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	59124	8.55	ug/L	98
113) 1,2-dichlorobenzene	16.775	146	59823	8.38	ug/L	98
114) n-butylbenzene	16.691	92	47049	7.09	ug/L	97
115) 1,2-dibromo-3-chloropr...	17.504	157	6522	7.63	ug/L	98
116) 1,3,5-trichlorobenzene	17.677	180	54225	7.59	ug/L	96
117) 2-ethylhexyl acrylate	18.280	70	4896	1.19	ug/L	90
118) nitrobenzene	17.682	77	1427	7.28	ug/L	98
119) 1,2,4-trichlorobenzene	18.264	180	49772	7.22	ug/L	99
120) hexachlorobutadiene	18.369	225	23887	7.67	ug/L	99
121) naphthalene	18.526	128	91168	6.59	ug/L	99
122) 1,2,3-trichlorobenzene	18.736	180	50819	7.36	ug/L	98
123) hexachloroethane	17.053	119	15863	6.97	ug/L	97
124) benzyl chloride	16.502	91	42433	7.25	ug/L	98
125) 2-methylnaphthalene	19.643	142	23429	2.72	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44243.D
Acq On : 22 Apr 2019 4:45 pm
Operator : roberts
Sample : IC1775-8
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 15:19:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:18:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44244.D
Acq On : 22 Apr 2019 5:11 pm
Operator : roberts
Sample : IC1775-20
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 15:20:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.280	65	100508	500.00	ug/L		-0.02
5) pentafluorobenzene	9.823	168	210635	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	298238	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	274449	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	175289	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	109492	49.44	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.88%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	103521	49.03	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.06%				
75) toluene-d8 (s)	12.465	98	345014	50.58	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.16%				
98) 4-bromofluorobenzene (s)	15.218	95	152299	49.21	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.42%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.400	59	32881	99.92	ug/L		91
4) 1,4-dioxane	11.469	88	11854	487.49	ug/L		92
6) chlorodifluoromethane	3.667	51	114278	19.07	ug/L		99
7) dichlorodifluoromethane	3.657	85	129961	18.80	ug/L		95
8) chloromethane	4.008	50	166454	22.44	ug/L		99
9) vinyl chloride	4.249	62	118880	19.35	ug/L		99
10) 1,3-butadiene	4.297	54	57412	19.54	ug/L		97
11) bromomethane	4.894	96	91480	19.89	ug/L	#	97
12) chloroethane	5.088	64	58127	20.27	ug/L		98
13) trichlorofluoromethane	5.592	101	107505	18.26	ug/L		99
14) vinyl bromide	5.450	106	52571	19.48	ug/L		96
15) ethyl ether	6.016	74	22656	19.53	ug/L		98
16) 2-chloropropane	6.247	43	87531	18.27	ug/L		98
17) acrolein	6.257	56	6966	20.40	ug/L		86
18) freon 113	6.520	151	45896	18.78	ug/L		96
19) 1,1-dichloroethene	6.472	96	47401	17.50	ug/L		97
20) acetone	6.488	58	15561	85.56	ug/L		95
21) acetonitrile	6.965	41	67595	194.00	ug/L		98
22) iodomethane	6.729	142	103345	19.20	ug/L		100
23) carbon disulfide	6.881	76	195316	18.58	ug/L		98
24) methylene chloride	7.280	84	71991	19.13	ug/L		95
25) methyl acetate	7.018	43	29378	20.32	ug/L		96
26) methyl tert butyl ether	7.715	73	177378	20.32	ug/L		99
27) trans-1,2-dichloroethene	7.725	96	51152	17.76	ug/L		95
28) hexane	8.155	57	51744	16.88	ug/L		96
29) di-isopropyl ether	8.418	45	197497	20.04	ug/L		96
30) ethyl tert-butyl ether	8.937	59	190935	20.16	ug/L		97
31) 2-butanone	9.136	72	14963	77.87	ug/L		96
32) 1,1-dichloroethane	8.386	63	98314	19.33	ug/L		99
33) chloroprene	8.501	53	57112	18.82	ug/L		98
34) acrylonitrile	7.615	52	11321	19.32	ug/L		98
35) vinyl acetate	8.344	86	6399	20.55	ug/L		94
36) ethyl acetate	9.173	45	5348	20.85	ug/L	#	57
37) 2,2-dichloropropane	9.230	77	96677	18.61	ug/L		97
38) cis-1,2-dichloroethene	9.194	96	56042	18.85	ug/L		93
39) propionitrile	9.214	54	50504	197.73	ug/L		97
40) methyl acrylate	9.251	85	5085	20.76	ug/L	#	82
41) bromochloromethane	9.513	128	27434	19.85	ug/L		98
42) tetrahydrofuran	9.534	72	3635	18.16	ug/L	#	84
43) chloroform	9.623	83	96227	18.77	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44244.D
Acq On : 22 Apr 2019 5:11 pm
Operator : roberts
Sample : IC1775-20
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 15:20:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) methacrylonitrile	9.429	67	13089	19.66	ug/L		99
46) 1,1,1-trichloroethane	9.891	97	96081	18.51	ug/L		98
47) cyclohexane	10.006	84	70102	18.49	ug/L		93
48) 1,1-dichloropropene	10.074	75	53250	18.43	ug/L		99
49) carbon tetrachloride	10.101	117	78540	18.04	ug/L		98
50) isobutyl alcohol	10.101	43	18017	191.34	ug/L		92
51) tert-amyl alcohol	10.268	55	10999	94.30	ug/L		97
54) iso-octane	10.468	57	173064	18.30	ug/L		98
55) benzene	10.337	78	180972	19.16	ug/L		100
56) tert-amyl methyl ether	10.457	73	166531	19.94	ug/L		98
57) heptane	10.646	57	26345	18.04	ug/L		94
58) isopropyl acetate	10.295	87	7589	19.22	ug/L		99
59) 1,2-dichloroethane	10.368	62	67578	19.73	ug/L		98
60) n-butyl alcohol	10.898	56	53959	922.61	ug/L		97
61) ethyl acrylate	11.133	55	41234	19.54	ug/L		99
62) trichloroethene	11.112	95	43753	18.74	ug/L		98
63) 2-nitropropane	11.894	41	7186	18.72	ug/L		93
64) 2-chloroethyl vinyl ether	11.946	63	108007	101.80	ug/L		97
65) methyl methacrylate	11.406	100	7957	19.39	ug/L	#	84
66) 1,2-dichloropropane	11.406	63	51906	19.63	ug/L		100
67) methylcyclohexane	11.417	83	70596	17.90	ug/L		99
68) dibromomethane	11.516	93	30769	19.81	ug/L		98
69) bromodichloromethane	11.689	83	69709	19.53	ug/L		95
70) epichlorohydrin	12.020	57	15858	95.37	ug/L		98
71) cis-1,3-dichloropropene	12.156	75	72522	19.86	ug/L		98
72) 4-methyl-2-pentanone	12.276	58	57167	79.77	ug/L		98
73) 3-methyl-1-butanol	12.303	70	20242	385.67	ug/L		97
76) toluene	12.539	92	101372	19.39	ug/L		100
77) ethyl methacrylate	12.748	69	44429	20.53	ug/L		98
78) trans-1,3-dichloropropene	12.738	75	62559	20.55	ug/L		99
79) 1,1,2-trichloroethane	12.958	83	33964	20.27	ug/L		97
80) tetrachloroethene	13.100	166	41463	18.78	ug/L		95
81) 2-hexanone	13.142	58	50861	84.50	ug/L		98
82) 1,3-dichloropropane	13.142	76	62733	20.28	ug/L		98
83) butyl acetate	13.231	56	24257	20.39	ug/L		97
84) dibromochloromethane	13.388	129	48856	20.04	ug/L		98
85) 1,2-dibromoethane	13.535	107	52750	20.19	ug/L		99
86) n-butyl ether	14.033	57	182786	20.20	ug/L		98
87) chlorobenzene	14.038	112	129363	20.03	ug/L		100
88) 1,1,1,2-tetrachloroethane	14.117	131	54731	20.31	ug/L		99
89) ethylbenzene	14.111	91	205552	20.02	ug/L		99
90) m,p-xylene	14.243	106	150060	40.01	ug/L		97
91) o-xylene	14.657	106	83047	20.94	ug/L		97
92) styrene	14.667	104	137485	21.87	ug/L		99
93) bromoform	14.893	173	33111	20.36	ug/L		98
94) butyl acrylate	14.499	55	78364	20.80	ug/L		98
95) isopropylbenzene	15.019	105	197218	19.81	ug/L		100
96) cis-1,4-dichloro-2-butene	15.055	88	18165	20.65	ug/L		97
99) bromobenzene	15.396	156	63498	19.57	ug/L		99
100) 1,1,2,2-tetrachloroethane	15.307	83	62138	19.14	ug/L		98
101) trans-1,4-dichloro-2-b...	15.338	53	12491	19.27	ug/L		99
102) 1,2,3-trichloropropane	15.386	110	14471	18.69	ug/L		94
103) n-propylbenzene	15.443	91	255133	19.16	ug/L		99
104) 2-chlorotoluene	15.569	126	56656	19.69	ug/L		99
105) 4-chlorotoluene	15.684	91	170110	19.94	ug/L		100
106) 1,3,5-trimethylbenzene	15.606	105	189556	19.62	ug/L		100
107) tert-butylbenzene	15.941	119	130159	17.83	ug/L		99
108) 1,2,4-trimethylbenzene	15.994	105	204531	20.02	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44244.D
Acq On : 22 Apr 2019 5:11 pm
Operator : roberts
Sample : IC1775-20
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 15:20:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

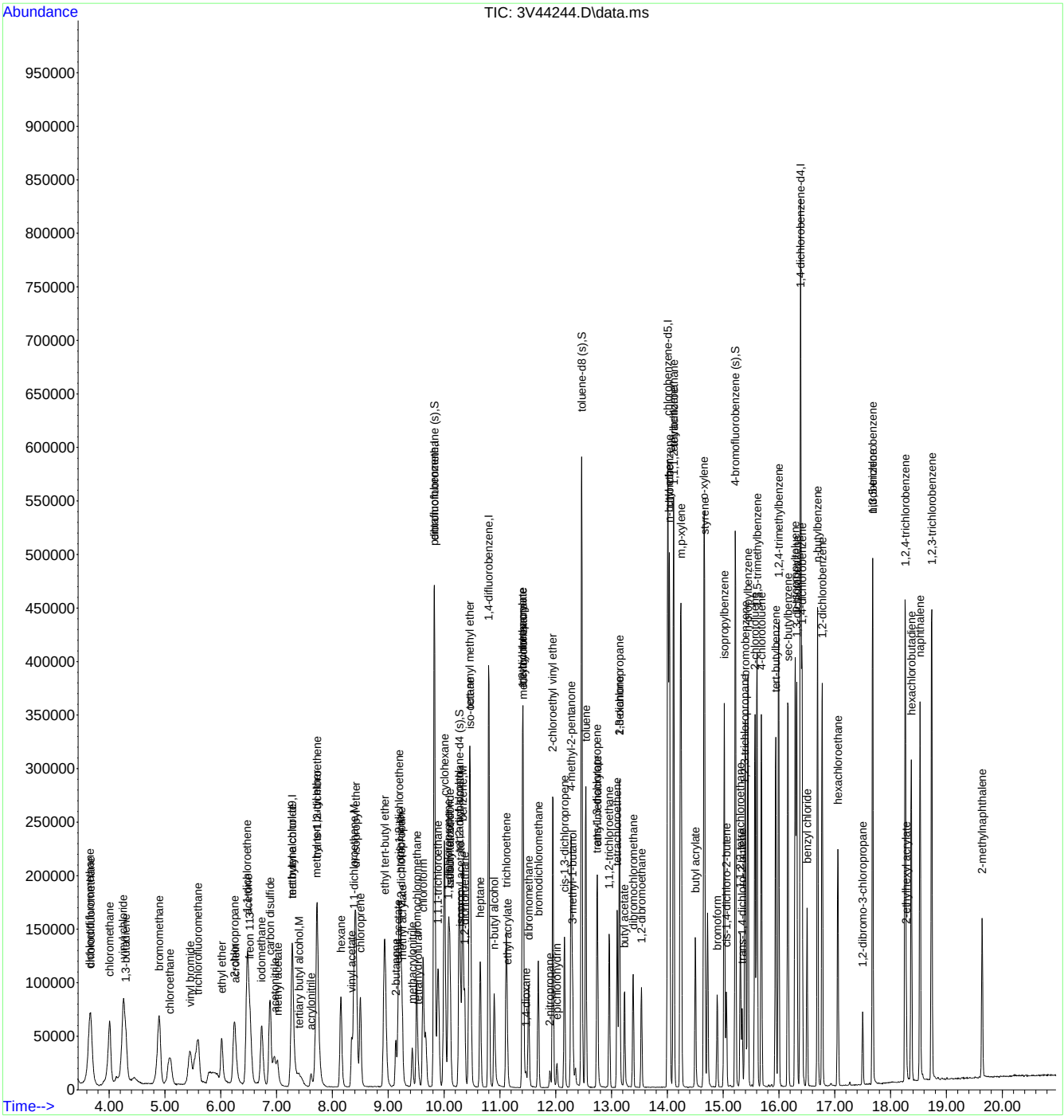
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	16.162	105	222985	18.97	ug/L	100
110) 1,3-dichlorobenzene	16.319	146	128776	19.94	ug/L	99
111) p-isopropyltoluene	16.293	119	194138	19.58	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	127925	19.41	ug/L	99
113) 1,2-dichlorobenzene	16.775	146	130133	19.54	ug/L	100
114) n-butylbenzene	16.691	92	111419	19.88	ug/L	96
115) 1,2-dibromo-3-chloropr...	17.499	157	14712	18.52	ug/L	95
116) 1,3,5-trichlorobenzene	17.677	180	126687	19.48	ug/L	97
117) 2-ethylhexyl acrylate	18.280	70	12335	3.55	ug/L	90
118) nitrobenzene	17.677	77	3396	18.81	ug/L	94
119) 1,2,4-trichlorobenzene	18.264	180	119524	19.84	ug/L	99
120) hexachlorobutadiene	18.369	225	52361	17.85	ug/L	98
121) naphthalene	18.526	128	233477	19.55	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	124266	19.90	ug/L	99
123) hexachloroethane	17.053	119	36780	17.42	ug/L	96
124) benzyl chloride	16.502	91	99601	19.88	ug/L	100
125) 2-methylnaphthalene	19.638	142	63219	8.89	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44244.D
Acq On : 22 Apr 2019 5:11 pm
Operator : roberts
Sample : IC1775-20
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 15:20:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44245.D
Acq On : 22 Apr 2019 5:37 pm
Operator : roberts
Sample : ICC1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 25 15:20:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.301	65	114561	500.00	ug/L		0.00
5) pentafluorobenzene	9.828	168	223069	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	314755	50.00	ug/L		0.00
74) chlorobenzene-d5	14.012	117	296013	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	182738	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	116744	49.78	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.56%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	111193	49.90	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.80%				
75) toluene-d8 (s)	12.465	98	370199	50.32	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.64%				
98) 4-bromofluorobenzene (s)	15.218	95	159956	49.58	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.16%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.432	59	90430	241.10	ug/L		100
4) 1,4-dioxane	11.469	88	35456	1279.25	ug/L		100
6) chlorodifluoromethane	3.678	51	292811	46.13	ug/L		100
7) dichlorodifluoromethane	3.662	85	359443	49.09	ug/L		100
8) chloromethane	4.019	50	430072	54.76	ug/L		100
9) vinyl chloride	4.255	62	323571	49.73	ug/L		100
10) 1,3-butadiene	4.302	54	144789	46.52	ug/L		100
11) bromomethane	4.905	96	230225	47.27	ug/L	#	100
12) chloroethane	5.093	64	149967	49.38	ug/L		100
13) trichlorofluoromethane	5.597	101	295173	47.34	ug/L		100
14) vinyl bromide	5.461	106	144562	50.58	ug/L		100
15) ethyl ether	6.022	74	59724	48.60	ug/L		100
16) 2-chloropropane	6.247	43	234150	46.14	ug/L		100
17) acrolein	6.263	56	17389	48.09	ug/L		100
18) freon 113	6.520	151	119618	46.21	ug/L		100
19) 1,1-dichloroethene	6.478	96	128068	44.65	ug/L		100
20) acetone	6.493	58	39313	211.70	ug/L		100
21) acetonitrile	6.971	41	180398	488.89	ug/L		100
22) iodomethane	6.740	142	287300	50.40	ug/L		100
23) carbon disulfide	6.887	76	521014	46.80	ug/L		100
24) methylene chloride	7.290	84	189107	47.45	ug/L		100
25) methyl acetate	7.018	43	74054	48.37	ug/L		100
26) methyl tert butyl ether	7.726	73	464119	50.21	ug/L		100
27) trans-1,2-dichloroethene	7.731	96	140956	46.20	ug/L		100
28) hexane	8.155	57	144346	44.45	ug/L		100
29) di-isopropyl ether	8.423	45	537098	51.45	ug/L		100
30) ethyl tert-butyl ether	8.942	59	520981	51.95	ug/L		100
31) 2-butanone	9.136	72	41711	204.96	ug/L		100
32) 1,1-dichloroethane	8.386	63	263017	48.83	ug/L		100
33) chloroprene	8.501	53	161355	50.21	ug/L		100
34) acrylonitrile	7.621	52	30754	49.57	ug/L		100
35) vinyl acetate	8.344	86	17336	52.57	ug/L		100
36) ethyl acetate	9.178	45	14206	52.29	ug/L		100
37) 2,2-dichloropropane	9.230	77	255809	46.49	ug/L		100
38) cis-1,2-dichloroethene	9.194	96	146546	46.54	ug/L		100
39) propionitrile	9.215	54	134175	496.03	ug/L		100
40) methyl acrylate	9.256	85	13963	53.83	ug/L		100
41) bromochloromethane	9.513	128	72088	49.24	ug/L		100
42) tetrahydrofuran	9.540	72	11400	53.79	ug/L		100
43) chloroform	9.629	83	252992	46.61	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44245.D
Acq On : 22 Apr 2019 5:37 pm
Operator : roberts
Sample : ICC1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 25 15:20:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) methacrylonitrile	9.430	67	35597	50.49	ug/L	100
46) 1,1,1-trichloroethane	9.896	97	262260	47.72	ug/L	100
47) cyclohexane	10.011	84	198186	49.36	ug/L	100
48) 1,1-dichloropropene	10.080	75	148075	48.40	ug/L	100
49) carbon tetrachloride	10.101	117	212167	46.02	ug/L	100
50) isobutyl alcohol	10.106	43	47353	474.86	ug/L	99
51) tert-amyl alcohol	10.268	55	30738	248.85	ug/L	100
54) iso-octane	10.468	57	518111	51.90	ug/L	100
55) benzene	10.337	78	478670	48.01	ug/L	100
56) tert-amyl methyl ether	10.457	73	448822	50.91	ug/L	100
57) heptane	10.651	57	74635	48.42	ug/L	100
58) isopropyl acetate	10.300	87	20756	49.81	ug/L	100
59) 1,2-dichloroethane	10.368	62	171948	47.56	ug/L	100
60) n-butyl alcohol	10.898	56	157283	2548.16	ug/L	100
61) ethyl acrylate	11.133	55	114865	51.57	ug/L	100
62) trichloroethene	11.113	95	119962	48.68	ug/L	100
63) 2-nitropropane	11.899	41	19603	48.39	ug/L	100
64) 2-chloroethyl vinyl ether	11.951	63	307667	274.78	ug/L	100
65) methyl methacrylate	11.406	100	22719	52.46	ug/L	100
66) 1,2-dichloropropane	11.406	63	134976	48.37	ug/L	100
67) methylcyclohexane	11.417	83	205024	49.25	ug/L	100
68) dibromomethane	11.516	93	80442	49.08	ug/L	100
69) bromodichloromethane	11.689	83	185252	49.19	ug/L	100
70) epichlorohydrin	12.025	57	44608	254.19	ug/L	100
71) cis-1,3-dichloropropene	12.156	75	199810	51.84	ug/L	100
72) 4-methyl-2-pentanone	12.276	58	163075	215.61	ug/L	100
73) 3-methyl-1-butanol	12.303	70	60906	1099.54	ug/L	100
76) toluene	12.539	92	274296	48.64	ug/L	100
77) ethyl methacrylate	12.748	69	127001	54.40	ug/L	100
78) trans-1,3-dichloropropene	12.738	75	170048	51.79	ug/L	100
79) 1,1,2-trichloroethane	12.958	83	89715	49.65	ug/L	100
80) tetrachloroethene	13.105	166	115799	48.63	ug/L	100
81) 2-hexanone	13.142	58	143510	221.06	ug/L	100
82) 1,3-dichloropropane	13.142	76	165795	49.70	ug/L	100
83) butyl acetate	13.236	56	67529	52.63	ug/L	100
84) dibromochloromethane	13.388	129	133304	50.68	ug/L	100
85) 1,2-dibromoethane	13.535	107	141696	50.28	ug/L	100
86) n-butyl ether	14.033	57	513419	52.61	ug/L	100
87) chlorobenzene	14.043	112	341132	48.98	ug/L	100
88) 1,1,1,2-tetrachloroethane	14.117	131	145545	50.07	ug/L	100
89) ethylbenzene	14.112	91	563494	50.89	ug/L	100
90) m,p-xylene	14.243	106	421092	104.09	ug/L	100
91) o-xylene	14.657	106	230609	53.91	ug/L	100
92) styrene	14.667	104	371944	54.86	ug/L	100
93) bromoform	14.893	173	88809	50.63	ug/L	100
94) butyl acrylate	14.500	55	219911	54.12	ug/L	100
95) isopropylbenzene	15.019	105	576540	53.69	ug/L	100
96) cis-1,4-dichloro-2-butene	15.055	88	49534	52.20	ug/L	100
99) bromobenzene	15.396	156	165755	48.99	ug/L	100
100) 1,1,2,2-tetrachloroethane	15.307	83	161235	47.65	ug/L	100
101) trans-1,4-dichloro-2-b...	15.338	53	33835	50.07	ug/L	100
102) 1,2,3-trichloropropane	15.391	110	38308	47.46	ug/L	100
103) n-propylbenzene	15.443	91	704016	50.71	ug/L	100
104) 2-chlorotoluene	15.569	126	151588	50.54	ug/L	100
105) 4-chlorotoluene	15.684	91	444851	50.02	ug/L	100
106) 1,3,5-trimethylbenzene	15.606	105	529295	52.55	ug/L	100
107) tert-butylbenzene	15.941	119	385668	50.68	ug/L	100
108) 1,2,4-trimethylbenzene	15.994	105	561221	52.70	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44245.D
Acq On : 22 Apr 2019 5:37 pm
Operator : roberts
Sample : ICC1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 25 15:20:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

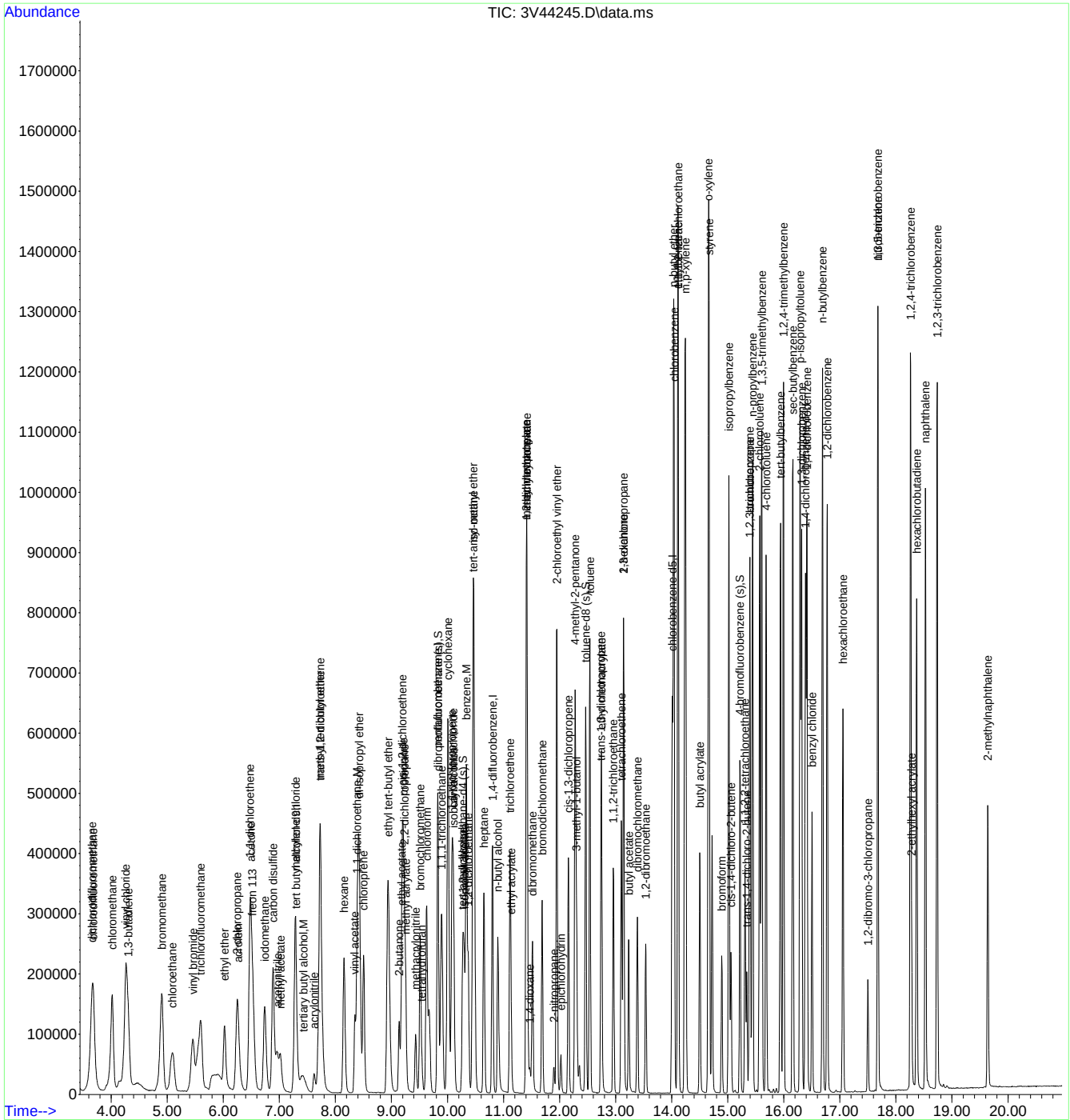
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	16.162	105	646039	52.71	ug/L	100
110) 1,3-dichlorobenzene	16.319	146	320338	47.59	ug/L	100
111) p-isopropyltoluene	16.293	119	557612	53.94	ug/L	100
112) 1,4-dichlorobenzene	16.413	146	327004	47.59	ug/L	100
113) 1,2-dichlorobenzene	16.775	146	337270	48.57	ug/L	100
114) n-butylbenzene	16.691	92	313500	53.66	ug/L	100
115) 1,2-dibromo-3-chloropr...	17.504	157	40411	48.79	ug/L	100
116) 1,3,5-trichlorobenzene	17.677	180	337749	49.82	ug/L	100
117) 2-ethylhexyl acrylate	18.280	70	38789	8.55	ug/L	100
118) nitrobenzene	17.677	77	9262	49.20	ug/L	100
119) 1,2,4-trichlorobenzene	18.264	180	326463	51.98	ug/L	100
120) hexachlorobutadiene	18.369	225	147177	48.14	ug/L	100
121) naphthalene	18.526	128	655648	52.67	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	328440	50.46	ug/L	100
123) hexachloroethane	17.053	119	107595	48.88	ug/L	100
124) benzyl chloride	16.502	91	276624	52.97	ug/L	100
125) 2-methylnaphthalene	19.638	142	205478	22.36	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44245.D
Acq On : 22 Apr 2019 5:37 pm
Operator : roberts
Sample : ICC1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 25 15:20:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44246.D
Acq On : 22 Apr 2019 6:03 pm
Operator : roberts
Sample : IC1775-100
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 25 15:20:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.285	65	104707	500.00	ug/L		-0.02
5) pentafluorobenzene	9.828	168	223423	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.798	114	303361	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	280112	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	157983	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	113203	48.19	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.38%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	105460	49.10	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.20%				
75) toluene-d8 (s)	12.465	98	350473	50.34	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.68%				
98) 4-bromofluorobenzene (s)	15.218	95	144783	51.91	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.82%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.411	59	176770	515.65	ug/L		98
4) 1,4-dioxane	11.469	88	69851	2757.40	ug/L		95
6) chlorodifluoromethane	3.673	51	631602	99.35	ug/L		100
7) dichlorodifluoromethane	3.652	85	754107	102.83	ug/L		99
8) chloromethane	4.008	50	842112	107.05	ug/L		99
9) vinyl chloride	4.250	62	625116	95.93	ug/L		98
10) 1,3-butadiene	4.286	54	320060	102.68	ug/L		98
11) bromomethane	4.894	96	415175	85.11	ug/L	#	99
12) chloroethane	5.088	64	282214	92.79	ug/L		99
13) trichlorofluoromethane	5.597	101	584052	93.53	ug/L		100
14) vinyl bromide	5.455	106	273903	95.68	ug/L		98
15) ethyl ether	6.022	74	123885	100.66	ug/L		96
16) 2-chloropropane	6.247	43	471851	92.83	ug/L		99
17) acrolein	6.258	56	35305	97.47	ug/L		93
18) freon 113	6.520	151	256448	98.90	ug/L		96
19) 1,1-dichloroethene	6.473	96	255569	88.96	ug/L		98
20) acetone	6.494	58	71052	386.41	ug/L		90
21) acetonitrile	6.960	41	339669	919.07	ug/L		98
22) iodomethane	6.735	142	519096	90.92	ug/L		99
23) carbon disulfide	6.882	76	1026640	92.08	ug/L		100
24) methylene chloride	7.285	84	362284	90.76	ug/L		99
25) methyl acetate	7.018	43	142736	93.09	ug/L		98
26) methyl tert butyl ether	7.726	73	937807	101.29	ug/L		99
27) trans-1,2-dichloroethene	7.726	96	277681	90.87	ug/L		97
28) hexane	8.150	57	341021	104.85	ug/L		98
29) di-isopropyl ether	8.423	45	1110036	106.17	ug/L		99
30) ethyl tert-butyl ether	8.942	59	1075724	107.09	ug/L		98
31) 2-butanone	9.136	72	81623	400.44	ug/L		96
32) 1,1-dichloroethane	8.386	63	518789	96.16	ug/L		99
33) chloroprene	8.502	53	340076	105.65	ug/L		99
34) acrylonitrile	7.621	52	60865	97.95	ug/L		97
35) vinyl acetate	8.350	86	35637	107.90	ug/L	#	90
36) ethyl acetate	9.173	45	27336	100.46	ug/L	#	50
37) 2,2-dichloropropane	9.230	77	506945	91.98	ug/L		97
38) cis-1,2-dichloroethene	9.194	96	295623	93.74	ug/L		98
39) propionitrile	9.215	54	262029	967.16	ug/L		100
40) methyl acrylate	9.251	85	27744	106.79	ug/L	#	77
41) bromochloromethane	9.514	128	143363	97.77	ug/L		96
42) tetrahydrofuran	9.540	72	22545	106.21	ug/L		93
43) chloroform	9.629	83	502222	92.37	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44246.D
Acq On : 22 Apr 2019 6:03 pm
Operator : roberts
Sample : IC1775-100
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 25 15:20:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) methacrylonitrile	9.430	67	73068	103.48	ug/L	94
46) 1,1,1-trichloroethane	9.896	97	534877	97.17	ug/L	99
47) cyclohexane	10.012	84	412235	102.51	ug/L	99
48) 1,1-dichloropropene	10.080	75	300178	97.97	ug/L	98
49) carbon tetrachloride	10.106	117	438621	94.99	ug/L	99
50) isobutyl alcohol	10.106	43	98667	987.87	ug/L	95
51) tert-amyl alcohol	10.274	55	61038	493.37	ug/L	94
54) iso-octane	10.468	57	1143560	118.86	ug/L	98
55) benzene	10.337	78	962613	100.18	ug/L	99
56) tert-amyl methyl ether	10.463	73	909909	107.09	ug/L	100
57) heptane	10.651	57	167027	112.43	ug/L	98
58) isopropyl acetate	10.300	87	42098	104.82	ug/L	98
59) 1,2-dichloroethane	10.368	62	337746	96.94	ug/L	98
60) n-butyl alcohol	10.898	56	321249	5400.08	ug/L	98
61) ethyl acrylate	11.134	55	230394	107.33	ug/L	98
62) trichloroethene	11.113	95	238494	100.41	ug/L	99
63) 2-nitropropane	11.899	41	40332	103.30	ug/L	99
64) 2-chloroethyl vinyl ether	11.946	63	606067	561.61	ug/L	98
65) methyl methacrylate	11.406	100	45578	109.19	ug/L	97
66) 1,2-dichloropropane	11.406	63	271966	101.13	ug/L	100
67) methylcyclohexane	11.417	83	455386	113.51	ug/L	100
68) dibromomethane	11.516	93	155925	98.70	ug/L	98
69) bromodichloromethane	11.689	83	366494	100.96	ug/L	99
70) epichlorohydrin	12.020	57	85431	505.09	ug/L	98
71) cis-1,3-dichloropropene	12.156	75	393706	105.97	ug/L	99
72) 4-methyl-2-pentanone	12.277	58	316665	434.40	ug/L	98
73) 3-methyl-1-butanol	12.303	70	117817	2206.84	ug/L	98
76) toluene	12.539	92	540492	101.29	ug/L	97
77) ethyl methacrylate	12.749	69	249613	113.00	ug/L	98
78) trans-1,3-dichloropropene	12.738	75	333141	107.23	ug/L	99
79) 1,1,2-trichloroethane	12.958	83	172173	100.69	ug/L	98
80) tetrachloroethene	13.100	166	229139	101.69	ug/L	96
81) 2-hexanone	13.142	58	270429	440.20	ug/L	97
82) 1,3-dichloropropane	13.142	76	314611	99.67	ug/L	99
83) butyl acetate	13.231	56	129608	106.75	ug/L	95
84) dibromochloromethane	13.388	129	259666	104.33	ug/L	100
85) 1,2-dibromoethane	13.535	107	270934	101.60	ug/L	98
86) n-butyl ether	14.033	57	1033736	111.95	ug/L	99
87) chlorobenzene	14.038	112	644482	97.79	ug/L	98
88) 1,1,1,2-tetrachloroethane	14.112	131	291905	106.12	ug/L	99
89) ethylbenzene	14.112	91	1064997	101.64	ug/L	99
90) m,p-xylene	14.243	106	803440	209.87	ug/L	98
91) o-xylene	14.657	106	445602	110.08	ug/L	98
92) styrene	14.668	104	695734	108.45	ug/L	99
93) bromoform	14.893	173	169218	101.95	ug/L	100
94) butyl acrylate	14.500	55	429920	111.80	ug/L	99
95) isopropylbenzene	15.019	105	1147344	112.91	ug/L	99
96) cis-1,4-dichloro-2-butene	15.056	88	91584	101.99	ug/L	95
99) bromobenzene	15.396	156	309435	105.79	ug/L	99
100) 1,1,2,2-tetrachloroethane	15.307	83	300249	102.63	ug/L	100
101) trans-1,4-dichloro-2-b...	15.339	53	61917	105.99	ug/L	94
102) 1,2,3-trichloropropane	15.386	110	70574	101.13	ug/L	100
103) n-propylbenzene	15.443	91	1342800	111.88	ug/L	100
104) 2-chlorotoluene	15.569	126	289065	111.48	ug/L	100
105) 4-chlorotoluene	15.685	91	820862	106.77	ug/L	99
106) 1,3,5-trimethylbenzene	15.606	105	1025628	117.78	ug/L	100
107) tert-butylbenzene	15.942	119	796208	121.02	ug/L	100
108) 1,2,4-trimethylbenzene	15.994	105	1060486	115.20	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44246.D
Acq On : 22 Apr 2019 6:03 pm
Operator : roberts
Sample : IC1775-100
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 25 15:20:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

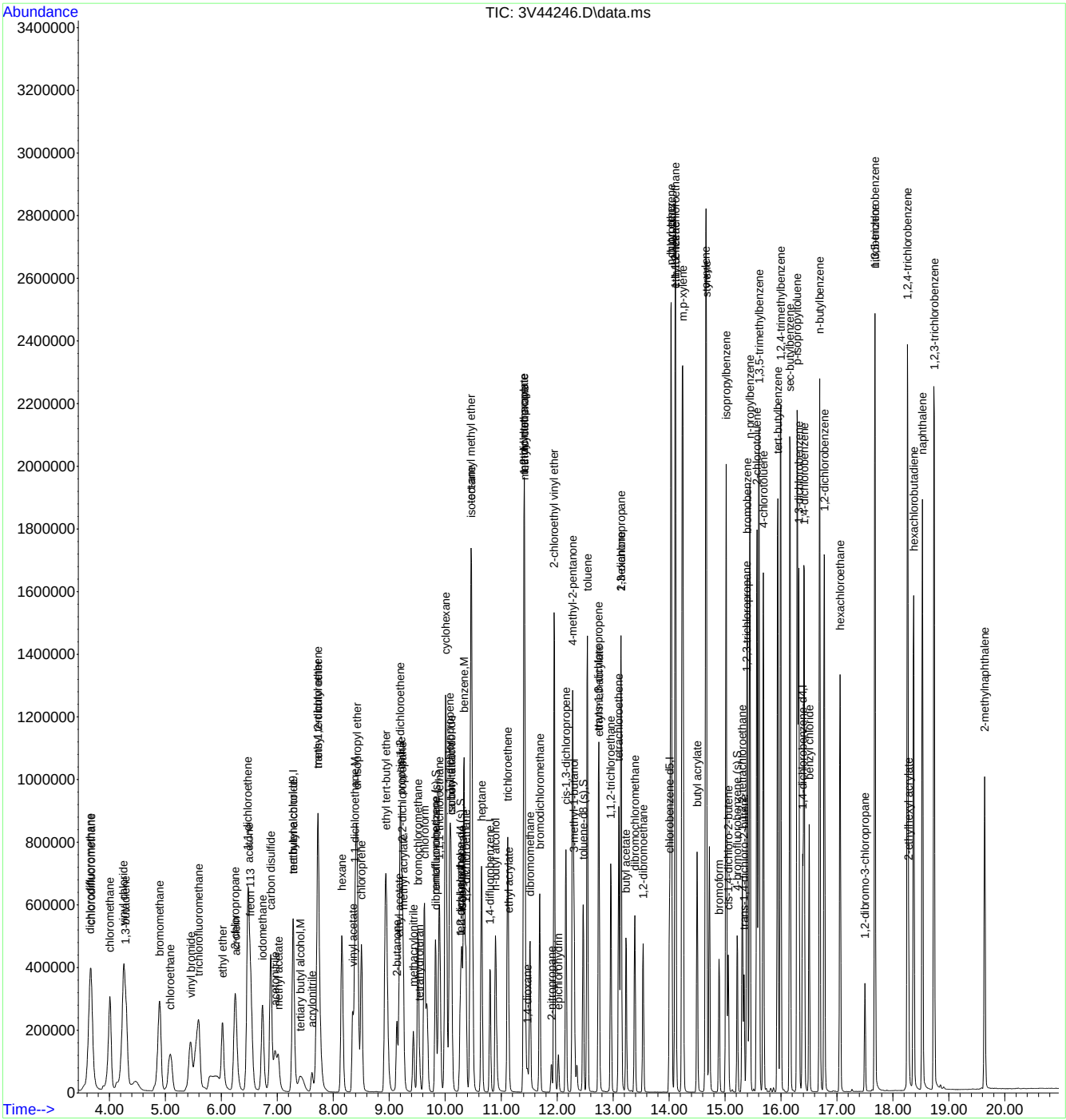
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) sec-butylbenzene	16.157	105	1287475	121.50	ug/L	99
110) 1,3-dichlorobenzene	16.319	146	581206	99.88	ug/L	99
111) p-isopropyltoluene	16.288	119	1093549	122.37	ug/L	98
112) 1,4-dichlorobenzene	16.413	146	584220	98.35	ug/L	99
113) 1,2-dichlorobenzene	16.775	146	619071	103.13	ug/L	98
114) n-butylbenzene	16.691	92	596650	118.12	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.499	157	77389	108.08	ug/L	95
116) 1,3,5-trichlorobenzene	17.677	180	646894	110.37	ug/L	98
117) 2-ethylhexyl acrylate	18.280	70	83356	19.65	ug/L	98
118) nitrobenzene	17.677	77	16460	101.13	ug/L	90
119) 1,2,4-trichlorobenzene	18.259	180	630235	116.08	ug/L	99
120) hexachlorobutadiene	18.369	225	290651	109.96	ug/L	100
121) naphthalene	18.526	128	1248696	116.03	ug/L	99
122) 1,2,3-trichlorobenzene	18.736	180	634577	112.77	ug/L	100
123) hexachloroethane	17.053	119	229281	120.47	ug/L	99
124) benzyl chloride	16.503	91	504848	111.83	ug/L	99
125) 2-methylnaphthalene	19.638	142	448639	52.59	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44246.D
Acq On : 22 Apr 2019 6:03 pm
Operator : roberts
Sample : IC1775-100
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 25 15:20:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44247.D
Acq On : 22 Apr 2019 6:29 pm
Operator : roberts
Sample : IC1775-200
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 25 15:21:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.301	65	109477	500.00	ug/L		0.00
5) pentafluorobenzene	9.828	168	222610	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	306483	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	292651	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	173314	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	114133	48.76	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.52%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	104968	48.38	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.76%				
75) toluene-d8 (s)	12.465	98	358635	49.30	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.60%				
98) 4-bromofluorobenzene (s)	15.218	95	149244	48.77	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.54%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.432	59	359481	1002.95	ug/L		96
4) 1,4-dioxane	11.469	88	131488	4964.39	ug/L		99
6) chlorodifluoromethane	3.683	51	1181460	186.53	ug/L		99
7) dichlorodifluoromethane	3.657	85	1388559	190.04	ug/L		98
8) chloromethane	4.019	50	1583844	202.07	ug/L		99
9) vinyl chloride	4.260	62	1164153	179.30	ug/L		99
10) 1,3-butadiene	4.302	54	610022	196.42	ug/L		97
12) chloroethane	5.094	64	517957	170.92	ug/L		99
13) trichlorofluoromethane	5.602	101	1095336	176.05	ug/L		100
14) vinyl bromide	5.455	106	531066	186.18	ug/L		98
15) ethyl ether	6.027	74	252700	206.07	ug/L		97
16) 2-chloropropane	6.252	43	942548	186.10	ug/L		99
17) acrolein	6.268	56	74366	206.07	ug/L		95
18) freon 113	6.530	151	473940	183.45	ug/L		98
19) 1,1-dichloroethene	6.478	96	512666	179.11	ug/L		97
20) acetone	6.499	58	144945	796.88	ug/L		90
21) acetonitrile	6.976	41	677890	1840.93	ug/L		98
22) iodomethane	6.745	142	1104562	194.16	ug/L		98
23) carbon disulfide	6.892	76	2050580	184.58	ug/L		99
24) methylene chloride	7.290	84	745471	187.43	ug/L		100
25) methyl acetate	7.023	43	285821	187.09	ug/L		99
26) methyl tert butyl ether	7.726	73	1877592	203.54	ug/L		99
27) trans-1,2-dichloroethene	7.731	96	551563	181.16	ug/L		96
28) hexane	8.155	57	644483	198.88	ug/L		98
29) di-isopropyl ether	8.428	45	2196497	210.85	ug/L		99
30) ethyl tert-butyl ether	8.947	59	2193946	219.21	ug/L		99
31) 2-butanone	9.141	72	158950	782.66	ug/L		96
32) 1,1-dichloroethane	8.391	63	1023959	190.48	ug/L		99
33) chloroprene	8.507	53	643507	200.65	ug/L		98
34) acrylonitrile	7.626	52	124637	201.30	ug/L		98
35) vinyl acetate	8.349	86	70911	215.48	ug/L	#	92
36) ethyl acetate	9.178	45	51866	191.30	ug/L	#	87
37) 2,2-dichloropropane	9.236	77	956975	174.27	ug/L		99
38) cis-1,2-dichloroethene	9.199	96	582867	185.50	ug/L		96
39) propionitrile	9.215	54	502735	1862.39	ug/L		99
40) methyl acrylate	9.257	85	53626	207.17	ug/L	#	93
41) bromochloromethane	9.513	128	287117	196.52	ug/L		96
42) tetrahydrofuran	9.540	72	43726	206.76	ug/L		88
43) chloroform	9.629	83	987668	182.32	ug/L		99
45) methacrylonitrile	9.430	67	142417	202.43	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44247.D
Acq On : 22 Apr 2019 6:29 pm
Operator : roberts
Sample : IC1775-200
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 25 15:21:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,1,1-trichloroethane	9.896	97	1033660	188.47	ug/L		99
47) cyclohexane	10.017	84	781155	194.95	ug/L		89
48) 1,1-dichloropropene	10.080	75	566266	185.48	ug/L		99
49) carbon tetrachloride	10.106	117	828975	180.19	ug/L		99
50) isobutyl alcohol	10.106	43	192154	1930.90	ug/L		95
51) tert-amyl alcohol	10.274	55	120644	978.72	ug/L	#	86
54) iso-octane	10.473	57	2245056	230.96	ug/L		98
55) benzene	10.337	78	1817832	187.25	ug/L		100
56) tert-amyl methyl ether	10.462	73	1819444	211.96	ug/L		98
57) heptane	10.651	57	304700	203.01	ug/L		99
58) isopropyl acetate	10.300	87	83242	205.15	ug/L	#	93
59) 1,2-dichloroethane	10.373	62	644553	183.11	ug/L		98
60) n-butyl alcohol	10.898	56	613430	10206.50	ug/L		98
61) ethyl acrylate	11.134	55	448495	206.80	ug/L		99
62) trichloroethene	11.113	95	455522	189.83	ug/L		100
63) 2-nitropropane	11.899	41	81438	206.45	ug/L		98
64) 2-chloroethyl vinyl ether	11.951	63	1182698	1084.79	ug/L		100
65) methyl methacrylate	11.406	100	91071	215.95	ug/L	#	83
66) 1,2-dichloropropane	11.411	63	515603	189.78	ug/L		99
67) methylcyclohexane	11.422	83	867712	214.08	ug/L		99
68) dibromomethane	11.516	93	303519	190.17	ug/L		99
69) bromodichloromethane	11.689	83	716523	195.38	ug/L		100
70) epichlorohydrin	12.025	57	170362	996.97	ug/L		98
71) cis-1,3-dichloropropene	12.156	75	773922	206.19	ug/L		99
72) 4-methyl-2-pentanone	12.277	58	612836	832.12	ug/L		97
73) 3-methyl-1-butanol	12.303	70	231962	4300.65	ug/L		98
76) toluene	12.539	92	1030916	184.91	ug/L		97
77) ethyl methacrylate	12.748	69	496855	215.28	ug/L		98
78) trans-1,3-dichloropropene	12.738	75	655266	201.87	ug/L		100
79) 1,1,2-trichloroethane	12.958	83	332557	186.15	ug/L		98
80) tetrachloroethene	13.105	166	444045	188.61	ug/L		98
81) 2-hexanone	13.142	58	515244	802.78	ug/L		98
82) 1,3-dichloropropane	13.142	76	595523	180.58	ug/L		99
83) butyl acetate	13.231	56	245873	193.84	ug/L		94
84) dibromochloromethane	13.388	129	520580	200.20	ug/L		100
85) 1,2-dibromoethane	13.535	107	533363	191.45	ug/L		99
86) n-butyl ether	14.033	57	1975045	204.72	ug/L		99
87) chlorobenzene	14.043	112	1242666	180.48	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.112	131	567373	197.43	ug/L		99
89) ethylbenzene	14.112	91	2000289	182.73	ug/L		98
90) m,p-xylene	14.243	106	1512394	378.13	ug/L		99
91) o-xylene	14.657	106	862818	204.01	ug/L		98
92) styrene	14.667	104	1330835	198.56	ug/L		99
93) bromoform	14.893	173	346555	199.84	ug/L		98
94) butyl acrylate	14.500	55	872985	217.29	ug/L		99
95) isopropylbenzene	15.019	105	2199373	207.17	ug/L		99
96) cis-1,4-dichloro-2-butene	15.055	88	188946	201.40	ug/L		97
99) bromobenzene	15.396	156	611507	190.57	ug/L		99
100) 1,1,2,2-tetrachloroethane	15.307	83	595685	185.61	ug/L		99
101) trans-1,4-dichloro-2-b...	15.338	53	132714	207.08	ug/L		95
102) 1,2,3-trichloropropane	15.391	110	137180	179.18	ug/L		98
103) n-propylbenzene	15.443	91	2516390	191.12	ug/L		99
104) 2-chlorotoluene	15.569	126	564591	198.48	ug/L		98
105) 4-chlorotoluene	15.685	91	1585793	188.02	ug/L		100
106) 1,3,5-trimethylbenzene	15.606	105	1947261	203.84	ug/L		99
107) tert-butylbenzene	15.941	119	1562580	216.50	ug/L		100
108) 1,2,4-trimethylbenzene	15.994	105	2049910	202.98	ug/L		98
109) sec-butylbenzene	16.162	105	2450539	210.80	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44247.D
Acq On : 22 Apr 2019 6:29 pm
Operator : roberts
Sample : IC1775-200
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 25 15:21:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration

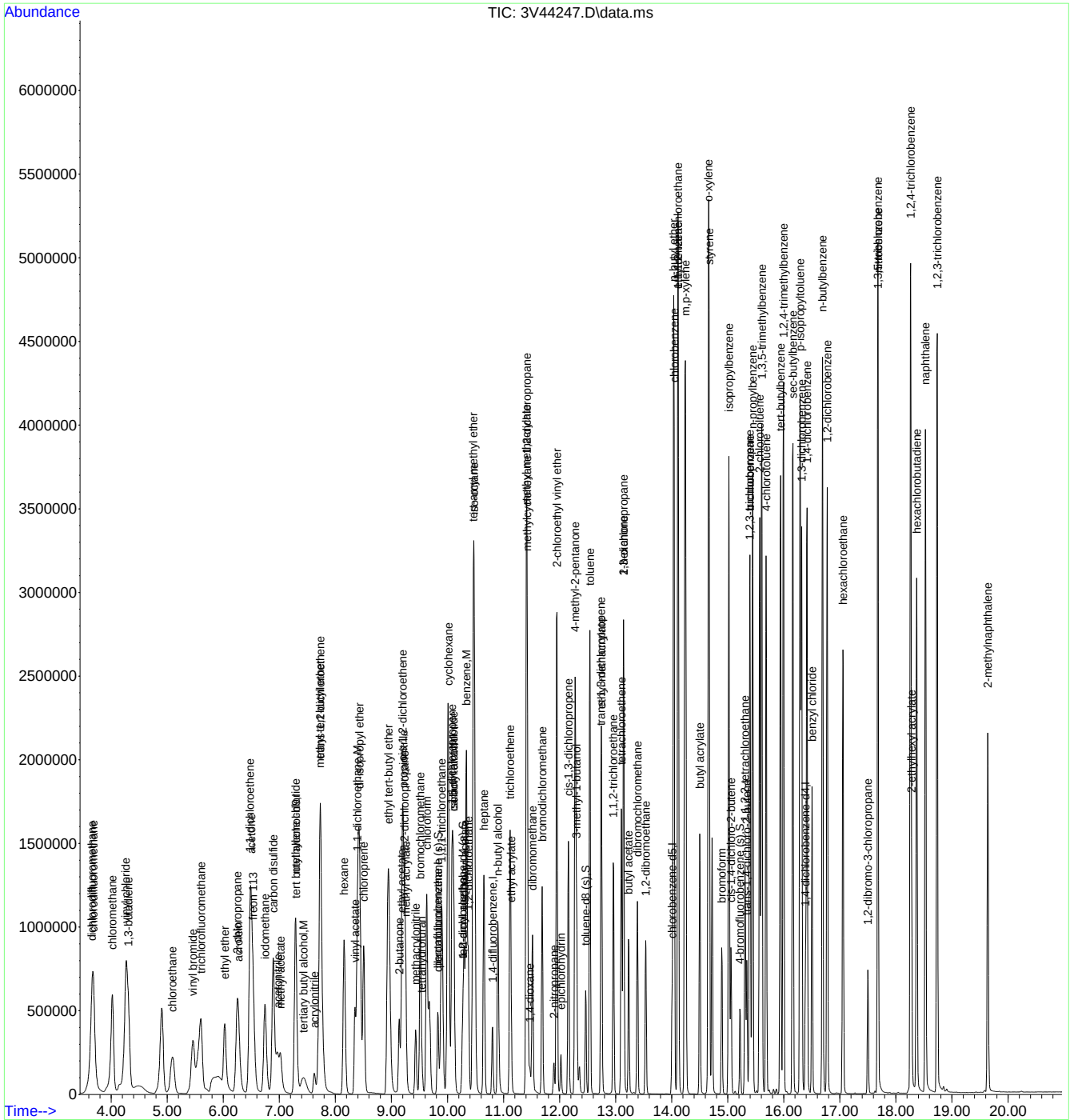
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) 1,3-dichlorobenzene	16.319	146	1167405	182.86	ug/L	99
111) p-isopropyltoluene	16.293	119	2096611	213.85	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	1207128	185.24	ug/L	100
113) 1,2-dichlorobenzene	16.775	146	1252801	190.24	ug/L	99
114) n-butylbenzene	16.691	92	1168497	210.87	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.499	157	173300	220.62	ug/L	95
116) 1,3,5-trichlorobenzene	17.677	180	1368751	212.87	ug/L	98
117) 2-ethylhexyl acrylate	18.280	70	200916	41.89	ug/L	98
118) nitrobenzene	17.682	77	40857	228.82	ug/L	88
119) 1,2,4-trichlorobenzene	18.264	180	1359320	228.21	ug/L	100
120) hexachlorobutadiene	18.369	225	573752	197.86	ug/L	99
121) naphthalene	18.526	128	2663378	225.60	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	1309091	212.07	ug/L	99
123) hexachloroethane	17.053	119	468268	224.28	ug/L	98
124) benzyl chloride	16.502	91	1101130	222.33	ug/L	100
125) 2-methylnaphthalene	19.638	142	968567	101.03	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44247.D
Acq On : 22 Apr 2019 6:29 pm
Operator : roberts
Sample : IC1775-200
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 25 15:21:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 23 07:42:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44250.D
Acq On : 22 Apr 2019 7:46 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 25 15:26:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.290	65	131065	500.00	ug/L		-0.01
5) pentafluorobenzene	9.828	168	254843	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	348735	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	312871	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	171892	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.833	113	133437	49.80	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.60%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	124202	50.29	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.58%				
75) toluene-d8 (s)	12.465	98	400060	51.45	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.90%				
98) 4-bromofluorobenzene (s)	15.218	95	158215	52.13	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.26%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.427	59	92721	216.08	ug/L		92
4) 1,4-dioxane	11.469	88	38993	1229.71	ug/L		92
6) chlorodifluoromethane	3.673	51	340603	46.97	ug/L		99
7) dichlorodifluoromethane	3.652	85	358685	42.88	ug/L		99
8) chloromethane	4.014	50	463617	47.92	ug/L		99
9) vinyl chloride	4.250	62	294065	39.56	ug/L		98
10) 1,3-butadiene	4.297	54	185453	52.06	ug/L		98
11) bromomethane	4.900	96	208525	37.48	ug/L	#	99
12) chloroethane	5.088	64	127932	36.88	ug/L		99
13) trichlorofluoromethane	5.592	101	282313	39.64	ug/L		98
14) vinyl bromide	5.450	106	138019	42.27	ug/L		99
15) ethyl ether	6.022	74	63265	45.07	ug/L		94
16) 2-chloropropane	6.247	43	241169	42.82	ug/L		99
17) acrolein	6.268	56	21639	52.38	ug/L		90
18) freon 113	6.515	151	136403	46.12	ug/L		97
19) 1,1-dichloroethene	6.478	96	121613	37.10	ug/L		93
20) acetone	6.494	58	38648	181.41	ug/L		99
22) iodomethane	6.740	142	316248	48.56	ug/L		97
23) carbon disulfide	6.887	76	584030	45.92	ug/L		100
24) methylene chloride	7.285	84	185921	40.83	ug/L		98
25) methyl acetate	7.023	43	75052	42.92	ug/L		99
26) methyl tert butyl ether	7.726	73	947582	89.64	ug/L		97
27) trans-1,2-dichloroethene	7.731	96	137752	39.52	ug/L		98
28) hexane	8.156	57	174392	47.01	ug/L		95
29) di-isopropyl ether	8.423	45	514582	43.07	ug/L		100
30) ethyl tert-butyl ether	8.942	59	498371	43.50	ug/L		99
31) 2-butanone	9.141	72	42746	183.86	ug/L		97
32) 1,1-dichloroethane	8.392	63	265494	43.14	ug/L		99
33) chloroprene	8.507	53	169999	46.30	ug/L		99
35) vinyl acetate	8.350	86	16074	42.67	ug/L	#	85
36) ethyl acetate	9.178	45	15757	50.66	ug/L	#	84
37) 2,2-dichloropropane	9.230	77	238787	37.99	ug/L		98
38) cis-1,2-dichloroethene	9.199	96	148800	41.36	ug/L		95
39) propionitrile	9.220	54	146733	474.70	ug/L		100
40) methyl acrylate	9.251	85	14033	47.36	ug/L	#	82
41) bromochloromethane	9.514	128	76477	45.73	ug/L		97
42) tetrahydrofuran	9.540	72	11949	49.35	ug/L		97
43) chloroform	9.629	83	259216	41.80	ug/L		100
45) methacrylonitrile	9.430	67	37269	46.27	ug/L		96
46) 1,1,1-trichloroethane	9.896	97	253252	40.34	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44250.D
Acq On : 22 Apr 2019 7:46 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 25 15:26:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) cyclohexane	10.012	84	210660	45.90	ug/L		96
48) 1,1-dichloropropene	10.080	75	150752	43.13	ug/L		99
49) carbon tetrachloride	10.101	117	215288	40.88	ug/L		100
50) isobutyl alcohol	10.106	43	54626	479.78	ug/L		98
51) tert-amyl alcohol	10.274	55	33605	238.14	ug/L		98
54) iso-octane	10.468	57	512180	46.31	ug/L		99
55) benzene	10.337	78	490002	44.35	ug/L		100
56) tert-amyl methyl ether	10.463	73	434533	44.46	ug/L		100
57) heptane	10.651	57	97469	57.07	ug/L		95
58) isopropyl acetate	10.300	87	20713	44.86	ug/L		96
59) 1,2-dichloroethane	10.373	62	171063	42.65	ug/L		97
60) n-butyl alcohol	10.903	56	171425	2502.55	ug/L		98
61) ethyl acrylate	11.134	55	116387	47.10	ug/L		99
62) trichloroethene	11.113	95	118514	43.40	ug/L		99
63) 2-nitropropane	11.899	41	20818	46.38	ug/L		99
64) 2-chloroethyl vinyl ether	11.946	63	314177	253.25	ug/L		98
65) methyl methacrylate	11.406	100	22977	47.88	ug/L	#	85
66) 1,2-dichloropropane	11.406	63	137704	44.54	ug/L		100
67) methylcyclohexane	11.417	83	213494	46.29	ug/L		99
68) dibromomethane	11.516	93	79295	43.66	ug/L		97
69) bromodichloromethane	11.689	83	179359	42.98	ug/L		98
70) epichlorohydrin	12.025	57	45190	232.41	ug/L		97
71) cis-1,3-dichloropropene	12.156	75	192824	45.15	ug/L		99
72) 4-methyl-2-pentanone	12.277	58	165454	197.37	ug/L		100
73) 3-methyl-1-butanol	12.303	70	64111	1044.05	ug/L		98
76) toluene	12.539	92	265481	44.54	ug/L		99
77) ethyl methacrylate	12.748	69	126008	51.07	ug/L		99
78) trans-1,3-dichloropropene	12.738	75	166680	48.03	ug/L		100
79) 1,1,2-trichloroethane	12.958	83	86926	45.52	ug/L		99
81) 2-hexanone	13.142	58	137153	199.59	ug/L		99
82) 1,3-dichloropropane	13.142	76	159436	45.23	ug/L		100
83) butyl acetate	13.231	56	65451	47.57	ug/L		97
84) dibromochloromethane	13.388	129	131210	47.20	ug/L		100
85) 1,2-dibromoethane	13.535	107	135262	45.42	ug/L		98
86) n-butyl ether	14.033	57	522540	50.66	ug/L		99
87) chlorobenzene	14.044	112	326623	44.37	ug/L		100
88) 1,1,1,2-tetrachloroethane	14.117	131	150173	48.88	ug/L		100
89) ethylbenzene	14.112	91	537004	45.89	ug/L		99
90) m,p-xylene	14.243	106	399708	93.48	ug/L		99
91) o-xylene	14.657	106	219441	48.53	ug/L		96
92) styrene	14.667	104	345269	48.19	ug/L		99
93) bromoform	14.893	173	88501	47.74	ug/L		99
94) butyl acrylate	14.500	55	207018	48.19	ug/L		99
95) isopropylbenzene	15.019	105	554462	48.86	ug/L		99
96) cis-1,4-dichloro-2-butene	15.055	88	43711	43.58	ug/L		98
99) bromobenzene	15.396	156	148907	46.79	ug/L		97
100) 1,1,2,2-tetrachloroethane	15.307	83	153019	48.07	ug/L		99
101) trans-1,4-dichloro-2-b...	15.339	53	32909	51.77	ug/L		96
102) 1,2,3-trichloropropane	15.386	110	34842	45.89	ug/L		99
103) n-propylbenzene	15.443	91	653648	50.05	ug/L		99
104) 2-chlorotoluene	15.569	126	139455	49.38	ug/L		100
105) 4-chlorotoluene	15.685	91	404675	48.38	ug/L		100
106) 1,3,5-trimethylbenzene	15.606	105	500892	52.87	ug/L		100
107) tert-butylbenzene	15.942	119	368553	51.49	ug/L		99
108) 1,2,4-trimethylbenzene	15.994	105	526475	52.56	ug/L		91
109) sec-butylbenzene	16.156	105	610657	52.97	ug/L		98
110) 1,3-dichlorobenzene	16.319	146	289300	45.69	ug/L		100
111) p-isopropyltoluene	16.293	119	524053	53.89	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44250.D
Acq On : 22 Apr 2019 7:46 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 25 15:26:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

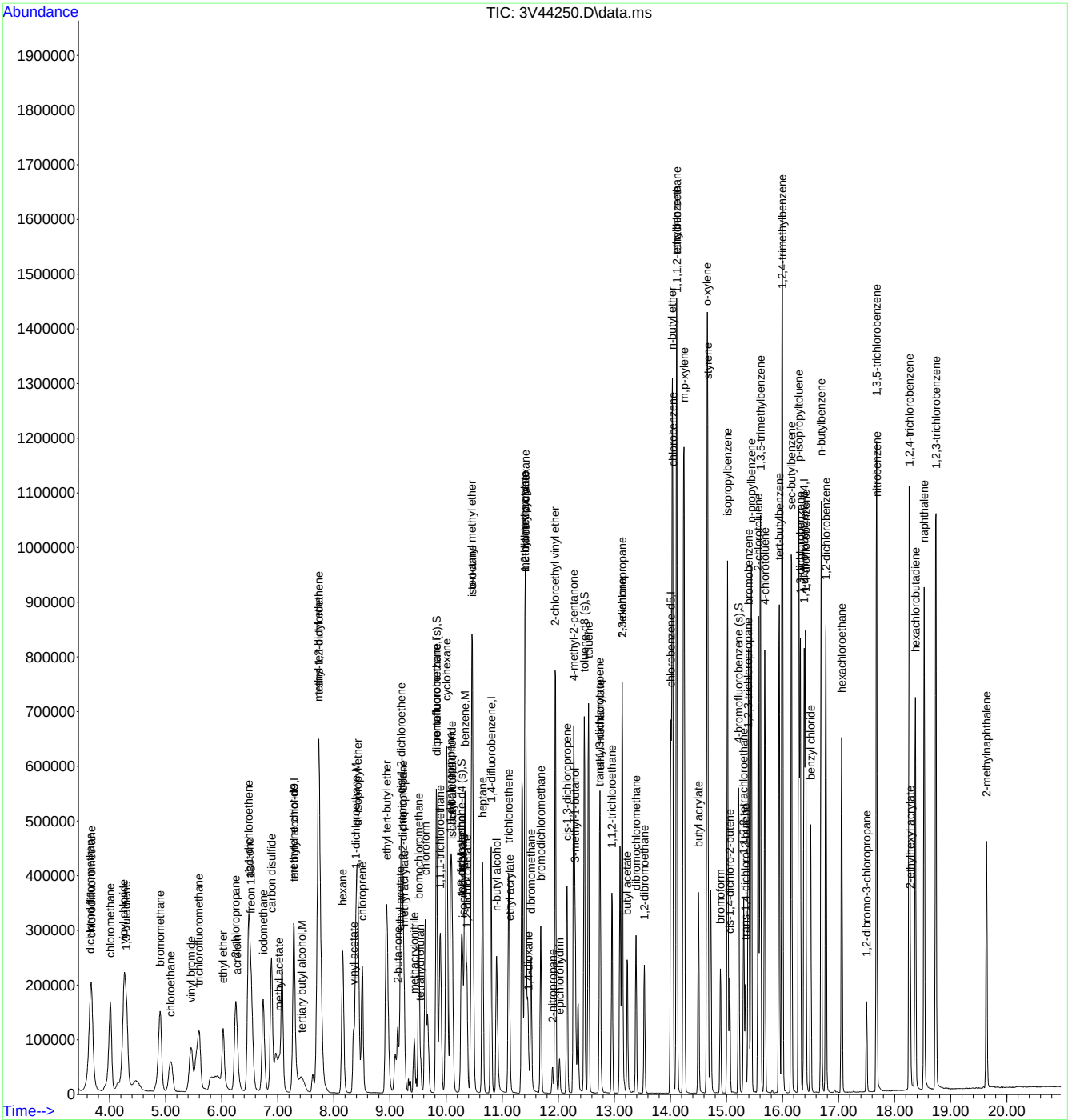
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
112) 1,4-dichlorobenzene	16.413	146	284951	44.09	ug/L	98
113) 1,2-dichlorobenzene	16.775	146	300703	46.04	ug/L	98
114) n-butylbenzene	16.691	92	279332	50.82	ug/L	100
115) 1,2-dibromo-3-chloropr...	17.499	157	35041	44.98	ug/L	93
116) 1,3,5-trichlorobenzene	17.677	180	303787	47.63	ug/L	99
117) 2-ethylhexyl acrylate	18.280	70	39133	9.09	ug/L	94
118) nitrobenzene	17.682	77	7876	44.48	ug/L	90
119) 1,2,4-trichlorobenzene	18.264	180	289362	48.96	ug/L	99
120) hexachlorobutadiene	18.369	225	127574	44.35	ug/L	100
121) naphthalene	18.526	128	597842	51.01	ug/L	99
122) 1,2,3-trichlorobenzene	18.736	180	301029	49.13	ug/L	99
123) hexachloroethane	17.053	119	108553	52.42	ug/L	98
124) benzyl chloride	16.503	91	290418	59.11	ug/L	100
125) 2-methylnaphthalene	19.638	142	196744	22.65	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44250.D
Acq On : 22 Apr 2019 7:46 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 25 15:26:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44251.D
Acq On : 22 Apr 2019 8:12 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 25 15:27:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

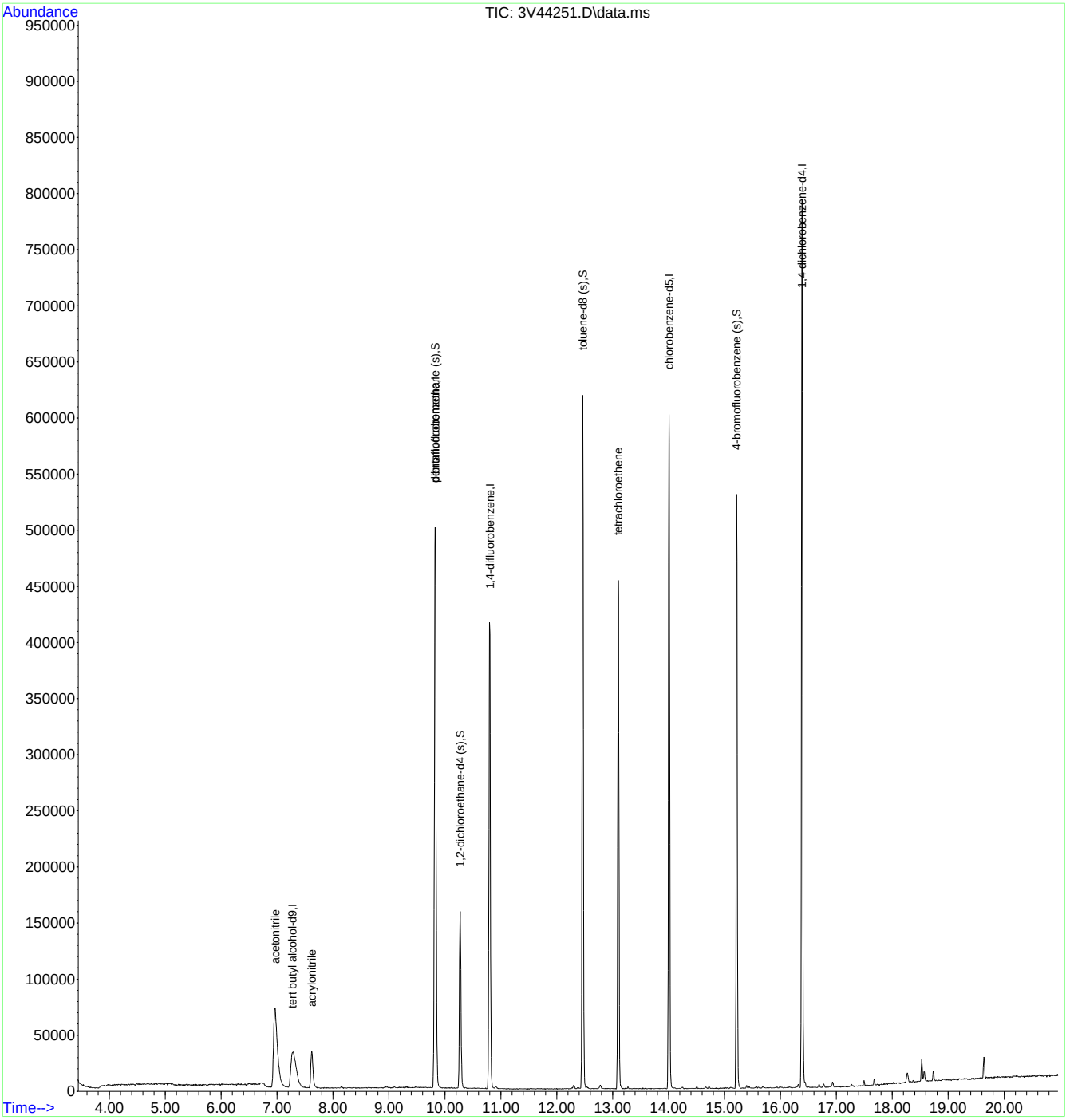
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.269	65	116063	500.00	ug/L	-0.03
5) pentafluorobenzene	9.828	168	227879	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.803	114	318825	50.00	ug/L	0.00
74) chlorobenzene-d5	14.007	117	287117	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.387	152	172331	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.828	113	118042	49.27	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.54%			
53) 1,2-dichloroethane-d4 (s)	10.274	65	112824	49.97	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.94%			
75) toluene-d8 (s)	12.465	98	363356	50.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.84%			
98) 4-bromofluorobenzene (s)	15.218	95	153703	50.52	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.04%			
Target Compounds						Qvalue
21) acetonitrile	6.965	41	191041	506.30	ug/L	98
34) acrylonitrile	7.621	52	30431	48.01	ug/L	97
80) tetrachloroethene	13.100	166	115631	50.07	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3v1775\
Data File : 3V44251.D
Acq On : 22 Apr 2019 8:12 pm
Operator : roberts
Sample : ICV1775-50
Misc : MS31723,V3V1775,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 25 15:27:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44284.d
Acq On : 24 Apr 2019 12:21 pm
Operator : roberts
Sample : CC1775-50 Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:56:42 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.296	65	92432	500.00	ug/L		0.00
5) pentafluorobenzene	9.828	168	196561	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.803	114	270516	50.00	ug/L		0.00
74) chlorobenzene-d5	14.007	117	247266	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.387	152	149044	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.828	113	102215	49.46	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.92%				
53) 1,2-dichloroethane-d4 (s)	10.274	65	94743	49.45	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.90%				
75) toluene-d8 (s)	12.465	98	316931	51.57	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.14%				
98) 4-bromofluorobenzene (s)	15.218	95	131308	49.90	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.80%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.427	59	78876	260.64	ug/L		95
4) 1,4-dioxane	11.469	88	31829	1423.32	ug/L		90
6) chlorodifluoromethane	3.678	51	302889	54.16	ug/L		98
7) dichlorodifluoromethane	3.662	85	377672	58.54	ug/L		97
8) chloromethane	4.019	50	354841	47.55	ug/L		99
9) vinyl chloride	4.260	62	306908	53.53	ug/L		99
10) 1,3-butadiene	4.302	54	159575	58.07	ug/L		98
11) bromomethane	4.905	96	214162	49.90	ug/L	#	98
12) chloroethane	5.104	64	140055	52.34	ug/L		99
13) trichlorofluoromethane	5.597	101	295409	53.77	ug/L		98
14) vinyl bromide	5.455	106	130820	51.94	ug/L		97
15) ethyl ether	6.022	74	57329	52.95	ug/L		96
16) 2-chloropropane	6.247	43	227863	52.46	ug/L		99
17) acrolein	6.268	56	20740	65.09	ug/L		97
18) freon 113	6.520	151	127964	56.10	ug/L		98
19) 1,1-dichloroethene	6.478	96	126508	50.04	ug/L		96
20) acetone	6.499	58	34517	210.92	ug/L		87
21) acetonitrile	6.965	41	168427	517.48	ug/L		99
22) iodomethane	6.740	142	273019	54.35	ug/L		99
23) carbon disulfide	6.887	76	509275	51.92	ug/L		98
24) methylene chloride	7.290	84	176794	50.34	ug/L		98
25) methyl acetate	7.018	43	68225	50.58	ug/L		99
26) methyl tert butyl ether	7.720	73	432474	53.04	ug/L		99
27) trans-1,2-dichloroethene	7.731	96	134757	50.13	ug/L		98
28) hexane	8.156	57	160172	55.98	ug/L		98
29) di-isopropyl ether	8.423	45	512866	55.66	ug/L		100
30) ethyl tert-butyl ether	8.942	59	487036	55.11	ug/L		98
31) 2-butanone	9.141	72	36928	205.93	ug/L		90
32) 1,1-dichloroethane	8.386	63	250830	52.84	ug/L		100
33) chloroprene	8.502	53	155735	55.00	ug/L		99
34) acrylonitrile	7.621	52	28474	52.08	ug/L		98
35) vinyl acetate	8.350	86	15491	53.31	ug/L	#	84
36) ethyl acetate	9.178	45	14002	58.37	ug/L	#	91
37) 2,2-dichloropropane	9.230	77	242156	49.94	ug/L		96
38) cis-1,2-dichloroethene	9.194	96	140711	50.71	ug/L		99
39) propionitrile	9.215	54	124360	521.62	ug/L		99
40) methyl acrylate	9.251	85	12723	55.67	ug/L	#	87
41) bromochloromethane	9.513	128	67637	52.43	ug/L		97
42) tetrahydrofuran	9.540	72	9987	53.48	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44284.d
Acq On : 24 Apr 2019 12:21 pm
Operator : roberts
Sample : CC1775-50 Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:56:42 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	chloroform	9.629	83	238565	49.87	ug/L		99
45)	methacrylonitrile	9.430	67	31793	51.18	ug/L		98
46)	1,1,1-trichloroethane	9.896	97	252082	52.05	ug/L		99
47)	cyclohexane	10.012	84	225021	63.56	ug/L	#	87
48)	1,1-dichloropropene	10.080	75	140014	51.94	ug/L		99
49)	carbon tetrachloride	10.106	117	210068	51.71	ug/L		99
50)	isobutyl alcohol	10.106	43	44087	502.03	ug/L		98
51)	tert-amyl alcohol	10.274	55	27871	256.07	ug/L		95
54)	iso-octane	10.468	57	533048	62.13	ug/L		98
55)	benzene	10.337	78	447070	52.16	ug/L		99
56)	tert-amyl methyl ether	10.462	73	420339	55.45	ug/L		97
57)	heptane	10.651	57	78092	58.95	ug/L		94
58)	isopropyl acetate	10.300	87	18818	52.54	ug/L	#	85
59)	1,2-dichloroethane	10.368	62	157299	50.56	ug/L		100
60)	n-butyl alcohol	10.898	56	139055	2616.97	ug/L		99
61)	ethyl acrylate	11.134	55	100485	52.42	ug/L		100
62)	trichloroethene	11.113	95	108242	51.10	ug/L		99
63)	2-nitropropane	11.899	41	16667	47.87	ug/L		97
64)	2-chloroethyl vinyl ether	11.946	63	273465	284.17	ug/L		99
65)	methyl methacrylate	11.406	100	20146	54.12	ug/L		95
66)	1,2-dichloropropane	11.406	63	125395	52.29	ug/L		99
67)	methylcyclohexane	11.417	83	215640	60.27	ug/L		99
68)	dibromomethane	11.516	93	73334	52.06	ug/L		98
69)	bromodichloromethane	11.689	83	166148	51.33	ug/L		99
70)	epichlorohydrin	12.020	57	39681	263.09	ug/L		97
71)	cis-1,3-dichloropropene	12.156	75	175095	52.85	ug/L		99
72)	4-methyl-2-pentanone	12.277	58	140896	216.67	ug/L		97
73)	3-methyl-1-butanol	12.303	70	51703	1085.44	ug/L		96
76)	toluene	12.539	92	247077	52.46	ug/L		98
77)	ethyl methacrylate	12.748	69	110974	56.91	ug/L		99
78)	trans-1,3-dichloropropene	12.738	75	147546	53.80	ug/L		99
79)	1,1,2-trichloroethane	12.958	83	78592	52.07	ug/L		96
80)	tetrachloroethene	13.105	166	102836	51.70	ug/L		97
81)	2-hexanone	13.142	58	121388	223.51	ug/L		99
82)	1,3-dichloropropane	13.142	76	147920	53.09	ug/L		99
83)	butyl acetate	13.231	56	57642	53.01	ug/L		92
84)	dibromochloromethane	13.388	129	117458	53.47	ug/L		98
85)	1,2-dibromoethane	13.535	107	124055	52.71	ug/L		99
86)	n-butyl ether	14.033	57	462717	56.76	ug/L		98
87)	chlorobenzene	14.043	112	303020	52.09	ug/L		99
88)	1,1,1,2-tetrachloroethane	14.112	131	134908	55.56	ug/L		97
89)	ethylbenzene	14.112	91	503144	54.40	ug/L		100
90)	m,p-xylene	14.237	106	374420	110.80	ug/L		99
91)	o-xylene	14.657	106	204896	57.34	ug/L		98
92)	styrene	14.667	104	329681	58.22	ug/L		99
93)	bromoform	14.893	173	75691	51.66	ug/L		99
94)	butyl acrylate	14.500	55	194205	57.20	ug/L		100
95)	isopropylbenzene	15.019	105	514844	57.40	ug/L		99
96)	cis-1,4-dichloro-2-butene	15.055	88	42316	53.38	ug/L		98
99)	bromobenzene	15.396	156	147138	53.32	ug/L		99
100)	1,1,2,2-tetrachloroethane	15.307	83	139370	50.50	ug/L		100
101)	trans-1,4-dichloro-2-b...	15.338	53	29127	52.85	ug/L		99
102)	1,2,3-trichloropropane	15.386	110	32793	49.81	ug/L		98
103)	n-propylbenzene	15.443	91	621544	54.89	ug/L		100
104)	2-chlorotoluene	15.569	126	134110	54.77	ug/L		99
105)	4-chlorotoluene	15.685	91	395375	54.52	ug/L		99
106)	1,3,5-trimethylbenzene	15.606	105	471012	57.33	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44284.d
Acq On : 24 Apr 2019 12:21 pm
Operator : roberts
Sample : CC1775-50 Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:56:42 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration

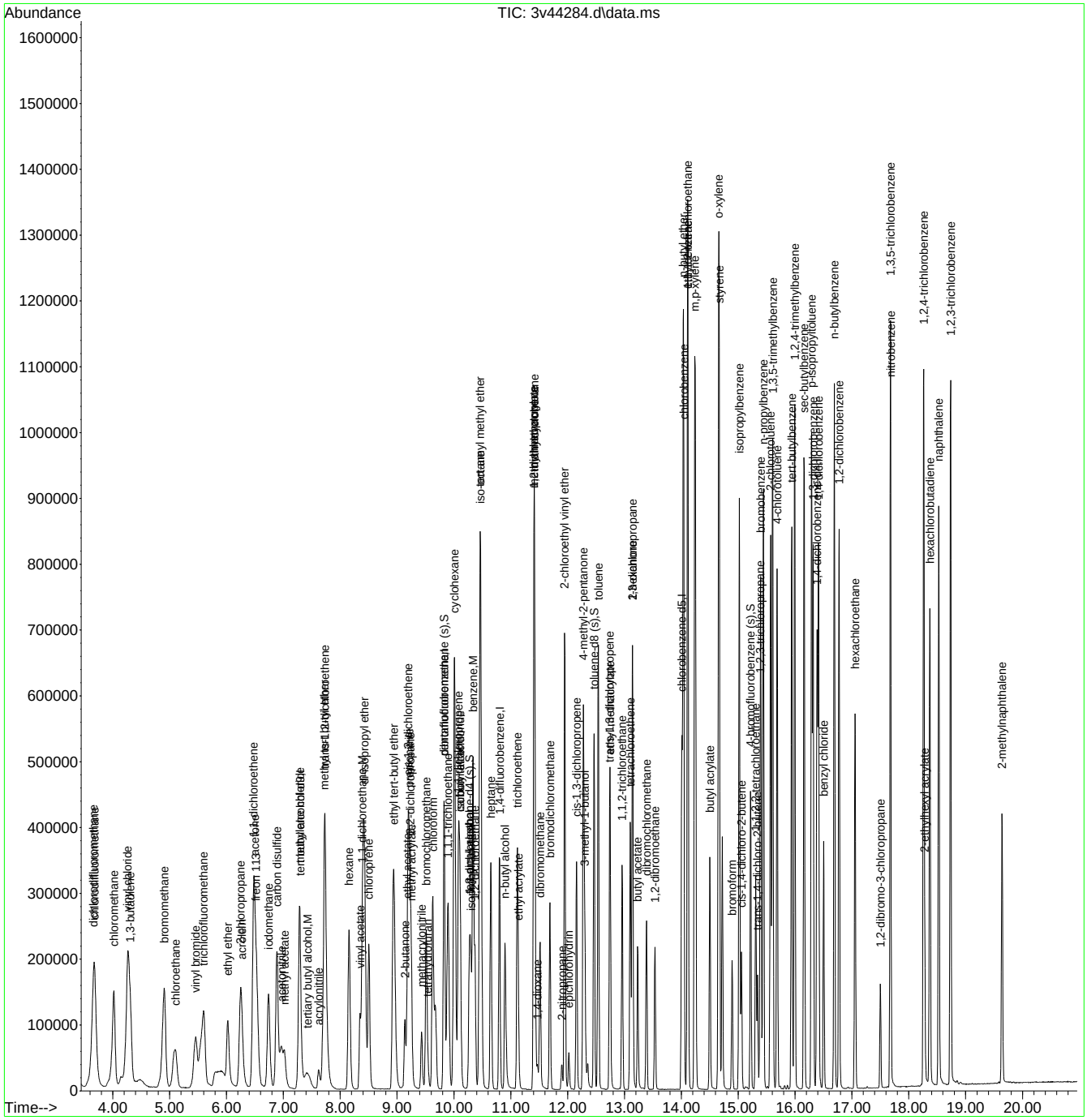
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.941	119	348050	56.08	ug/L	100
108) 1,2,4-trimethylbenzene	15.994	105	496163	57.13	ug/L	99
109) sec-butylbenzene	16.156	105	586910	58.71	ug/L	99
110) 1,3-dichlorobenzene	16.319	146	286473	52.18	ug/L	99
111) p-isopropyltoluene	16.293	119	493759	58.56	ug/L	99
112) 1,4-dichlorobenzene	16.413	146	285253	50.90	ug/L	99
113) 1,2-dichlorobenzene	16.775	146	299350	52.86	ug/L	99
114) n-butylbenzene	16.691	92	274893	57.68	ug/L	100
115) 1,2-dibromo-3-chloropr...	17.504	157	35261	52.20	ug/L	99
116) 1,3,5-trichlorobenzene	17.677	180	300167	54.28	ug/L	99
117) 2-ethylhexyl acrylate	18.280	70	34947	9.33	ug/L	99
118) nitrobenzene	17.682	77	7920	51.58	ug/L	95
119) 1,2,4-trichlorobenzene	18.264	180	287942	56.19	ug/L	100
120) hexachlorobutadiene	18.369	225	131543	52.74	ug/L	100
121) naphthalene	18.526	128	577269	56.80	ug/L	100
122) 1,2,3-trichlorobenzene	18.736	180	297179	55.94	ug/L	100
123) hexachloroethane	17.053	119	97802	54.47	ug/L	98
124) benzyl chloride	16.502	91	223349	52.43	ug/L	100
125) 2-methylnaphthalene	19.638	142	183013	24.11	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v3v1778\
Data File : 3v44284.d
Acq On : 24 Apr 2019 12:21 pm
Operator : roberts
Sample : CC1775-50 Inst : MS3V
Misc : MS34034,V3V1778,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3V1775.M
Quant Results File: M3V1775.RES
Quant Time: Apr 26 13:56:42 2019
Quant Title : SW-846 Method 8260C, column DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 15:23:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263011.D
Acq On : 14 Mar 2019 6:32 pm
Operator : juntaep
Sample : ic10606-0.5
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 15 14:22:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.484	65	99388	500.00	ug/L	0.01
5) pentafluorobenzene	9.728	168	191550	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.685	114	285244	50.00	ug/L	0.00
75) chlorobenzene-d5	14.095	117	290419	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.741	152	159501	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.754	113	90144	49.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.74%			
55) 1,2-dichloroethane-d4 (s)	10.188	65	107760	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.78%			
76) toluene-d8 (s)	12.421	98	349476	49.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.52%			
100) 4-bromofluorobenzene (s)	15.413	95	158685	53.69	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 107.38%			
Target Compounds						Qvalue
6) chlorodifluoromethane	4.398	51	2029	0.50	ug/L	70
8) chloromethane	4.649	50	2140	0.48	ug/L	86
10) vinyl chloride	4.942	62	2150	0.45	ug/L	90
12) chloroethane	5.664	64	822	0.40	ug/L #	46
16) 2-chloropropane	6.679	43	2519	0.55	ug/L	76
18) freon 113	6.919	151	1169	0.47	ug/L	84
19) 1,1-dichloroethene	6.883	96	1227	0.52	ug/L #	74
22) iodomethane	7.128	142	1705	0.46	ug/L #	47
23) carbon disulfide	7.290	76	3816	0.50	ug/L	78
24) methylene chloride	7.542	84	1292	0.52	ug/L	89
26) methyl tert butyl ether	7.913	73	3845	0.54	ug/L	96
27) trans-1,2-dichloroethene	7.939	96	1071	0.49	ug/L	90
28) hexane	8.305	56	668	0.48	ug/L #	65
29) di-isopropyl ether	8.499	45	4127	0.50	ug/L	92
31) 1,1-dichloroethane	8.483	63	1867	0.48	ug/L	82
32) chloroprene	8.608	53	1613	0.47	ug/L	87
35) ethyl tert-butyl ether	8.959	59	4080	0.50	ug/L	97
37) 2,2-dichloropropane	9.252	77	2257	0.55	ug/L	82
38) cis-1,2-dichloroethene	9.189	96	1222	0.52	ug/L #	79
42) bromochloromethane	9.487	128	436	0.41	ug/L #	57
44) chloroform	9.571	83	2214	0.57	ug/L	97
45) tert-butyl formate	9.623	59	1075	0.49	ug/L	83
47) 1,1,1-trichloroethane	9.864	97	1910	0.48	ug/L	91
48) cyclohexane	10.015	84	1825	0.45	ug/L	93
50) 1,1-dichloropropene	10.041	75	1580	0.54	ug/L	89
51) carbon tetrachloride	10.078	117	1619	0.47	ug/L	95
58) benzene	10.287	78	4468	0.52	ug/L	95
59) tert-amyl methyl ether	10.371	73	4189	0.53	ug/L	97
60) heptane	10.575	57	541	0.47	ug/L #	76
63) trichloroethene	11.030	95	1078	0.50	ug/L	93
64) 2-chloroethyl vinyl ether	11.835	63	2441	2.16	ug/L	96
66) methylcyclohexane	11.365	83	1732	0.47	ug/L	96
67) 1,2-dichloropropane	11.307	63	1039	0.48	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263011.D
Acq On : 14 Mar 2019 6:32 pm
Operator : juntaep
Sample : ic10606-0.5
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 15 14:22:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

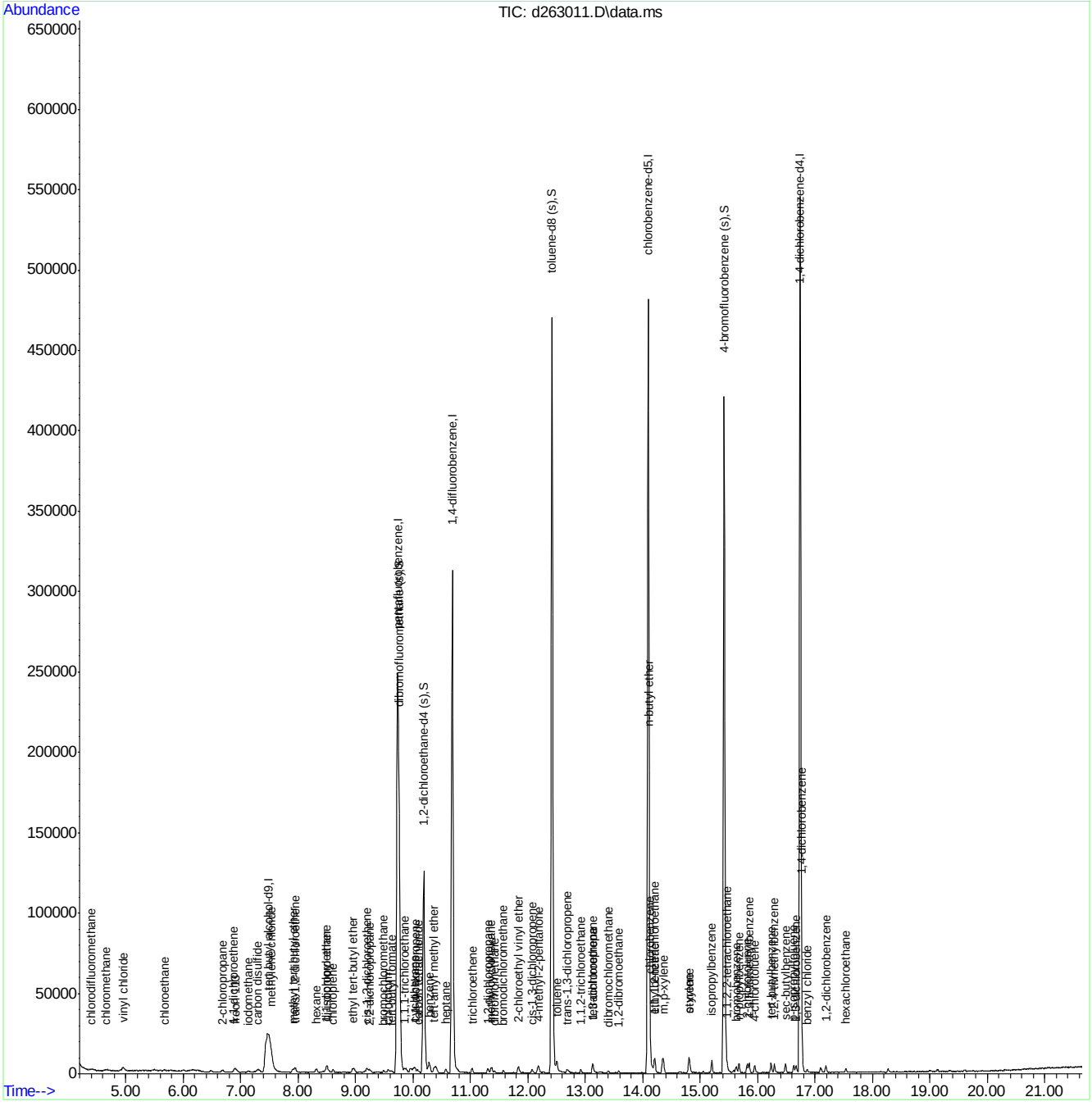
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
68) dibromomethane	11.417	93	539	0.43	ug/L		90
69) bromodichloromethane	11.574	83	1357	0.47	ug/L		96
72) cis-1,3-dichloropropene	12.071	75	1692	0.49	ug/L		98
73) 4-methyl-2-pentanone	12.181	58	1344	1.79	ug/L	#	72
77) toluene	12.505	92	2892	0.52	ug/L	#	85
79) trans-1,3-dichloropropene	12.683	75	1555	0.48	ug/L		80
80) 1,1,2-trichloroethane	12.918	83	729	0.49	ug/L		87
81) tetrachloroethene	13.127	164	925	0.51	ug/L		93
83) 1,3-dichloropropane	13.127	76	1464	0.46	ug/L		91
85) dibromochloromethane	13.399	129	946	0.45	ug/L		76
86) 1,2-dibromoethane	13.582	107	999	0.43	ug/L		93
87) n-butyl ether	14.116	57	5111	0.50	ug/L		83
88) chlorobenzene	14.131	112	3283	0.51	ug/L		95
89) 1,1,1,2-tetrachloroethane	14.199	131	1094	0.44	ug/L		70
90) ethylbenzene	14.215	91	5595	0.51	ug/L		94
91) m,p-xylene	14.351	106	4168	0.99	ug/L		99
92) o-xylene	14.801	91	4621	0.50	ug/L		88
93) styrene	14.811	104	3456	0.48	ug/L		95
96) isopropylbenzene	15.198	105	5401	0.50	ug/L		97
101) 1,1,2,2-tetrachloroethane	15.476	83	1377	0.56	ug/L		91
104) bromobenzene	15.627	156	1437	0.51	ug/L		94
105) n-propylbenzene	15.680	91	6045	0.55	ug/L		95
106) 2-chlorotoluene	15.821	126	1296	0.52	ug/L	#	85
107) 4-chlorotoluene	15.946	91	3845	0.53	ug/L		96
108) 1,3,5-trimethylbenzene	15.852	105	4368	0.52	ug/L		95
109) tert-butylbenzene	16.234	119	3474	0.53	ug/L		97
110) 1,2,4-trimethylbenzene	16.297	105	4276	0.51	ug/L		98
111) sec-butylbenzene	16.480	105	4987	0.52	ug/L		97
112) p-isopropyltoluene	16.631	119	3834	0.48	ug/L		97
113) 1,3-dichlorobenzene	16.668	146	2534	0.52	ug/L		99
114) 1,4-dichlorobenzene	16.767	146	2647	0.52	ug/L		86
115) 1,2-dichlorobenzene	17.191	146	2430	0.50	ug/L		95
116) benzyl chloride	16.867	91	2202	0.46	ug/L		97
119) hexachloroethane	17.531	201	597	0.48	ug/L	#	65

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263011.D
Acq On : 14 Mar 2019 6:32 pm
Operator : juntaep
Sample : ic10606-0.5
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 15 14:22:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263012.D
Acq On : 14 Mar 2019 7:01 pm
Operator : juntaep
Sample : ic10606-1
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 15 14:25:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.469	65	96612	500.00	ug/L		0.00
5) pentafluorobenzene	9.728	168	188659	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.685	114	278156	50.00	ug/L		0.00
75) chlorobenzene-d5	14.095	117	285207	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.737	152	162480	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.760	113	88051	49.45	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.90%				
55) 1,2-dichloroethane-d4 (s)	10.188	65	105051	50.37	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.74%				
76) toluene-d8 (s)	12.416	98	340640	48.89	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.78%				
100) 4-bromofluorobenzene (s)	15.413	95	158381	52.61	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.22%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.589	59	1081	4.12	ug/L		75
6) chlorodifluoromethane	4.399	51	4002	1.01	ug/L		70
7) dichlorodifluoromethane	4.430	85	4810	0.90	ug/L		94
8) chloromethane	4.644	50	4210	0.95	ug/L		86
10) vinyl chloride	4.927	62	4332	0.93	ug/L		91
11) bromomethane	5.492	94	2148	0.93	ug/L		78
12) chloroethane	5.654	64	1953	0.96	ug/L		75
13) trichlorofluoromethane	6.151	101	3633	1.00	ug/L		78
14) vinyl bromide	5.989	106	1816	0.88	ug/L		91
15) ethyl ether	6.475	74	1057	1.06	ug/L	#	79
16) 2-chloropropane	6.689	43	4935	1.10	ug/L		94
18) freon 113	6.925	151	2338	0.95	ug/L	#	74
19) 1,1-dichloroethene	6.883	96	2384	1.02	ug/L	#	72
21) acetonitrile	7.244	41	3427	12.23	ug/L		67
22) iodomethane	7.139	142	3640	0.99	ug/L		88
23) carbon disulfide	7.301	76	7633	1.01	ug/L		93
24) methylene chloride	7.542	84	2435	1.00	ug/L		89
26) methyl tert butyl ether	7.908	73	7543	1.07	ug/L		95
27) trans-1,2-dichloroethene	7.945	96	2177	1.02	ug/L		94
28) hexane	8.311	56	1288	0.94	ug/L		82
29) di-isopropyl ether	8.499	45	8418	1.04	ug/L		97
31) 1,1-dichloroethane	8.489	63	3938	1.04	ug/L		95
32) chloroprene	8.609	53	3317	0.98	ug/L		98
35) ethyl tert-butyl ether	8.954	59	8338	1.05	ug/L		97
37) 2,2-dichloropropane	9.252	77	4282	1.05	ug/L		90
38) cis-1,2-dichloroethene	9.195	96	2318	0.99	ug/L		91
39) propionitrile	9.169	54	2393	9.38	ug/L		79
42) bromochloromethane	9.488	128	987	0.94	ug/L	#	83
44) chloroform	9.571	83	4080	1.06	ug/L		92
45) tert-butyl formate	9.618	59	2125	0.98	ug/L		90
47) 1,1,1-trichloroethane	9.864	97	4071	1.03	ug/L		93
48) cyclohexane	10.011	84	4016	1.01	ug/L		90
50) 1,1-dichloropropene	10.032	75	3021	1.04	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263012.D
Acq On : 14 Mar 2019 7:01 pm
Operator : juntaep
Sample : ic10606-1
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 15 14:25:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) carbon tetrachloride	10.079	117	3440	1.02	ug/L		94
52) tert-amyl alcohol	10.115	73	697	5.85	ug/L	#	37
57) 2,2,4-trimethylpentane	10.413	57	6347	0.94	ug/L		93
58) benzene	10.288	78	8845	1.05	ug/L		93
59) tert-amyl methyl ether	10.371	73	7872	1.02	ug/L		94
60) heptane	10.565	57	1124	1.00	ug/L		95
61) 1,2-dichloroethane	10.283	62	3491	1.15	ug/L		93
63) trichloroethene	11.025	95	2151	1.02	ug/L		92
64) 2-chloroethyl vinyl ether	11.825	63	5353	4.86	ug/L		99
66) methylcyclohexane	11.365	83	3767	1.05	ug/L		93
67) 1,2-dichloropropane	11.308	63	2090	1.00	ug/L		89
68) dibromomethane	11.412	93	1160	0.96	ug/L		90
69) bromodichloromethane	11.574	83	2882	1.03	ug/L		98
72) cis-1,3-dichloropropene	12.066	75	3395	1.00	ug/L		96
73) 4-methyl-2-pentanone	12.171	58	2786	3.81	ug/L		95
77) toluene	12.500	92	5369	0.98	ug/L		97
78) ethyl methacrylate	12.699	69	2160	0.88	ug/L		90
79) trans-1,3-dichloropropene	12.683	75	3147	0.99	ug/L		90
80) 1,1,2-trichloroethane	12.924	83	1409	0.97	ug/L		93
81) tetrachloroethene	13.128	164	1692	0.95	ug/L		94
82) 2-hexanone	13.123	58	2280	3.68	ug/L	#	84
83) 1,3-dichloropropane	13.123	76	3266	1.04	ug/L		96
85) dibromochloromethane	13.400	129	2021	0.98	ug/L		86
86) 1,2-dibromoethane	13.583	107	2276	1.00	ug/L		84
87) n-butyl ether	14.116	57	10200	1.02	ug/L		89
88) chlorobenzene	14.127	112	6405	1.01	ug/L		94
89) 1,1,1,2-tetrachloroethane	14.200	131	2445	1.01	ug/L		91
90) ethylbenzene	14.210	91	11055	1.02	ug/L		99
91) m,p-xylene	14.346	106	8507	2.06	ug/L		88
92) o-xylene	14.801	91	9187	1.01	ug/L		97
93) styrene	14.812	104	6891	0.98	ug/L		98
96) isopropylbenzene	15.199	105	10767	1.02	ug/L		96
97) bromoform	15.052	173	1368	0.95	ug/L		85
101) 1,1,2,2-tetrachloroethane	15.481	83	2754	1.10	ug/L		96
103) 1,2,3-trichloropropane	15.575	110	743	1.04	ug/L	#	79
104) bromobenzene	15.623	156	3147	1.11	ug/L		90
105) n-propylbenzene	15.675	91	12301	1.09	ug/L		99
106) 2-chlorotoluene	15.816	126	2682	1.06	ug/L		96
107) 4-chlorotoluene	15.947	91	7986	1.08	ug/L		97
108) 1,3,5-trimethylbenzene	15.847	105	9298	1.08	ug/L		96
109) tert-butylbenzene	16.234	119	7022	1.06	ug/L		95
110) 1,2,4-trimethylbenzene	16.292	105	9023	1.05	ug/L		98
111) sec-butylbenzene	16.486	105	10409	1.06	ug/L		96
112) p-isopropyltoluene	16.627	119	7895	0.97	ug/L		96
113) 1,3-dichlorobenzene	16.663	146	5157	1.04	ug/L		94
114) 1,4-dichlorobenzene	16.768	146	5523	1.07	ug/L		95
115) 1,2-dichlorobenzene	17.186	146	5096	1.02	ug/L		91
116) benzyl chloride	16.862	91	4444	0.92	ug/L		100
117) n-butylbenzene	17.097	92	3374	0.90	ug/L		86
119) hexachloroethane	17.532	201	1216	0.96	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263012.D
Acq On : 14 Mar 2019 7:01 pm
Operator : juntaep
Sample : ic10606-1
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 15 14:25:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

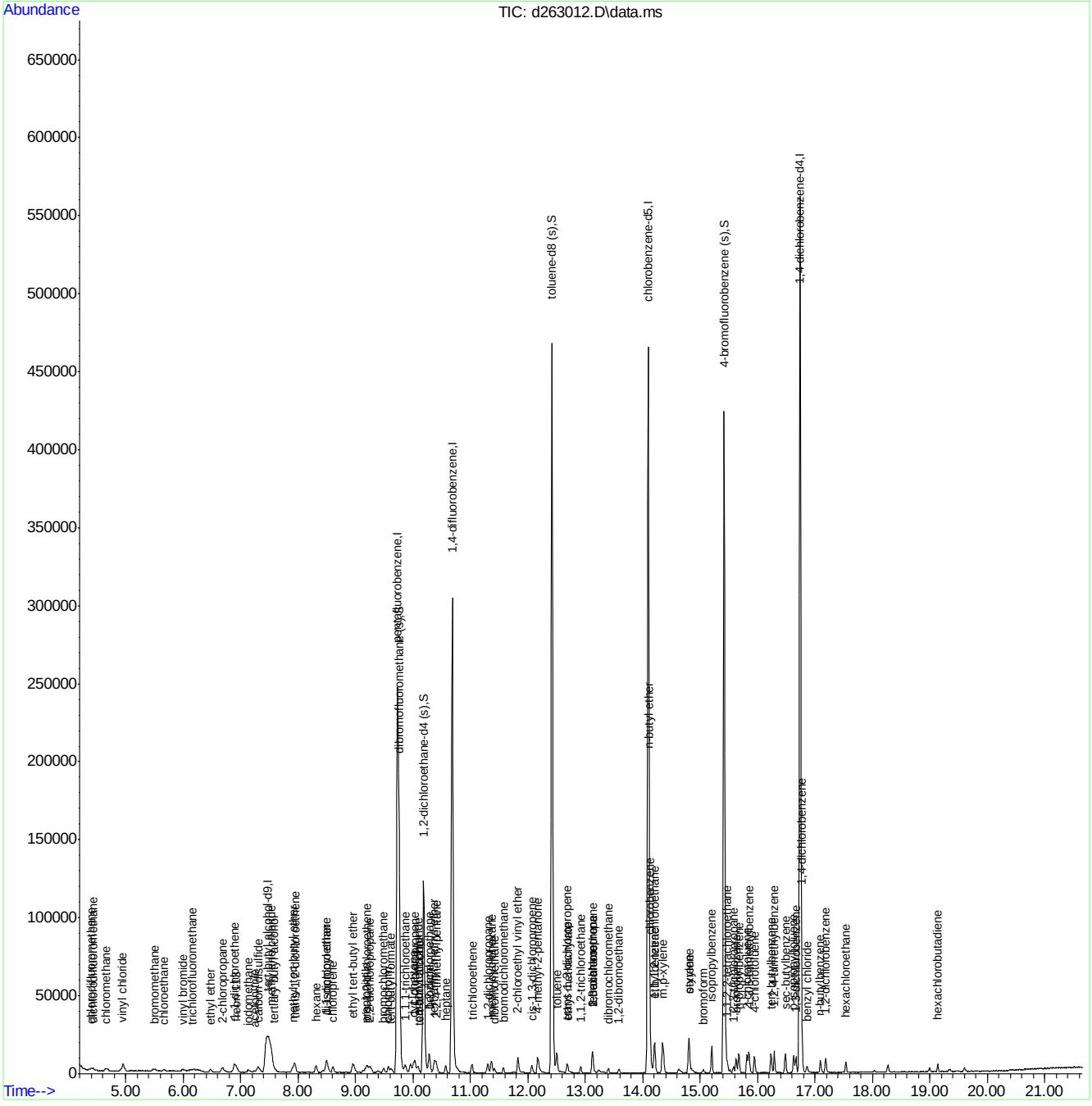
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
123) hexachlorobutadiene	19.132	225	1342	0.90 ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263012.D
Acq On : 14 Mar 2019 7:01 pm
Operator : juntaep
Sample : ic10606-1
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 15 14:25:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263013.D
Acq On : 14 Mar 2019 7:30 pm
Operator : juntaep
Sample : ic10606-2
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 15 14:28:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.473	65	92253	500.00	ug/L		0.00
5) pentafluorobenzene	9.727	168	188232	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.685	114	280288	50.00	ug/L		0.00
75) chlorobenzene-d5	14.095	117	286950	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.741	152	161340	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.754	113	88670	49.92	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.84%				
55) 1,2-dichloroethane-d4 (s)	10.188	65	104538	49.74	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.48%				
76) toluene-d8 (s)	12.421	98	344293	49.12	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.24%				
100) 4-bromofluorobenzene (s)	15.413	95	156414	52.32	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.64%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.583	59	2119	8.47	ug/L		75
6) chlorodifluoromethane	4.419	51	7789	1.96	ug/L		88
7) dichlorodifluoromethane	4.435	85	10486	1.96	ug/L		94
8) chloromethane	4.659	50	8496	1.92	ug/L		96
9) 1,3-butadiene	4.952	54	4156	1.70	ug/L		97
10) vinyl chloride	4.931	62	9353	2.01	ug/L		97
11) bromomethane	5.486	94	4355	1.88	ug/L		93
12) chloroethane	5.669	64	4005	1.96	ug/L		92
13) trichlorofluoromethane	6.140	101	7535	2.09	ug/L		91
14) vinyl bromide	5.998	106	3750	1.82	ug/L		95
15) ethyl ether	6.474	74	1782	1.79	ug/L		83
16) 2-chloropropane	6.678	43	8648	1.93	ug/L		95
18) freon 113	6.914	151	4515	1.83	ug/L		93
19) 1,1-dichloroethene	6.893	96	4316	1.86	ug/L		90
20) acetone	6.846	58	822	6.23	ug/L	#	22
21) acetonitrile	7.233	41	6031	21.57	ug/L		75
22) iodomethane	7.133	142	6736	1.84	ug/L		96
23) carbon disulfide	7.301	76	14057	1.86	ug/L		96
24) methylene chloride	7.536	84	4616	1.89	ug/L		97
25) methyl acetate	7.311	43	2307	1.80	ug/L		62
26) methyl tert butyl ether	7.913	73	13662	1.94	ug/L		95
27) trans-1,2-dichloroethene	7.944	96	3922	1.84	ug/L		94
28) hexane	8.315	56	2690	1.96	ug/L	#	82
29) di-isopropyl ether	8.498	45	15340	1.90	ug/L		93
30) 2-butanone	9.126	72	1091	6.65	ug/L	#	78
31) 1,1-dichloroethane	8.488	63	7046	1.86	ug/L		98
32) chloroprene	8.608	53	6077	1.80	ug/L		95
35) ethyl tert-butyl ether	8.953	59	14716	1.85	ug/L		97
37) 2,2-dichloropropane	9.252	77	7772	1.91	ug/L		95
38) cis-1,2-dichloroethene	9.199	96	4244	1.82	ug/L		94
39) propionitrile	9.163	54	4816	18.93	ug/L		97
42) bromochloromethane	9.487	128	1975	1.88	ug/L		93
44) chloroform	9.571	83	7452	1.95	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263013.D
Acq On : 14 Mar 2019 7:30 pm
Operator : juntaep
Sample : ic10606-2
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 15 14:28:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) tert-butyl formate	9.628	59	3887	1.80	ug/L		90
47) 1,1,1-trichloroethane	9.869	97	7440	1.89	ug/L		96
48) cyclohexane	10.015	84	7429	1.88	ug/L		91
50) 1,1-dichloropropene	10.041	75	5221	1.80	ug/L		99
51) carbon tetrachloride	10.088	117	6089	1.82	ug/L		89
52) tert-amyl alcohol	10.125	73	1043	8.78	ug/L		89
57) 2,2,4-trimethylpentane	10.402	57	11685	1.71	ug/L		92
58) benzene	10.282	78	15625	1.84	ug/L		97
59) tert-amyl methyl ether	10.371	73	14242	1.83	ug/L		98
60) heptane	10.570	57	2232	1.96	ug/L		95
61) 1,2-dichloroethane	10.277	62	5854	1.91	ug/L		97
63) trichloroethene	11.030	95	3987	1.88	ug/L		96
64) 2-chloroethyl vinyl ether	11.825	63	10186	9.19	ug/L		97
66) methylcyclohexane	11.370	83	6490	1.80	ug/L		97
67) 1,2-dichloropropane	11.307	63	3947	1.87	ug/L		95
68) dibromomethane	11.417	93	2351	1.92	ug/L		93
69) bromodichloromethane	11.568	83	5280	1.86	ug/L		94
71) epichlorohydrin	11.903	57	1822	9.65	ug/L		79
72) cis-1,3-dichloropropene	12.071	75	6221	1.82	ug/L		92
73) 4-methyl-2-pentanone	12.170	58	5781	7.84	ug/L		91
74) isoamyl alcohol	12.170	70	1517	3.89	ug/L	#	30
77) toluene	12.505	92	10140	1.84	ug/L		96
78) ethyl methacrylate	12.698	69	4648	1.88	ug/L		96
79) trans-1,3-dichloropropene	12.677	75	5950	1.86	ug/L		91
80) 1,1,2-trichloroethane	12.918	83	2776	1.89	ug/L		95
81) tetrachloroethene	13.132	164	3280	1.83	ug/L		97
82) 2-hexanone	13.117	58	4317	6.93	ug/L	#	83
83) 1,3-dichloropropane	13.122	76	5779	1.83	ug/L		88
84) butyl acetate	13.226	56	2123	1.65	ug/L	#	77
85) dibromochloromethane	13.399	129	3693	1.79	ug/L		89
86) 1,2-dibromoethane	13.582	107	4167	1.83	ug/L		92
87) n-butyl ether	14.110	57	19068	1.90	ug/L		88
88) chlorobenzene	14.131	112	12093	1.90	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.199	131	4401	1.80	ug/L		95
90) ethylbenzene	14.210	91	20411	1.87	ug/L		97
91) m,p-xylene	14.346	106	15319	3.69	ug/L		99
92) o-xylene	14.801	91	16904	1.85	ug/L		98
93) styrene	14.811	104	12617	1.78	ug/L		96
94) butyl acrylate	14.618	55	6372	1.63	ug/L		93
96) isopropylbenzene	15.198	105	19691	1.85	ug/L		98
97) bromoform	15.057	173	2581	1.77	ug/L		98
101) 1,1,2,2-tetrachloroethane	15.475	83	4905	1.97	ug/L		92
102) trans-1,4-dichloro-2-b...	15.517	53	1113	1.82	ug/L	#	73
103) 1,2,3-trichloropropane	15.575	110	1412	1.99	ug/L		95
104) bromobenzene	15.627	156	5568	1.97	ug/L		91
105) n-propylbenzene	15.669	91	22061	1.97	ug/L		97
106) 2-chlorotoluene	15.815	126	5052	2.02	ug/L		96
107) 4-chlorotoluene	15.941	91	14484	1.96	ug/L		97
108) 1,3,5-trimethylbenzene	15.852	105	16546	1.94	ug/L		97
109) tert-butylbenzene	16.234	119	12834	1.94	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263013.D
Acq On : 14 Mar 2019 7:30 pm
Operator : juntaep
Sample : ic10606-2
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 15 14:28:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) 1,2,4-trimethylbenzene	16.291	105	16238	1.91	ug/L	100
111) sec-butylbenzene	16.485	105	18519	1.90	ug/L	98
112) p-isopropyltoluene	16.631	119	15245	1.88	ug/L	98
113) 1,3-dichlorobenzene	16.668	146	9353	1.89	ug/L	97
114) 1,4-dichlorobenzene	16.767	146	9740	1.90	ug/L	94
115) 1,2-dichlorobenzene	17.186	146	9418	1.90	ug/L	98
116) benzyl chloride	16.861	91	8358	1.74	ug/L	100
117) n-butylbenzene	17.091	92	6556	1.77	ug/L	99
119) hexachloroethane	17.531	201	2294	1.82	ug/L	88
120) 1,2-dibromo-3-chloropr...	18.028	75	622	1.42	ug/L	87
121) 1,3,5-trichlorobenzene	18.268	180	5104	1.64	ug/L	96
123) hexachlorobutadiene	19.136	225	2621	1.77	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

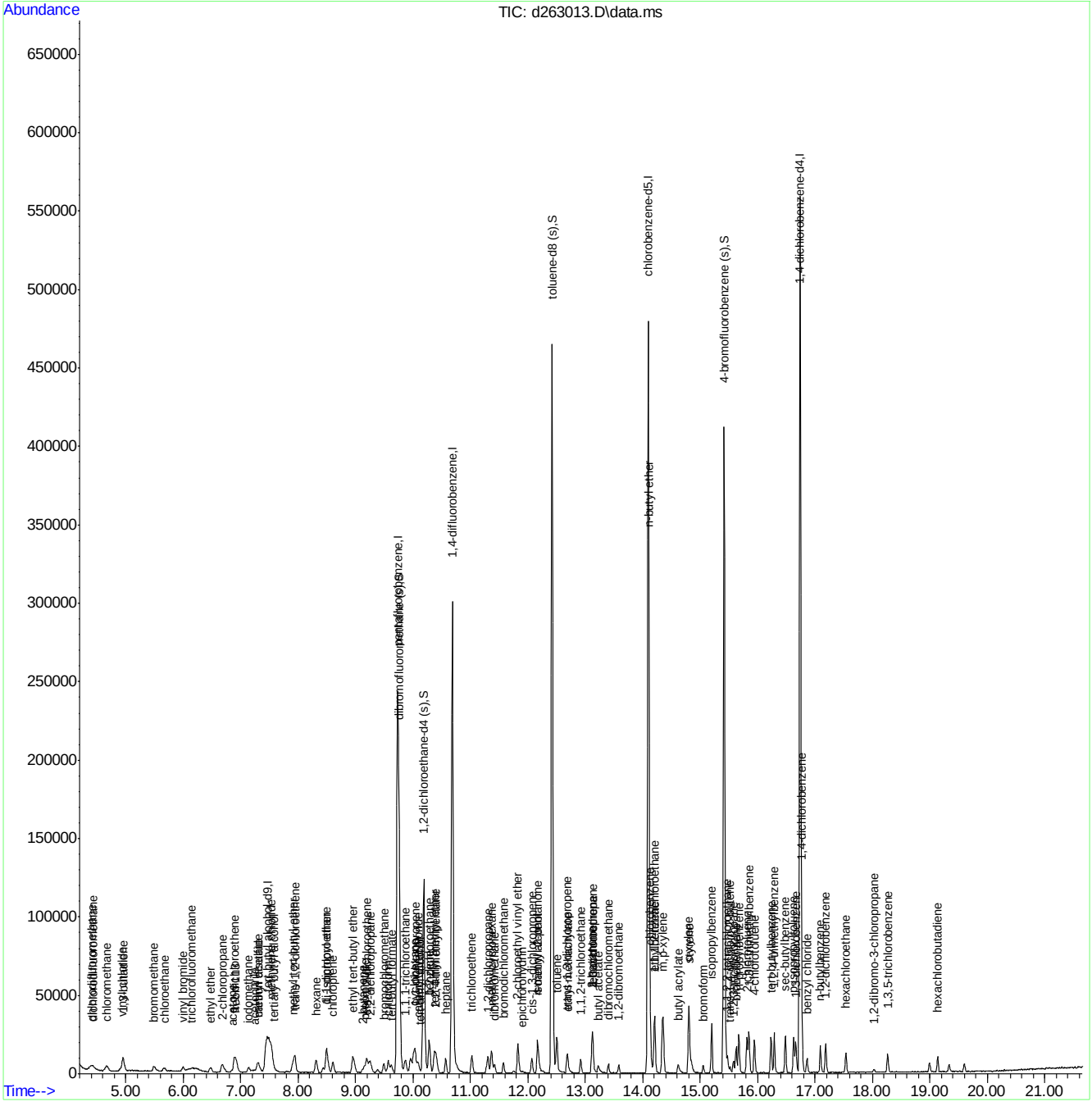
7.7.15

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263013.D
Acq On : 14 Mar 2019 7:30 pm
Operator : juntaep
Sample : ic10606-2
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 15 14:28:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263014.D
Acq On : 14 Mar 2019 7:58 pm
Operator : juntaep
Sample : ic10606-4
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 15 14:29:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.472	65	91322	500.00	ug/L	0.00
5) pentafluorobenzene	9.732	168	189294	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.684	114	279021	50.00	ug/L	0.00
75) chlorobenzene-d5	14.094	117	278777	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.740	152	163641	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.758	113	89244	49.96	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.92%			
55) 1,2-dichloroethane-d4 (s)	10.187	65	105585	50.47	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.94%			
76) toluene-d8 (s)	12.420	98	340687	50.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.06%			
100) 4-bromofluorobenzene (s)	15.412	95	156146	51.50	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.561	59	4861	19.62	ug/L	75
4) 1,4-dioxane	11.369	88	1895	85.75	ug/L	90
6) chlorodifluoromethane	4.413	51	15885	3.98	ug/L	99
7) dichlorodifluoromethane	4.407	85	21671	4.02	ug/L	98
8) chloromethane	4.669	50	17465	3.93	ug/L	94
9) 1,3-butadiene	4.957	54	8851	3.60	ug/L	94
10) vinyl chloride	4.941	62	18630	3.98	ug/L	95
11) bromomethane	5.495	94	9037	3.88	ug/L	96
12) chloroethane	5.673	64	8200	4.00	ug/L	92
13) trichlorofluoromethane	6.149	101	16312	4.49	ug/L	99
14) vinyl bromide	5.997	106	8190	3.95	ug/L	94
15) ethyl ether	6.473	74	4086	4.08	ug/L	93
16) 2-chloropropane	6.682	43	17755	3.94	ug/L	97
18) freon 113	6.928	151	9647	3.90	ug/L	98
19) 1,1-dichloroethene	6.892	96	9226	3.95	ug/L	96
20) acetone	6.845	58	2333	17.58	ug/L #	59
21) acetonitrile	7.221	41	12366	43.98	ug/L	95
22) iodomethane	7.138	142	14451	3.94	ug/L	95
23) carbon disulfide	7.300	76	30171	3.96	ug/L	99
24) methylene chloride	7.535	84	9901	4.04	ug/L	97
25) methyl acetate	7.305	43	5302	4.11	ug/L	91
26) methyl tert butyl ether	7.912	73	27220	3.84	ug/L	98
27) trans-1,2-dichloroethene	7.943	96	8602	4.02	ug/L	92
28) hexane	8.314	56	5593	4.06	ug/L	95
29) di-isopropyl ether	8.503	45	31922	3.94	ug/L	98
30) 2-butanone	9.114	72	2553	15.47	ug/L	99
31) 1,1-dichloroethane	8.487	63	15683	4.11	ug/L	97
32) chloroprene	8.602	53	13405	3.94	ug/L	98
33) acrylonitrile	7.781	53	1962	3.60	ug/L	84
34) vinyl acetate	8.435	86	1320	3.51	ug/L #	54
35) ethyl tert-butyl ether	8.963	59	30860	3.86	ug/L	97
36) ethyl acetate	9.151	45	780	3.19	ug/L #	59
37) 2,2-dichloropropane	9.245	77	15635	3.82	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263014.D
Acq On : 14 Mar 2019 7:58 pm
Operator : juntaep
Sample : ic10606-4
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 15 14:29:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) cis-1,2-dichloroethene	9.193	96	9636	4.11	ug/L		90
39) propionitrile	9.156	54	10554	41.25	ug/L		93
40) methyl acrylate	9.240	85	544	2.35	ug/L	#	40
41) methacrylonitrile	9.376	67	2374	3.81	ug/L		96
42) bromochloromethane	9.491	128	4433	4.19	ug/L		91
43) tetrahydrofuran	9.533	42	1971	3.91	ug/L		86
44) chloroform	9.570	83	15065	3.91	ug/L		97
45) tert-butyl formate	9.617	59	8167	3.76	ug/L		95
47) 1,1,1-trichloroethane	9.868	97	15411	3.90	ug/L		99
48) cyclohexane	10.009	84	15810	3.98	ug/L		97
50) 1,1-dichloropropene	10.040	75	11370	3.90	ug/L		99
51) carbon tetrachloride	10.082	117	13116	3.89	ug/L		98
52) tert-amyl alcohol	10.119	73	2336	19.55	ug/L	#	74
53) isopropyl acetate	10.176	87	1575	2.93	ug/L	#	51
56) n-butyl alcohol	10.710	56	16460	165.59	ug/L		82
57) 2,2,4-trimethylpentane	10.412	57	25461	3.75	ug/L		99
58) benzene	10.286	78	33444	3.95	ug/L		97
59) tert-amyl methyl ether	10.370	73	29874	3.86	ug/L		96
60) heptane	10.568	57	4575	4.04	ug/L		98
61) 1,2-dichloroethane	10.281	62	11858	3.88	ug/L		96
62) ethyl acrylate	10.997	55	8129	4.33	ug/L		92
63) trichloroethene	11.024	95	8621	4.09	ug/L		96
64) 2-chloroethyl vinyl ether	11.824	63	21374	19.36	ug/L		98
65) methyl methacrylate	11.280	100	1521	3.36	ug/L	#	82
66) methylcyclohexane	11.363	83	14069	3.92	ug/L		93
67) 1,2-dichloropropane	11.306	63	8338	3.96	ug/L		94
68) dibromomethane	11.416	93	4902	4.03	ug/L		90
69) bromodichloromethane	11.573	83	11065	3.92	ug/L		97
70) 2-nitropropane	11.756	41	1706	3.93	ug/L		85
71) epichlorohydrin	11.907	57	3947	21.00	ug/L		93
72) cis-1,3-dichloropropene	12.070	75	12937	3.81	ug/L		97
73) 4-methyl-2-pentanone	12.169	58	11824	16.11	ug/L		96
74) isoamyl alcohol	12.164	70	4171	10.74	ug/L	#	64
77) toluene	12.498	92	21367	4.00	ug/L		98
78) ethyl methacrylate	12.687	69	9772	4.07	ug/L		94
79) trans-1,3-dichloropropene	12.676	75	12108	3.90	ug/L		97
80) 1,1,2-trichloroethane	12.917	83	5546	3.89	ug/L		98
81) tetrachloroethene	13.131	164	7071	4.06	ug/L		97
82) 2-hexanone	13.110	58	10464	17.28	ug/L		98
83) 1,3-dichloropropane	13.121	76	12610	4.11	ug/L		91
84) butyl acetate	13.215	56	4965	3.98	ug/L		98
85) dibromochloromethane	13.403	129	7716	3.85	ug/L		99
86) 1,2-dibromoethane	13.581	107	8758	3.96	ug/L		97
87) n-butyl ether	14.109	57	40387	4.15	ug/L		96
88) chlorobenzene	14.130	112	24714	4.00	ug/L		94
89) 1,1,1,2-tetrachloroethane	14.198	131	9205	3.87	ug/L		95
90) ethylbenzene	14.209	91	42248	3.99	ug/L		99
91) m,p-xylene	14.350	106	31565	7.83	ug/L		97
92) o-xylene	14.800	91	35138	3.97	ug/L		98
93) styrene	14.810	104	27198	3.96	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263014.D
Acq On : 14 Mar 2019 7:58 pm
Operator : juntaep
Sample : ic10606-4
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 15 14:29:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration

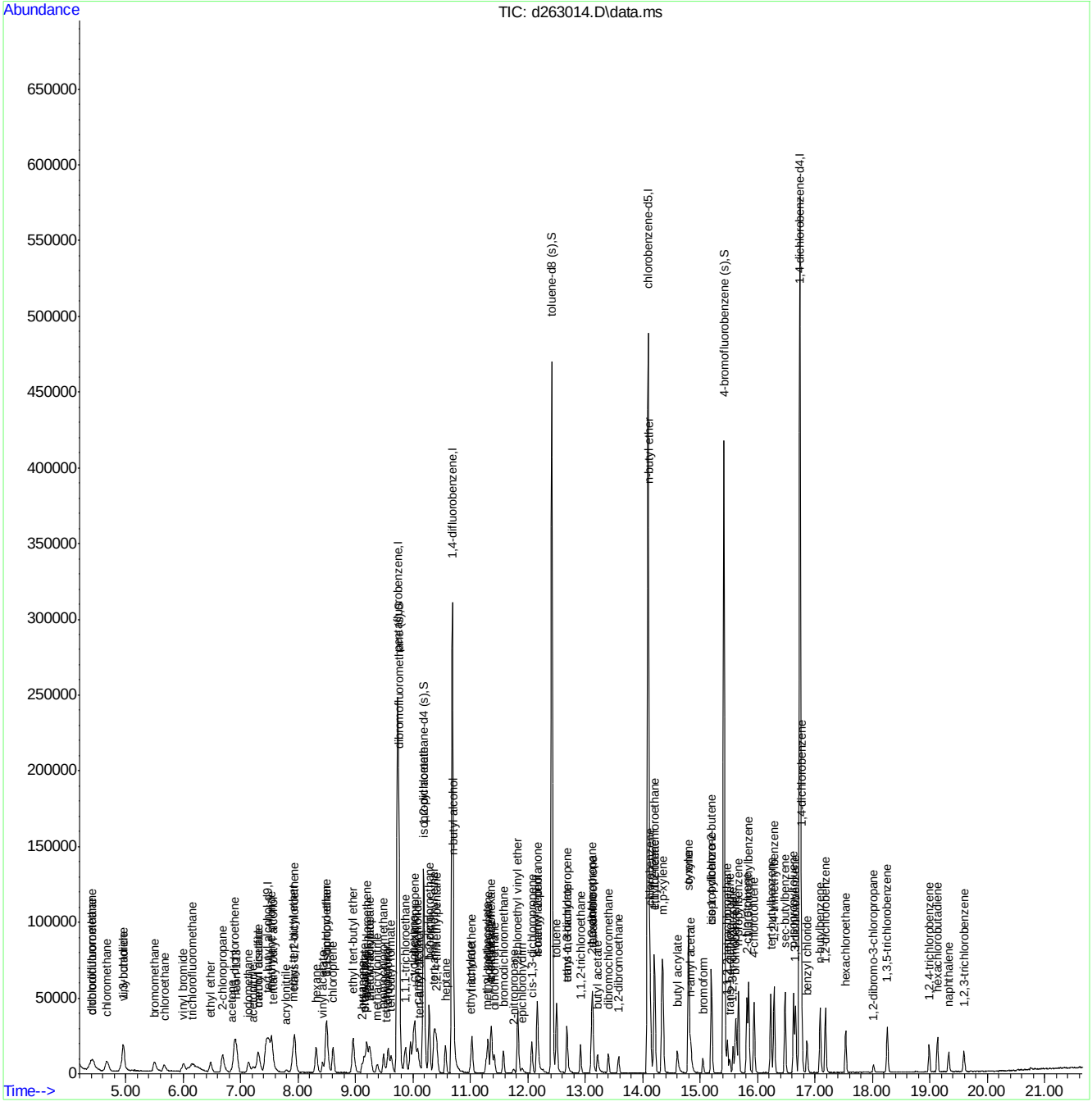
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	14.601	55	14630	3.85	ug/L		99
95) n-amyl acetate	14.842	70	5397	3.55	ug/L	#	86
96) isopropylbenzene	15.197	105	41212	3.99	ug/L		100
97) bromoform	15.051	173	5382	3.81	ug/L		90
98) cis-1,4-dichloro-2-butene	15.202	88	3433	4.03	ug/L		93
101) 1,1,2,2-tetrachloroethane	15.474	83	10629	4.20	ug/L		98
102) trans-1,4-dichloro-2-b...	15.516	53	2516	4.05	ug/L		94
103) 1,2,3-trichloropropane	15.574	110	3180	4.41	ug/L		98
104) bromobenzene	15.626	156	11701	4.08	ug/L		86
105) n-propylbenzene	15.668	91	46419	4.10	ug/L		99
106) 2-chlorotoluene	15.814	126	10308	4.06	ug/L		97
107) 4-chlorotoluene	15.940	91	30825	4.12	ug/L		99
108) 1,3,5-trimethylbenzene	15.846	105	35523	4.10	ug/L		96
109) tert-butylbenzene	16.233	119	26926	4.02	ug/L		96
110) 1,2,4-trimethylbenzene	16.290	105	35057	4.06	ug/L		98
111) sec-butylbenzene	16.479	105	40191	4.06	ug/L		99
112) p-isopropyltoluene	16.630	119	33652	4.09	ug/L		98
113) 1,3-dichlorobenzene	16.662	146	20132	4.02	ug/L		95
114) 1,4-dichlorobenzene	16.766	146	20589	3.96	ug/L		97
115) 1,2-dichlorobenzene	17.185	146	20329	4.05	ug/L		100
116) benzyl chloride	16.860	91	18551	3.80	ug/L		96
117) n-butylbenzene	17.090	92	14450	3.85	ug/L		99
119) hexachloroethane	17.540	201	4834	3.78	ug/L		90
120) 1,2-dibromo-3-chloropr...	18.016	75	1630	3.68	ug/L		90
121) 1,3,5-trichlorobenzene	18.262	180	11857	3.75	ug/L		96
122) 1,2,4-trichlorobenzene	18.989	180	7312	3.23	ug/L		98
123) hexachlorobutadiene	19.135	225	5787	3.85	ug/L		93
124) naphthalene	19.329	128	14437	3.04	ug/L		99
125) 1,2,3-trichlorobenzene	19.601	180	6245	3.21	ug/L		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263014.D
Acq On : 14 Mar 2019 7:58 pm
Operator : juntaep
Sample : ic10606-4
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 15 14:29:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:07:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263015.D
Acq On : 14 Mar 2019 8:27 pm
Operator : juntaep
Sample : ic10606-8
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 15 14:30:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.462	65	92536	500.00	ug/L		-0.01
5) pentafluorobenzene	9.727	168	185394	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.684	114	276172	50.00	ug/L		0.00
75) chlorobenzene-d5	14.094	117	283163	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.740	152	167234	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.758	113	88130	49.59	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.18%				
55) 1,2-dichloroethane-d4 (s)	10.182	65	105435	51.68	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.36%				
76) toluene-d8 (s)	12.420	98	345834	49.91	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.82%				
100) 4-bromofluorobenzene (s)	15.412	95	160912	54.86	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 109.72%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.588	59	10048	37.63	ug/L		75
4) 1,4-dioxane	11.369	88	4391	184.68	ug/L		84
6) chlorodifluoromethane	4.403	51	32562	7.99	ug/L		98
7) dichlorodifluoromethane	4.413	85	44740	7.59	ug/L		97
8) chloromethane	4.675	50	36109	7.10	ug/L		96
9) 1,3-butadiene	4.957	54	18875	6.66	ug/L		95
10) vinyl chloride	4.941	62	38147	7.51	ug/L		99
11) bromomethane	5.496	94	18941	7.05	ug/L		97
12) chloroethane	5.653	64	16622	7.52	ug/L		95
13) trichlorofluoromethane	6.155	101	34023	7.37	ug/L		96
14) vinyl bromide	6.003	106	17266	7.20	ug/L		98
15) ethyl ether	6.474	74	8323	7.63	ug/L		95
16) 2-chloropropane	6.678	43	34813	7.93	ug/L		99
17) acrolein	6.662	56	2370	6.50	ug/L		81
18) freon 113	6.923	151	20023	7.63	ug/L		96
19) 1,1-dichloroethene	6.887	96	18018	7.61	ug/L		99
20) acetone	6.845	58	4769	30.27	ug/L	#	83
21) acetonitrile	7.211	41	25019	82.13	ug/L		99
22) iodomethane	7.133	142	29050	7.55	ug/L		98
23) carbon disulfide	7.300	76	61074	7.76	ug/L		100
24) methylene chloride	7.535	84	19547	7.92	ug/L		99
25) methyl acetate	7.300	43	10758	8.21	ug/L		93
26) methyl tert butyl ether	7.912	73	55217	7.75	ug/L		97
27) trans-1,2-dichloroethene	7.938	96	17128	7.80	ug/L		98
28) hexane	8.315	56	11329	7.97	ug/L		89
29) di-isopropyl ether	8.498	45	63900	7.69	ug/L		97
30) 2-butanone	9.110	72	5626	30.41	ug/L		89
31) 1,1-dichloroethane	8.487	63	30291	7.71	ug/L		99
32) chloroprene	8.602	53	27771	7.62	ug/L		97
33) acrylonitrile	7.781	53	4694	7.40	ug/L		96
34) vinyl acetate	8.414	86	3135	6.88	ug/L	#	71
35) ethyl tert-butyl ether	8.953	59	62982	7.61	ug/L		98
36) ethyl acetate	9.141	45	1979	7.70	ug/L	#	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263015.D
Acq On : 14 Mar 2019 8:27 pm
Operator : juntaep
Sample : ic10606-8
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 15 14:30:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	9.246	77	32373	7.80	ug/L		99
38) cis-1,2-dichloroethene	9.193	96	18517	7.67	ug/L		97
39) propionitrile	9.146	54	21489	79.45	ug/L		98
40) methyl acrylate	9.235	85	1642	6.10	ug/L	#	87
41) methacrylonitrile	9.366	67	5250	7.37	ug/L		93
42) bromochloromethane	9.486	128	8648	7.67	ug/L		95
43) tetrahydrofuran	9.533	42	4152	8.20	ug/L		96
44) chloroform	9.570	83	29580	7.80	ug/L		99
45) tert-butyl formate	9.622	59	16694	7.22	ug/L		99
47) 1,1,1-trichloroethane	9.863	97	31570	7.69	ug/L		96
48) cyclohexane	10.014	84	30873	7.33	ug/L		97
50) 1,1-dichloropropene	10.035	75	22836	7.65	ug/L		99
51) carbon tetrachloride	10.082	117	26289	7.45	ug/L		99
52) tert-amyl alcohol	10.119	73	4844	41.79	ug/L		93
53) isopropyl acetate	10.161	87	3378	7.25	ug/L	#	90
56) n-butyl alcohol	10.705	56	30283	491.47	ug/L		93
57) 2,2,4-trimethylpentane	10.407	57	52152	6.92	ug/L		96
58) benzene	10.281	78	67942	7.90	ug/L		99
59) tert-amyl methyl ether	10.370	73	60172	7.63	ug/L		99
60) heptane	10.564	57	9069	7.80	ug/L		95
61) 1,2-dichloroethane	10.276	62	23614	8.13	ug/L		97
62) ethyl acrylate	10.993	55	17578	7.88	ug/L		99
63) trichloroethene	11.024	95	16811	7.85	ug/L		93
64) 2-chloroethyl vinyl ether	11.819	63	45797	39.02	ug/L		99
65) methyl methacrylate	11.270	100	3722	7.36	ug/L		92
66) methylcyclohexane	11.364	83	28970	7.77	ug/L		95
67) 1,2-dichloropropane	11.306	63	17396	8.03	ug/L		97
68) dibromomethane	11.411	93	10047	7.87	ug/L		96
69) bromodichloromethane	11.573	83	22474	7.67	ug/L		98
70) 2-nitropropane	11.746	41	3628	8.20	ug/L		92
71) epichlorohydrin	11.897	57	8606	41.15	ug/L		98
72) cis-1,3-dichloropropene	12.065	75	28002	7.91	ug/L		96
73) 4-methyl-2-pentanone	12.164	58	24503	32.29	ug/L		94
74) isoamyl alcohol	12.159	70	9628	150.30	ug/L	#	68
77) toluene	12.499	92	43401	7.72	ug/L		98
78) ethyl methacrylate	12.687	69	21476	7.81	ug/L		99
79) trans-1,3-dichloropropene	12.677	75	25504	7.70	ug/L		96
80) 1,1,2-trichloroethane	12.917	83	11839	7.81	ug/L		96
81) tetrachloroethene	13.126	164	14220	7.75	ug/L		97
82) 2-hexanone	13.100	58	21716	30.93	ug/L		98
83) 1,3-dichloropropane	13.121	76	25527	7.92	ug/L		99
84) butyl acetate	13.210	56	10997	7.78	ug/L		91
85) dibromochloromethane	13.404	129	16089	7.32	ug/L		95
86) 1,2-dibromoethane	13.576	107	18642	7.77	ug/L		96
87) n-butyl ether	14.110	57	81950	8.16	ug/L		98
88) chlorobenzene	14.131	112	51162	7.96	ug/L		96
89) 1,1,1,2-tetrachloroethane	14.199	131	19294	7.45	ug/L		99
90) ethylbenzene	14.209	91	86975	7.86	ug/L		99
91) m,p-xylene	14.345	106	65880	15.50	ug/L		99
92) o-xylene	14.795	91	73457	7.90	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263015.D
Acq On : 14 Mar 2019 8:27 pm
Operator : juntaep
Sample : ic10606-8
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 15 14:30:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

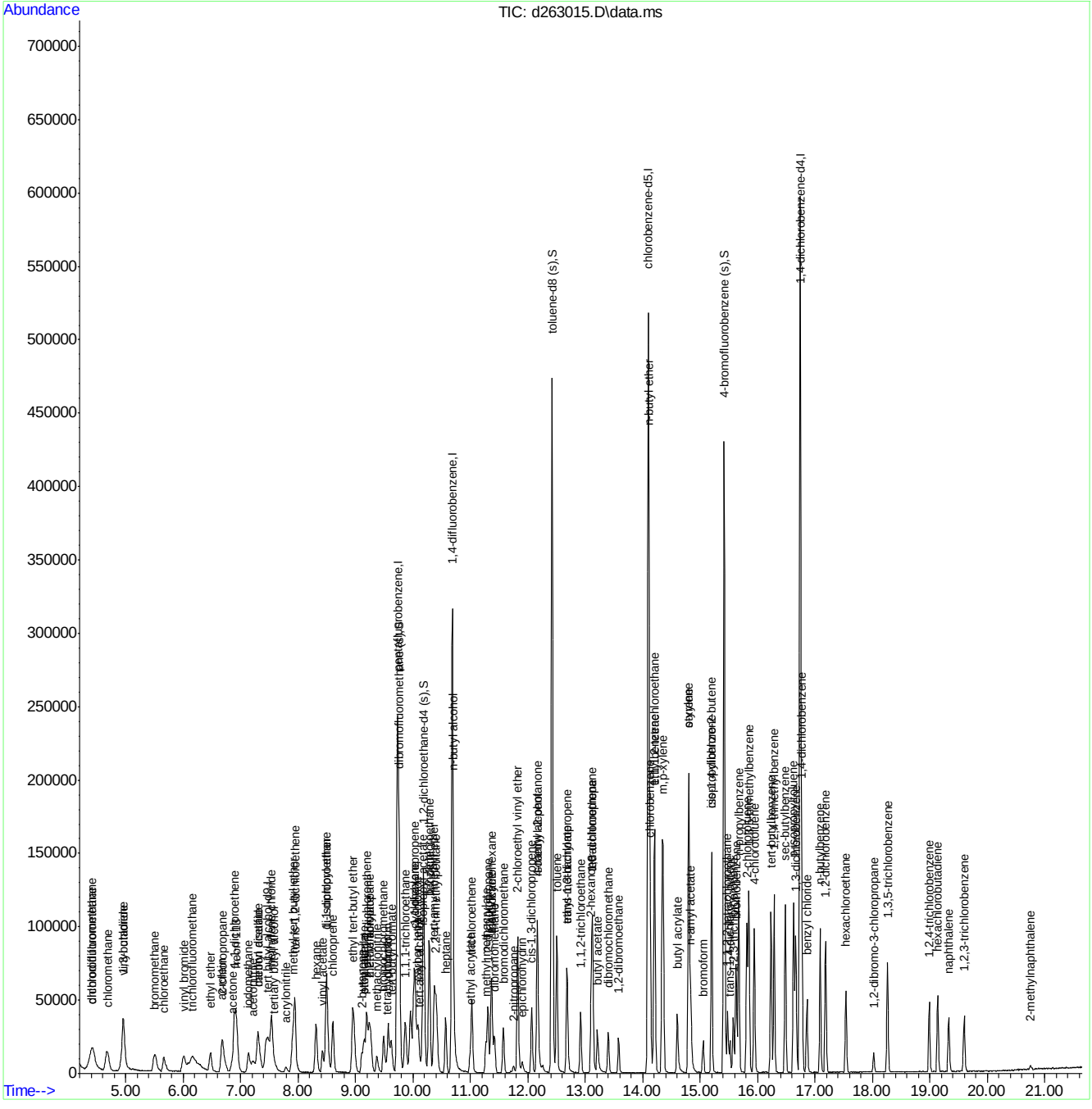
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.805	104	57251	7.78	ug/L	97
94) butyl acrylate	14.601	55	33112	7.08	ug/L	99
95) n-amyl acetate	14.837	70	12795	6.74	ug/L	99
96) isopropylbenzene	15.198	105	85248	7.84	ug/L	98
97) bromoform	15.051	173	11425	7.22	ug/L	97
98) cis-1,4-dichloro-2-butene	15.203	88	7313	7.13	ug/L	98
101) 1,1,2,2-tetrachloroethane	15.475	83	21382	8.50	ug/L	98
102) trans-1,4-dichloro-2-b...	15.517	53	5439	8.02	ug/L	92
103) 1,2,3-trichloropropane	15.579	110	6205	8.36	ug/L	95
104) bromobenzene	15.626	156	24395	8.38	ug/L	88
105) n-propylbenzene	15.668	91	95910	8.37	ug/L	100
106) 2-chlorotoluene	15.809	126	20881	8.04	ug/L	97
107) 4-chlorotoluene	15.940	91	63064	8.32	ug/L	98
108) 1,3,5-trimethylbenzene	15.846	105	72792	8.17	ug/L	98
109) tert-butylbenzene	16.233	119	56125	8.10	ug/L	97
110) 1,2,4-trimethylbenzene	16.285	105	74200	8.26	ug/L	100
111) sec-butylbenzene	16.479	105	84328	8.15	ug/L	99
112) p-isopropyltoluene	16.625	119	71076	7.94	ug/L	98
113) 1,3-dichlorobenzene	16.662	146	42098	8.10	ug/L	99
114) 1,4-dichlorobenzene	16.767	146	43031	8.04	ug/L	99
115) 1,2-dichlorobenzene	17.185	146	42426	7.99	ug/L	100
116) benzyl chloride	16.861	91	40097	7.17	ug/L	98
117) n-butylbenzene	17.091	92	33052	7.56	ug/L	98
119) hexachloroethane	17.535	201	10405	7.39	ug/L	94
120) 1,2-dibromo-3-chloropr...	18.017	75	3777	7.12	ug/L	90
121) 1,3,5-trichlorobenzene	18.262	180	27649	7.04	ug/L	95
122) 1,2,4-trichlorobenzene	18.989	180	18552	5.76	ug/L	98
123) hexachlorobutadiene	19.136	225	12828	7.26	ug/L	98
124) naphthalene	19.329	128	36977	5.18	ug/L	99
125) 1,2,3-trichlorobenzene	19.596	180	15718	5.58	ug/L	96
126) 2-methylnaphthalene	20.752	142	2738	1.73	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263015.D
Acq On : 14 Mar 2019 8:27 pm
Operator : juntaep
Sample : ic10606-8
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 15 14:30:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263016.D
Acq On : 14 Mar 2019 8:56 pm
Operator : juntaep
Sample : ic10606-20
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 15 14:31:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.462	65	92161	500.00	ug/L	-0.01
5) pentafluorobenzene	9.726	168	190286	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.683	114	283837	50.00	ug/L	0.00
75) chlorobenzene-d5	14.093	117	287923	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.740	152	177702	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.758	113	90478	49.60	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.20%			
55) 1,2-dichloroethane-d4 (s)	10.181	65	105229	50.18	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.36%			
76) toluene-d8 (s)	12.420	98	353611	50.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.38%			
100) 4-bromofluorobenzene (s)	15.411	95	161220	51.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.44%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.587	59	25734	96.77	ug/L	95
4) 1,4-dioxane	11.358	88	11553	487.88	ug/L	95
6) chlorodifluoromethane	4.402	51	80875	19.32	ug/L	98
7) dichlorodifluoromethane	4.418	85	117055	19.35	ug/L	99
8) chloromethane	4.679	50	96622	18.51	ug/L	99
9) 1,3-butadiene	4.962	54	50815	17.46	ug/L	96
10) vinyl chloride	4.946	62	99607	19.09	ug/L	99
11) bromomethane	5.511	94	49957	18.13	ug/L	96
12) chloroethane	5.662	64	42476	18.73	ug/L	97
13) trichlorofluoromethane	6.144	101	89922	18.97	ug/L	99
14) vinyl bromide	6.018	106	45207	18.37	ug/L	98
15) ethyl ether	6.473	74	21509	19.21	ug/L	98
16) 2-chloropropane	6.682	43	87332	19.37	ug/L	98
17) acrolein	6.656	56	7084	18.93	ug/L	89
18) freon 113	6.923	151	50746	18.83	ug/L	98
19) 1,1-dichloroethene	6.886	96	46029	18.95	ug/L	98
20) acetone	6.839	58	12406	76.73	ug/L	97
21) acetonitrile	7.216	41	61911	198.02	ug/L	99
22) iodomethane	7.137	142	74823	18.94	ug/L	98
23) carbon disulfide	7.299	76	154427	19.13	ug/L	100
24) methylene chloride	7.540	84	49371	19.50	ug/L	98
25) methyl acetate	7.294	43	26697	19.84	ug/L	97
26) methyl tert butyl ether	7.911	73	140409	19.20	ug/L	98
27) trans-1,2-dichloroethene	7.938	96	43806	19.45	ug/L	99
28) hexane	8.314	56	28357	19.44	ug/L	94
29) di-isopropyl ether	8.492	45	161831	18.97	ug/L	97
30) 2-butanone	9.099	72	14502	76.36	ug/L	96
31) 1,1-dichloroethane	8.487	63	77784	19.30	ug/L	99
32) chloroprene	8.602	53	70203	18.78	ug/L	98
33) acrylonitrile	7.781	53	12547	19.28	ug/L	99
34) vinyl acetate	8.419	86	8780	18.77	ug/L #	76
35) ethyl tert-butyl ether	8.957	59	160154	18.86	ug/L	99
36) ethyl acetate	9.135	45	5175	19.62	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263016.D
Acq On : 14 Mar 2019 8:56 pm
Operator : juntaep
Sample : ic10606-20
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 15 14:31:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	9.250	77	80584	18.92	ug/L		95
38) cis-1,2-dichloroethene	9.193	96	47260	19.08	ug/L		99
39) propionitrile	9.146	54	54301	195.61	ug/L		99
40) methyl acrylate	9.229	85	4922	17.82	ug/L	#	91
41) methacrylonitrile	9.365	67	13800	18.87	ug/L		96
42) bromochloromethane	9.486	128	22218	19.19	ug/L		97
43) tetrahydrofuran	9.528	42	10428	20.07	ug/L		98
44) chloroform	9.564	83	74487	19.14	ug/L		97
45) tert-butyl formate	9.616	59	43458	18.30	ug/L		96
47) 1,1,1-trichloroethane	9.867	97	79190	18.80	ug/L		99
48) cyclohexane	10.009	84	80514	18.63	ug/L		98
50) 1,1-dichloropropene	10.035	75	58671	19.16	ug/L		99
51) carbon tetrachloride	10.082	117	67332	18.58	ug/L		97
52) tert-amyl alcohol	10.124	73	12253	103.00	ug/L		89
53) isopropyl acetate	10.160	87	9117	19.06	ug/L	#	88
56) n-butyl alcohol	10.694	56	67202	1061.18	ug/L		94
57) 2,2,4-trimethylpentane	10.411	57	138966	17.95	ug/L		98
58) benzene	10.281	78	171763	19.44	ug/L		100
59) tert-amyl methyl ether	10.370	73	154482	19.05	ug/L		99
60) heptane	10.568	57	23377	19.56	ug/L		96
61) 1,2-dichloroethane	10.275	62	58463	19.58	ug/L		99
62) ethyl acrylate	10.987	55	43924	19.15	ug/L		98
63) trichloroethene	11.023	95	42267	19.20	ug/L		95
64) 2-chloroethyl vinyl ether	11.818	63	116853	96.88	ug/L		99
65) methyl methacrylate	11.264	100	9757	18.77	ug/L		91
66) methylcyclohexane	11.363	83	71587	18.69	ug/L		98
67) 1,2-dichloropropane	11.306	63	43257	19.42	ug/L		98
68) dibromomethane	11.416	93	25398	19.35	ug/L		97
69) bromodichloromethane	11.572	83	58058	19.29	ug/L		100
70) 2-nitropropane	11.750	41	8678	19.08	ug/L		86
71) epichlorohydrin	11.902	57	20915	97.29	ug/L		98
72) cis-1,3-dichloropropene	12.064	75	70308	19.32	ug/L		97
73) 4-methyl-2-pentanone	12.158	58	60764	77.90	ug/L		98
74) isoamyl alcohol	12.153	70	25196	382.70	ug/L	#	86
77) toluene	12.498	92	109134	19.08	ug/L		100
78) ethyl methacrylate	12.681	69	53865	19.26	ug/L		98
79) trans-1,3-dichloropropene	12.671	75	64537	19.17	ug/L		98
80) 1,1,2-trichloroethane	12.917	83	29386	19.06	ug/L		100
81) tetrachloroethene	13.131	164	35236	18.89	ug/L		98
82) 2-hexanone	13.100	58	55592	77.87	ug/L		99
83) 1,3-dichloropropane	13.115	76	63817	19.47	ug/L		99
84) butyl acetate	13.204	56	27664	19.25	ug/L		98
85) dibromochloromethane	13.398	129	41458	18.56	ug/L		98
86) 1,2-dibromoethane	13.576	107	46622	19.11	ug/L		100
87) n-butyl ether	14.104	57	201699	19.75	ug/L		99
88) chlorobenzene	14.130	112	126945	19.43	ug/L		100
89) 1,1,1,2-tetrachloroethane	14.198	131	48643	18.48	ug/L		99
90) ethylbenzene	14.208	91	217450	19.32	ug/L		99
91) m,p-xylene	14.344	106	164971	38.18	ug/L		98
92) o-xylene	14.794	91	182846	19.34	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263016.D
Acq On : 14 Mar 2019 8:56 pm
Operator : juntaep
Sample : ic10606-20
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 15 14:31:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.805	104	144967	19.37 ug/L	98
94) butyl acrylate	14.595	55	88065	18.52 ug/L	99
95) n-amyl acetate	14.831	70	36036	18.68 ug/L	99
96) isopropylbenzene	15.197	105	211704	19.15 ug/L	99
97) bromoform	15.051	173	29919	18.61 ug/L	96
98) cis-1,4-dichloro-2-butene	15.202	88	19054	18.26 ug/L	98
101) 1,1,2,2-tetrachloroethane	15.474	83	53532	20.03 ug/L	99
102) trans-1,4-dichloro-2-b...	15.516	53	14090	19.54 ug/L	95
103) 1,2,3-trichloropropane	15.574	110	15963	20.25 ug/L	92
104) bromobenzene	15.621	156	60062	19.42 ug/L	98
105) n-propylbenzene	15.668	91	241155	19.81 ug/L	100
106) 2-chlorotoluene	15.814	126	54101	19.59 ug/L	98
107) 4-chlorotoluene	15.940	91	159836	19.84 ug/L	99
108) 1,3,5-trimethylbenzene	15.845	105	183703	19.39 ug/L	100
109) tert-butylbenzene	16.233	119	140017	19.03 ug/L	100
110) 1,2,4-trimethylbenzene	16.285	105	187296	19.62 ug/L	100
111) sec-butylbenzene	16.478	105	211850	19.27 ug/L	99
112) p-isopropyltoluene	16.625	119	182246	19.16 ug/L	100
113) 1,3-dichlorobenzene	16.661	146	107774	19.53 ug/L	100
114) 1,4-dichlorobenzene	16.766	146	112020	19.69 ug/L	99
115) 1,2-dichlorobenzene	17.179	146	108986	19.31 ug/L	99
116) benzyl chloride	16.855	91	110092	18.53 ug/L	99
117) n-butylbenzene	17.085	92	87712	18.87 ug/L	96
118) 2-ethylhexyl acrylate	18.989	70	1146	1.68 ug/L	90
119) hexachloroethane	17.535	201	26470	17.70 ug/L	99
120) 1,2-dibromo-3-chloropr...	18.016	75	10320	18.31 ug/L	97
121) 1,3,5-trichlorobenzene	18.262	180	75343	18.05 ug/L	99
122) 1,2,4-trichlorobenzene	18.984	180	56255	16.43 ug/L	99
123) hexachlorobutadiene	19.135	225	33523	17.86 ug/L	99
124) naphthalene	19.324	128	120043	15.84 ug/L	99
125) 1,2,3-trichlorobenzene	19.596	180	48495	16.21 ug/L	97
126) 2-methylnaphthalene	20.746	142	9843	5.87 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

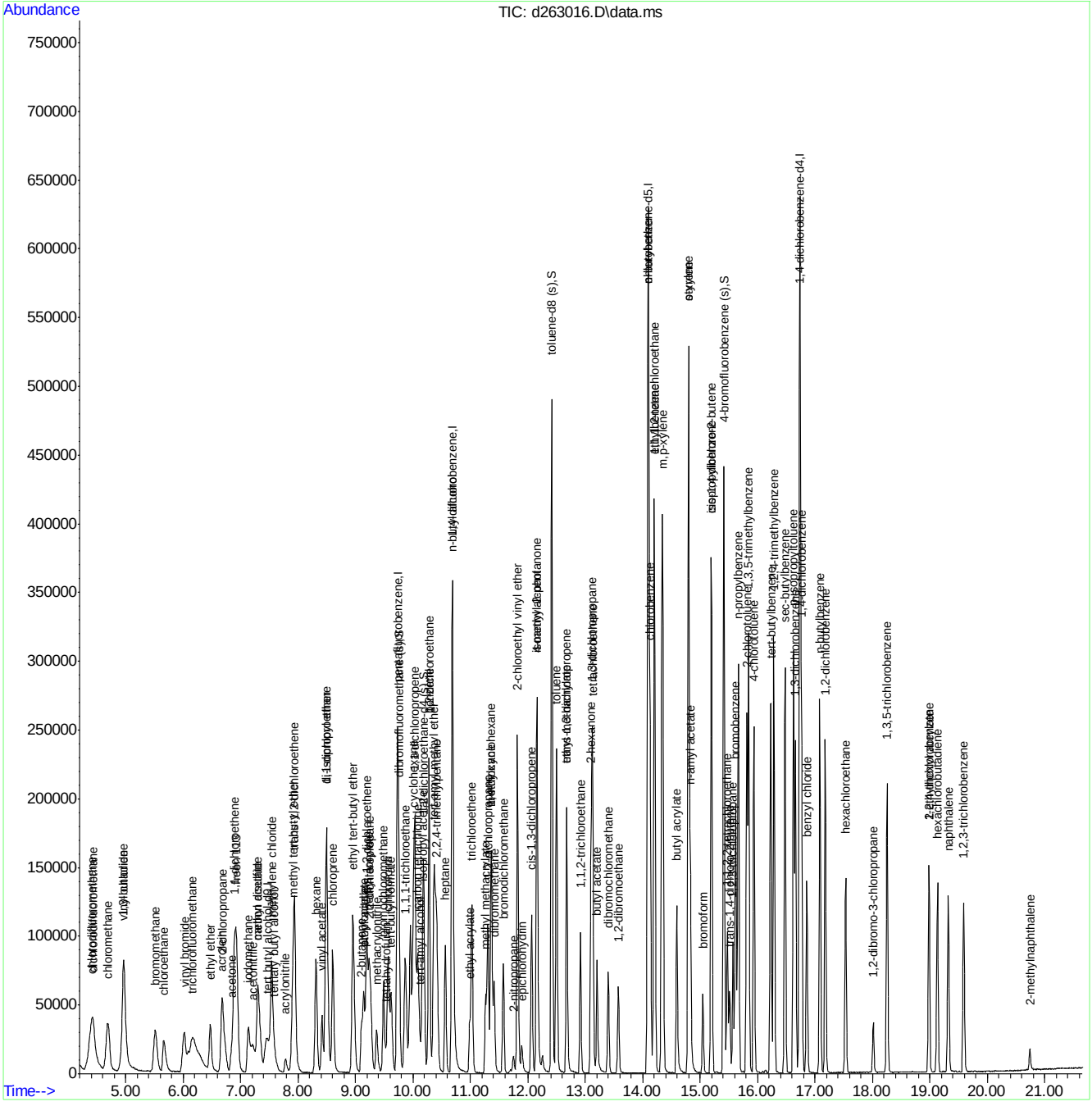
7.7.18

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263016.D
Acq On : 14 Mar 2019 8:56 pm
Operator : juntaep
Sample : ic10606-20
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 15 14:31:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263017.D
Acq On : 14 Mar 2019 9:25 pm
Operator : juntaep
Sample : icc10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 15 14:31:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.473	65	90501	500.00	ug/L	0.00
5) pentafluorobenzene	9.727	168	188744	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.684	114	284207	50.00	ug/L	0.00
75) chlorobenzene-d5	14.094	117	284451	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.740	152	179389	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.758	113	90466	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.00%			
55) 1,2-dichloroethane-d4 (s)	10.187	65	104983	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.00%			
76) toluene-d8 (s)	12.420	98	348019	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
100) 4-bromofluorobenzene (s)	15.412	95	157328	50.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.567	59	65282	250.00	ug/L	100
4) 1,4-dioxane	11.353	88	29067	1250.00	ug/L	100
6) chlorodifluoromethane	4.408	51	207572	50.00	ug/L	100
7) dichlorodifluoromethane	4.413	85	300060	50.00	ug/L	100
8) chloromethane	4.701	50	258947	50.00	ug/L	100
9) 1,3-butadiene	4.983	54	144322	50.00	ug/L	100
10) vinyl chloride	4.957	62	258723	50.00	ug/L	100
11) bromomethane	5.522	94	136695	50.00	ug/L	100
12) chloroethane	5.663	64	112499	50.00	ug/L	100
13) trichlorofluoromethane	6.144	101	235126	50.00	ug/L	100
14) vinyl bromide	6.019	106	122061	50.00	ug/L	100
15) ethyl ether	6.474	74	55533	50.00	ug/L	100
16) 2-chloropropane	6.678	43	223598	50.00	ug/L	100
17) acrolein	6.657	56	18559	50.00	ug/L	100
18) freon 113	6.923	151	133629	50.00	ug/L	100
19) 1,1-dichloroethene	6.892	96	120463	50.00	ug/L	100
20) acetone	6.840	58	32074	200.00	ug/L	100
21) acetonitrile	7.211	41	155059	500.00	ug/L	100
22) iodomethane	7.138	142	195955	50.00	ug/L	100
23) carbon disulfide	7.300	76	400394	50.00	ug/L	100
24) methylene chloride	7.535	84	125574	50.00	ug/L	100
25) methyl acetate	7.295	43	66730	50.00	ug/L	100
26) methyl tert butyl ether	7.912	73	362663	50.00	ug/L	100
27) trans-1,2-dichloroethene	7.938	96	111708	50.00	ug/L	100
28) hexane	8.309	56	72354	50.00	ug/L	100
29) di-isopropyl ether	8.498	45	423053	50.00	ug/L	100
30) 2-butanone	9.099	72	37673	200.00	ug/L	100
31) 1,1-dichloroethane	8.487	63	199916	50.00	ug/L	100
32) chloroprene	8.602	53	185416	50.00	ug/L	100
33) acrylonitrile	7.776	53	32271	50.00	ug/L	100
34) vinyl acetate	8.409	86	23201	50.00	ug/L	100
35) ethyl tert-butyl ether	8.953	59	421125	50.00	ug/L	100
36) ethyl acetate	9.136	45	13079	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263017.D
Acq On : 14 Mar 2019 9:25 pm
Operator : juntaep
Sample : icc10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 15 14:31:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.246	77	211257	50.00	ug/L	100
38) cis-1,2-dichloroethene	9.193	96	122814	50.00	ug/L	100
39) propionitrile	9.146	54	137674	500.00	ug/L	100
40) methyl acrylate	9.225	85	13695	50.00	ug/L	100
41) methacrylonitrile	9.361	67	36262	50.00	ug/L	100
42) bromochloromethane	9.486	128	57430	50.00	ug/L	100
43) tetrahydrofuran	9.523	42	25768	50.00	ug/L	100
44) chloroform	9.565	83	193035	50.00	ug/L	100
45) tert-butyl formate	9.617	59	117766	50.00	ug/L	100
47) 1,1,1-trichloroethane	9.868	97	208923	50.00	ug/L	100
48) cyclohexane	10.014	84	214335	50.00	ug/L	100
50) 1,1-dichloropropene	10.035	75	151889	50.00	ug/L	100
51) carbon tetrachloride	10.082	117	179705	50.00	ug/L	100
52) tert-amyl alcohol	10.109	73	29499	250.00	ug/L	100
53) isopropyl acetate	10.161	87	23725	50.00	ug/L	100
56) n-butyl alcohol	10.689	56	158526	2500.00	ug/L	100
57) 2,2,4-trimethylpentane	10.412	57	387529	50.00	ug/L	100
58) benzene	10.281	78	442455	50.00	ug/L	100
59) tert-amyl methyl ether	10.370	73	406026	50.00	ug/L	100
60) heptane	10.564	57	59846	50.00	ug/L	100
61) 1,2-dichloroethane	10.276	62	149467	50.00	ug/L	100
62) ethyl acrylate	10.982	55	114815	50.00	ug/L	100
63) trichloroethene	11.024	95	110212	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	11.819	63	301939	250.00	ug/L	100
65) methyl methacrylate	11.259	100	26023	50.00	ug/L	100
66) methylcyclohexane	11.364	83	191739	50.00	ug/L	100
67) 1,2-dichloropropane	11.301	63	111538	50.00	ug/L	100
68) dibromomethane	11.411	93	65711	50.00	ug/L	100
69) bromodichloromethane	11.568	83	150697	50.00	ug/L	100
70) 2-nitropropane	11.746	41	22765	50.00	ug/L	100
71) epichlorohydrin	11.897	57	53812	250.00	ug/L	100
72) cis-1,3-dichloropropene	12.065	75	182220	50.00	ug/L	100
73) 4-methyl-2-pentanone	12.159	58	156203	200.00	ug/L	100
74) isoamyl alcohol	12.148	70	65923	1000.00	ug/L	100
77) toluene	12.499	92	282548	50.00	ug/L	100
78) ethyl methacrylate	12.682	69	138118	50.00	ug/L	100
79) trans-1,3-dichloropropene	12.671	75	166298	50.00	ug/L	100
80) 1,1,2-trichloroethane	12.917	83	76145	50.00	ug/L	100
81) tetrachloroethene	13.126	164	92132	50.00	ug/L	100
82) 2-hexanone	13.095	58	141055	200.00	ug/L	100
83) 1,3-dichloropropane	13.116	76	161950	50.00	ug/L	100
84) butyl acetate	13.205	56	70993	50.00	ug/L	100
85) dibromochloromethane	13.398	129	110353	50.00	ug/L	100
86) 1,2-dibromoethane	13.576	107	120492	50.00	ug/L	100
87) n-butyl ether	14.104	57	504578	50.00	ug/L	100
88) chlorobenzene	14.131	112	322725	50.00	ug/L	100
89) 1,1,1,2-tetrachloroethane	14.199	131	130018	50.00	ug/L	100
90) ethylbenzene	14.209	91	555892	50.00	ug/L	100
91) m,p-xylene	14.345	106	426891	100.00	ug/L	100
92) o-xylene	14.795	91	466896	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263017.D
Acq On : 14 Mar 2019 9:25 pm
Operator : juntaep
Sample : icc10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 15 14:31:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

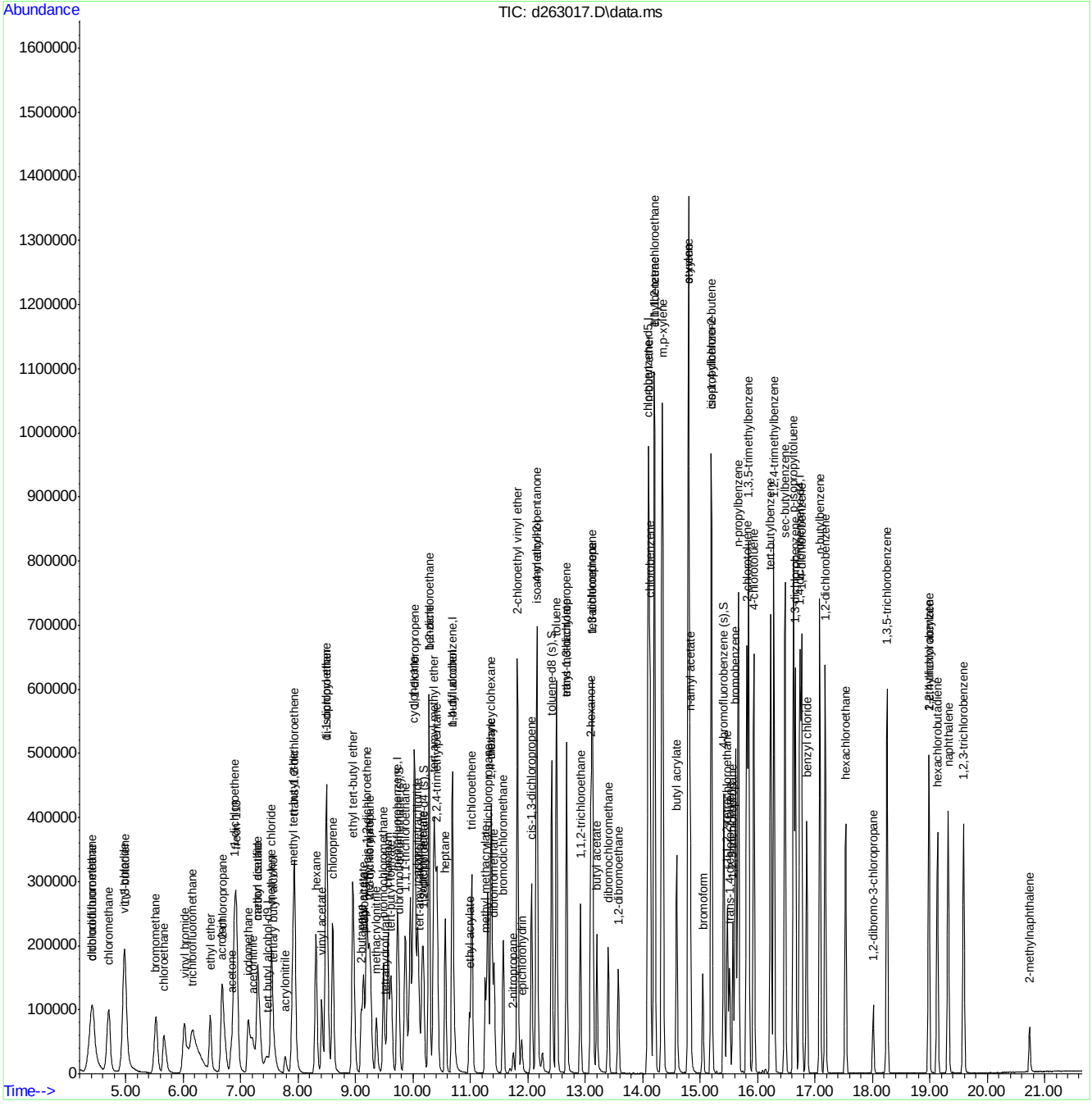
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.805	104	369612	50.00	ug/L	100
94) butyl acrylate	14.591	55	234870	50.00	ug/L	100
95) n-amyl acetate	14.831	70	95299	50.00	ug/L	100
96) isopropylbenzene	15.197	105	546136	50.00	ug/L	100
97) bromoform	15.051	173	79428	50.00	ug/L	100
98) cis-1,4-dichloro-2-butene	15.197	88	51535	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	15.475	83	134880	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	15.511	53	36392	50.00	ug/L	100
103) 1,2,3-trichloropropane	15.574	110	39797	50.00	ug/L	100
104) bromobenzene	15.621	156	156121	50.00	ug/L	100
105) n-propylbenzene	15.668	91	614411	50.00	ug/L	100
106) 2-chlorotoluene	15.815	126	139362	50.00	ug/L	100
107) 4-chlorotoluene	15.935	91	406593	50.00	ug/L	100
108) 1,3,5-trimethylbenzene	15.846	105	478121	50.00	ug/L	100
109) tert-butylbenzene	16.228	119	371419	50.00	ug/L	100
110) 1,2,4-trimethylbenzene	16.285	105	481745	50.00	ug/L	100
111) sec-butylbenzene	16.479	105	554972	50.00	ug/L	100
112) p-isopropyltoluene	16.625	119	480032	50.00	ug/L	100
113) 1,3-dichlorobenzene	16.662	146	278595	50.00	ug/L	100
114) 1,4-dichlorobenzene	16.767	146	287178	50.00	ug/L	100
115) 1,2-dichlorobenzene	17.180	146	284944	50.00	ug/L	100
116) benzyl chloride	16.855	91	299845	50.00	ug/L	100
117) n-butylbenzene	17.086	92	234621	50.00	ug/L	100
118) 2-ethylhexyl acrylate	18.984	70	6867	10.00	ug/L	100
119) hexachloroethane	17.535	201	75488	50.00	ug/L	100
120) 1,2-dibromo-3-chloropr...	18.017	75	28456	50.00	ug/L	100
121) 1,3,5-trichlorobenzene	18.257	180	210667	50.00	ug/L	100
122) 1,2,4-trichlorobenzene	18.984	180	172844	50.00	ug/L	100
123) hexachlorobutadiene	19.136	225	94727	50.00	ug/L	100
124) naphthalene	19.324	128	382609	50.00	ug/L	100
125) 1,2,3-trichlorobenzene	19.591	180	151005	50.00	ug/L	100
126) 2-methylnaphthalene	20.741	142	42331	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263017.D
Acq On : 14 Mar 2019 9:25 pm
Operator : juntaep
Sample : icc10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 15 14:31:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263018.D
Acq On : 14 Mar 2019 9:54 pm
Operator : juntaep
Sample : ic10606-100
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 15 14:31:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.457	65	93777	500.00	ug/L	-0.02
5) pentafluorobenzene	9.727	168	198721	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.684	114	292304	50.00	ug/L	0.00
75) chlorobenzene-d5	14.094	117	288098	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.736	152	186790	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.753	113	93474	49.07	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.14%			
55) 1,2-dichloroethane-d4 (s)	10.182	65	109003	50.48	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.96%			
76) toluene-d8 (s)	12.421	98	358480	50.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.70%			
100) 4-bromofluorobenzene (s)	15.412	95	161900	49.41	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.82%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	132209	488.61	ug/L	98
4) 1,4-dioxane	11.354	88	58603	2432.13	ug/L	96
6) chlorodifluoromethane	4.403	51	407279	93.18	ug/L	99
7) dichlorodifluoromethane	4.413	85	583349	92.33	ug/L	98
8) chloromethane	4.706	50	513703	94.21	ug/L	99
9) 1,3-butadiene	4.989	54	298423	98.20	ug/L	97
10) vinyl chloride	4.963	62	489722	89.89	ug/L	99
11) bromomethane	5.527	94	267073	92.78	ug/L	96
12) chloroethane	5.663	64	223903	94.52	ug/L	98
13) trichlorofluoromethane	6.145	101	456892	92.28	ug/L	100
14) vinyl bromide	6.019	106	237435	92.38	ug/L	99
15) ethyl ether	6.469	74	113343	96.93	ug/L	92
16) 2-chloropropane	6.678	43	450567	95.70	ug/L	98
17) acrolein	6.652	56	37323	95.50	ug/L	91
18) freon 113	6.924	151	269822	95.89	ug/L	98
19) 1,1-dichloroethene	6.887	96	244770	96.49	ug/L	98
20) acetone	6.835	58	66249	392.36	ug/L	97
21) acetonitrile	7.206	41	311918	955.31	ug/L	99
22) iodomethane	7.138	142	396956	96.20	ug/L	99
23) carbon disulfide	7.300	76	796578	94.48	ug/L	100
24) methylene chloride	7.536	84	253898	96.02	ug/L	99
25) methyl acetate	7.295	43	137937	98.17	ug/L	97
26) methyl tert butyl ether	7.907	73	726433	95.12	ug/L	100
27) trans-1,2-dichloroethene	7.938	96	224864	95.59	ug/L	99
28) hexane	8.310	56	145245	95.33	ug/L	98
29) di-isopropyl ether	8.498	45	844922	94.85	ug/L	100
30) 2-butanone	9.100	72	80277	404.78	ug/L	98
31) 1,1-dichloroethane	8.488	63	398037	94.55	ug/L	99
32) chloroprene	8.603	53	370706	94.95	ug/L	98
33) acrylonitrile	7.771	53	65568	96.49	ug/L	97
34) vinyl acetate	8.409	86	46859	95.91	ug/L	97
35) ethyl tert-butyl ether	8.953	59	849532	95.80	ug/L	99
36) ethyl acetate	9.131	45	26884	97.62	ug/L #	81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263018.D
Acq On : 14 Mar 2019 9:54 pm
Operator : juntaep
Sample : ic10606-100
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 15 14:31:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	9.251	77	414070	93.08	ug/L		99
38) cis-1,2-dichloroethene	9.188	96	244462	94.53	ug/L		98
39) propionitrile	9.141	54	279202	963.09	ug/L		99
40) methyl acrylate	9.220	85	27938	96.88	ug/L	#	90
41) methacrylonitrile	9.361	67	75802	99.27	ug/L		92
42) bromochloromethane	9.487	128	116247	96.13	ug/L		96
43) tetrahydrofuran	9.523	42	53653	98.88	ug/L		99
44) chloroform	9.565	83	387364	95.30	ug/L		98
45) tert-butyl formate	9.617	59	242535	97.80	ug/L		100
47) 1,1,1-trichloroethane	9.868	97	415885	94.53	ug/L		98
48) cyclohexane	10.015	84	425513	94.28	ug/L		99
50) 1,1-dichloropropene	10.036	75	305047	95.38	ug/L		100
51) carbon tetrachloride	10.083	117	366398	96.83	ug/L		99
52) tert-amyl alcohol	10.114	73	60611	487.88	ug/L		94
53) isopropyl acetate	10.161	87	50797	101.68	ug/L		99
56) n-butyl alcohol	10.690	56	316259	4849.34	ug/L		97
57) 2,2,4-trimethylpentane	10.418	57	811279	101.77	ug/L		98
58) benzene	10.282	78	889446	97.73	ug/L		100
59) tert-amyl methyl ether	10.370	73	826493	98.96	ug/L		99
60) heptane	10.564	57	120620	97.98	ug/L		99
61) 1,2-dichloroethane	10.276	62	300945	97.88	ug/L		99
62) ethyl acrylate	10.977	55	237046	100.37	ug/L		99
63) trichloroethene	11.024	95	219819	96.96	ug/L		96
64) 2-chloroethyl vinyl ether	11.819	63	621859	500.63	ug/L		99
65) methyl methacrylate	11.260	100	53764	100.44	ug/L		93
66) methylcyclohexane	11.364	83	389715	98.81	ug/L		99
67) 1,2-dichloropropane	11.301	63	223895	97.59	ug/L		99
68) dibromomethane	11.411	93	133946	99.10	ug/L		98
69) bromodichloromethane	11.568	83	304671	98.29	ug/L		100
70) 2-nitropropane	11.746	41	46475	99.25	ug/L		94
71) epichlorohydrin	11.898	57	110026	497.00	ug/L		98
72) cis-1,3-dichloropropene	12.065	75	367319	98.00	ug/L		99
73) 4-methyl-2-pentanone	12.159	58	320070	398.46	ug/L		95
74) isoamyl alcohol	12.149	70	135037	1991.66	ug/L		96
77) toluene	12.499	92	562317	98.25	ug/L		99
78) ethyl methacrylate	12.677	69	285698	102.12	ug/L		99
79) trans-1,3-dichloropropene	12.672	75	334689	99.36	ug/L		98
80) 1,1,2-trichloroethane	12.918	83	152264	98.72	ug/L		99
81) tetrachloroethene	13.127	164	186089	99.71	ug/L		99
82) 2-hexanone	13.095	58	291474	408.05	ug/L		99
83) 1,3-dichloropropane	13.116	76	324671	98.97	ug/L		96
84) butyl acetate	13.200	56	146863	102.13	ug/L		97
85) dibromochloromethane	13.399	129	226469	101.31	ug/L		98
86) 1,2-dibromoethane	13.577	107	242021	99.16	ug/L		99
87) n-butyl ether	14.105	57	984591	96.33	ug/L		100
88) chlorobenzene	14.131	112	633838	96.96	ug/L		99
89) 1,1,1,2-tetrachloroethane	14.199	131	264540	100.44	ug/L		100
90) ethylbenzene	14.204	91	1094782	97.22	ug/L		99
91) m,p-xylene	14.345	106	848749	196.30	ug/L		98
92) o-xylene	14.795	91	924543	97.76	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263018.D
Acq On : 14 Mar 2019 9:54 pm
Operator : juntaep
Sample : ic10606-100
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 15 14:31:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

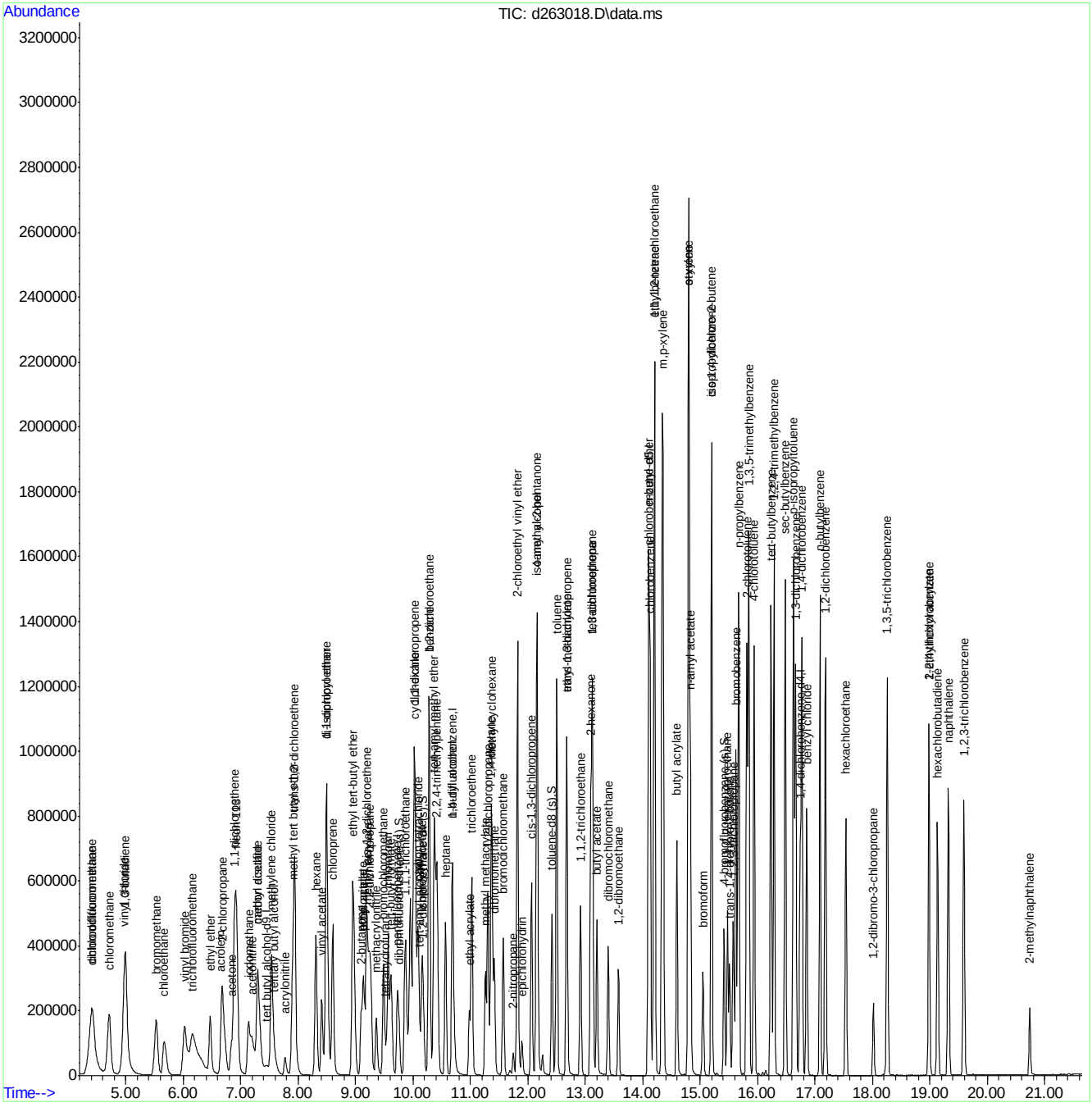
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.806	104	737899	98.56	ug/L	99
94) butyl acrylate	14.591	55	483550	101.64	ug/L	100
95) n-amyl acetate	14.832	70	205074	106.23	ug/L	96
96) isopropylbenzene	15.198	105	1076313	97.29	ug/L	100
97) bromoform	15.046	173	164783	102.42	ug/L	99
98) cis-1,4-dichloro-2-butene	15.198	88	106451	101.97	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.475	83	265632	94.57	ug/L	100
102) trans-1,4-dichloro-2-b...	15.512	53	74218	97.93	ug/L	98
103) 1,2,3-trichloropropane	15.574	110	80083	96.63	ug/L	93
104) bromobenzene	15.622	156	311606	95.84	ug/L	97
105) n-propylbenzene	15.669	91	1204175	94.11	ug/L	98
106) 2-chlorotoluene	15.815	126	276310	95.21	ug/L	96
107) 4-chlorotoluene	15.935	91	808760	95.52	ug/L	98
108) 1,3,5-trimethylbenzene	15.846	105	948712	95.28	ug/L	99
109) tert-butylbenzene	16.228	119	751090	97.10	ug/L	99
110) 1,2,4-trimethylbenzene	16.286	105	957940	95.48	ug/L	100
111) sec-butylbenzene	16.479	105	1099455	95.13	ug/L	99
112) p-isopropyltoluene	16.626	119	951198	95.15	ug/L	99
113) 1,3-dichlorobenzene	16.662	146	562767	97.00	ug/L	99
114) 1,4-dichlorobenzene	16.767	146	581486	97.23	ug/L	100
115) 1,2-dichlorobenzene	17.180	146	571419	96.30	ug/L	99
116) benzyl chloride	16.856	91	619198	99.16	ug/L	99
117) n-butylbenzene	17.086	92	468310	95.85	ug/L	99
118) 2-ethylhexyl acrylate	18.984	70	22959	32.11	ug/L	81
119) hexachloroethane	17.536	201	159035	101.16	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.012	75	58477	98.68	ug/L	98
121) 1,3,5-trichlorobenzene	18.258	180	431501	98.36	ug/L	99
122) 1,2,4-trichlorobenzene	18.984	180	368847	102.47	ug/L	98
123) hexachlorobutadiene	19.136	225	195059	98.88	ug/L	99
124) naphthalene	19.324	128	837271	105.08	ug/L	100
125) 1,2,3-trichlorobenzene	19.591	180	326441	103.81	ug/L	100
126) 2-methylnaphthalene	20.737	142	115812	65.69	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263018.D
Acq On : 14 Mar 2019 9:54 pm
Operator : juntaep
Sample : ic10606-100
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 15 14:31:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263019.D
Acq On : 14 Mar 2019 10:23 pm
Operator : juntaep
Sample : ic10606-200
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 15 14:31:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.479	65	91305	500.00	ug/L	0.00
5) pentafluorobenzene	9.728	168	200374	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.685	114	293222	50.00	ug/L	0.00
75) chlorobenzene-d5	14.096	117	290041	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.737	152	199160	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.755	113	93257	48.55	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.10%			
55) 1,2-dichloroethane-d4 (s)	10.183	65	109009	50.32	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.64%			
76) toluene-d8 (s)	12.417	98	358552	50.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.04%			
100) 4-bromofluorobenzene (s)	15.414	95	165668	47.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.584	59	255750	970.78	ug/L	96
4) 1,4-dioxane	11.355	88	113142	4822.72	ug/L	97
6) chlorodifluoromethane	4.409	51	806016	182.88	ug/L	99
7) dichlorodifluoromethane	4.409	85	1130589	177.46	ug/L	100
8) chloromethane	4.723	50	1020835	185.67	ug/L	100
9) 1,3-butadiene	5.000	54	606943	198.07	ug/L	99
10) vinyl chloride	4.979	62	954155	173.69	ug/L	100
11) bromomethane	5.534	94	529162	182.32	ug/L	97
12) chloroethane	5.680	64	463245	193.94	ug/L	98
13) trichlorofluoromethane	6.146	101	920053	184.30	ug/L	98
14) vinyl bromide	6.025	106	484869	187.09	ug/L	99
15) ethyl ether	6.470	74	221451	187.81	ug/L	96
16) 2-chloropropane	6.679	43	896468	188.83	ug/L	99
17) acrolein	6.653	56	74009	187.82	ug/L	95
18) freon 113	6.930	151	552363	194.68	ug/L	98
19) 1,1-dichloroethene	6.894	96	503342	196.79	ug/L	99
20) acetone	6.836	58	129487	760.56	ug/L	96
21) acetonitrile	7.207	41	602832	1831.05	ug/L	98
22) iodomethane	7.134	142	821140	197.36	ug/L	100
23) carbon disulfide	7.302	76	1604701	188.76	ug/L	99
24) methylene chloride	7.537	84	507317	190.27	ug/L	98
25) methyl acetate	7.291	43	265475	187.37	ug/L	97
26) methyl tert butyl ether	7.908	73	1430121	185.73	ug/L	99
27) trans-1,2-dichloroethene	7.934	96	442870	186.72	ug/L	99
28) hexane	8.306	56	284134	184.95	ug/L	99
29) di-isopropyl ether	8.494	45	1681862	187.24	ug/L	100
30) 2-butanone	9.101	72	150314	751.68	ug/L	99
31) 1,1-dichloroethane	8.484	63	773145	182.14	ug/L	100
32) chloroprene	8.599	53	723073	183.67	ug/L	97
33) acrylonitrile	7.772	53	127080	185.47	ug/L	96
34) vinyl acetate	8.405	86	90552	183.82	ug/L	96
35) ethyl tert-butyl ether	8.954	59	1675688	187.41	ug/L	99
36) ethyl acetate	9.132	45	51240	184.52	ug/L #	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263019.D
Acq On : 14 Mar 2019 10:23 pm
Operator : juntaep
Sample : ic10606-200
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 15 14:31:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	9.258	77	823434	183.58	ug/L		96
38) cis-1,2-dichloroethene	9.190	96	484391	185.76	ug/L		97
39) propionitrile	9.143	54	537197	1837.74	ug/L		100
40) methyl acrylate	9.216	85	54344	186.89	ug/L	#	87
41) methacrylonitrile	9.362	67	148273	192.58	ug/L		99
42) bromochloromethane	9.483	128	230411	188.96	ug/L		96
43) tetrahydrofuran	9.524	42	102100	186.62	ug/L		99
44) chloroform	9.566	83	765873	186.86	ug/L		98
45) tert-butyl formate	9.619	59	490118	196.01	ug/L		99
47) 1,1,1-trichloroethane	9.870	97	838471	189.02	ug/L		99
48) cyclohexane	10.016	84	871448	191.49	ug/L		100
50) 1,1-dichloropropene	10.032	75	601169	186.41	ug/L		99
51) carbon tetrachloride	10.084	117	750915	196.80	ug/L		99
52) tert-amyl alcohol	10.115	73	121593	970.67	ug/L		93
53) isopropyl acetate	10.162	87	101145	200.79	ug/L	#	87
56) n-butyl alcohol	10.691	56	597720	9136.41	ug/L		98
57) 2,2,4-trimethylpentane	10.419	57	1685978	210.84	ug/L		98
58) benzene	10.278	78	1743492	190.97	ug/L		99
59) tert-amyl methyl ether	10.372	73	1653002	197.30	ug/L		99
60) heptane	10.565	57	236498	191.51	ug/L		98
61) 1,2-dichloroethane	10.278	62	586068	190.03	ug/L		99
62) ethyl acrylate	10.978	55	452347	190.93	ug/L		99
63) trichloroethene	11.020	95	435778	191.62	ug/L		97
64) 2-chloroethyl vinyl ether	11.820	63	1199924	962.97	ug/L		98
65) methyl methacrylate	11.261	100	106178	197.74	ug/L		90
66) methylcyclohexane	11.365	83	787150	198.96	ug/L		99
67) 1,2-dichloropropane	11.303	63	440876	191.56	ug/L		99
68) dibromomethane	11.412	93	260886	192.41	ug/L		97
69) bromodichloromethane	11.569	83	604155	194.29	ug/L		100
70) 2-nitropropane	11.747	41	91729	195.28	ug/L		94
71) epichlorohydrin	11.894	57	209581	943.74	ug/L		98
72) cis-1,3-dichloropropene	12.061	75	721102	191.78	ug/L		99
73) 4-methyl-2-pentanone	12.160	58	620652	770.24	ug/L		91
74) isoamyl alcohol	12.145	70	254895	3747.68	ug/L		90
77) toluene	12.500	92	1107312	192.17	ug/L		96
78) ethyl methacrylate	12.678	69	555571	197.25	ug/L		100
79) trans-1,3-dichloropropene	12.673	75	654585	193.02	ug/L		99
80) 1,1,2-trichloroethane	12.914	83	299401	192.81	ug/L		99
81) tetrachloroethene	13.128	164	370346	197.11	ug/L		99
82) 2-hexanone	13.091	58	558889	777.17	ug/L		99
83) 1,3-dichloropropane	13.117	76	632809	191.61	ug/L		95
84) butyl acetate	13.201	56	288676	199.39	ug/L		96
85) dibromochloromethane	13.400	129	451815	200.77	ug/L		99
86) 1,2-dibromoethane	13.578	107	475111	193.35	ug/L		99
87) n-butyl ether	14.106	57	1884525	183.14	ug/L		99
88) chlorobenzene	14.127	112	1261211	191.63	ug/L		97
89) 1,1,1,2-tetrachloroethane	14.200	131	538014	202.91	ug/L		99
90) ethylbenzene	14.205	91	2156736	190.25	ug/L		97
91) m,p-xylene	14.347	106	1696395	389.72	ug/L		95
92) o-xylene	14.796	91	1825847	191.76	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263019.D
Acq On : 14 Mar 2019 10:23 pm
Operator : juntaep
Sample : ic10606-200
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 15 14:31:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration

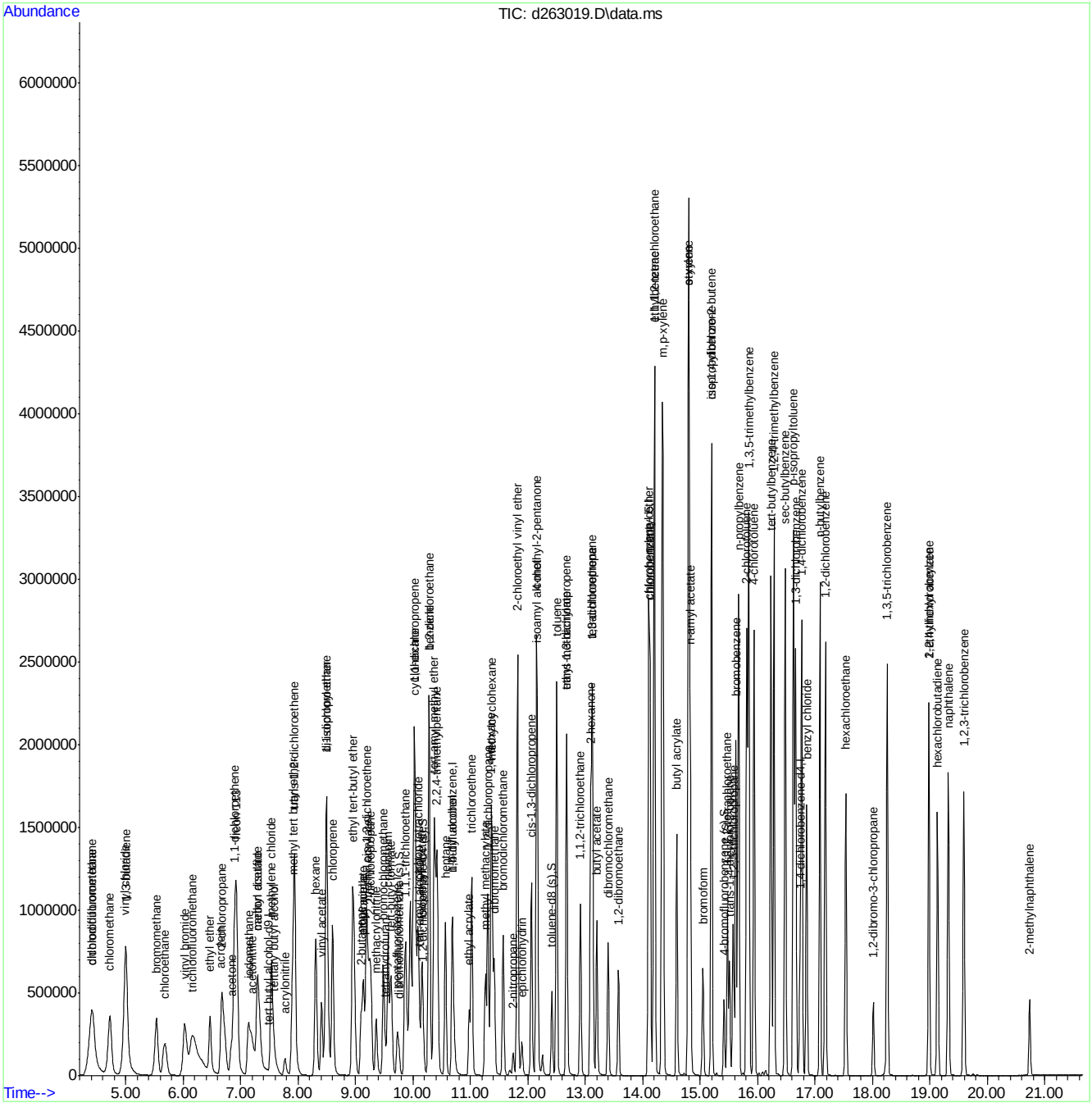
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.802	104	1454068	192.91	ug/L	95
94) butyl acrylate	14.592	55	968336	202.17	ug/L	99
95) n-amyl acetate	14.828	70	418800	215.49	ug/L	98
96) isopropylbenzene	15.199	105	2140541	192.19	ug/L	97
97) bromoform	15.047	173	334380	206.44	ug/L	100
98) cis-1,4-dichloro-2-butene	15.199	88	214028	203.65	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.476	83	523011	174.63	ug/L	99
102) trans-1,4-dichloro-2-b...	15.513	53	148335	183.57	ug/L	97
103) 1,2,3-trichloropropane	15.576	110	158437	179.30	ug/L	87
104) bromobenzene	15.623	156	637295	183.84	ug/L	97
105) n-propylbenzene	15.670	91	2389737	175.17	ug/L	96
106) 2-chlorotoluene	15.811	126	571634	184.73	ug/L	95
107) 4-chlorotoluene	15.937	91	1646666	182.39	ug/L	97
108) 1,3,5-trimethylbenzene	15.848	105	1935386	182.30	ug/L	97
109) tert-butylbenzene	16.229	119	1547293	187.62	ug/L	98
110) 1,2,4-trimethylbenzene	16.287	105	1942436	181.59	ug/L	97
111) sec-butylbenzene	16.480	105	2211043	179.43	ug/L	96
112) p-isopropyltoluene	16.627	119	1946117	182.58	ug/L	98
113) 1,3-dichlorobenzene	16.664	146	1168203	188.85	ug/L	99
114) 1,4-dichlorobenzene	16.768	146	1200195	188.22	ug/L	99
115) 1,2-dichlorobenzene	17.181	146	1168801	184.73	ug/L	98
116) benzyl chloride	16.857	91	1253689	188.30	ug/L	98
117) n-butylbenzene	17.087	92	968277	185.86	ug/L	97
118) 2-ethylhexyl acrylate	18.980	70	65576	86.01	ug/L	80
119) hexachloroethane	17.537	201	347214	207.15	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.013	75	117088	185.31	ug/L	98
121) 1,3,5-trichlorobenzene	18.259	180	880795	188.30	ug/L	100
122) 1,2,4-trichlorobenzene	18.986	180	755373	196.82	ug/L	98
123) hexachlorobutadiene	19.132	225	399415	189.90	ug/L	99
124) naphthalene	19.320	128	1686059	198.46	ug/L	99
125) 1,2,3-trichlorobenzene	19.592	180	669779	199.76	ug/L	99
126) 2-methylnaphthalene	20.738	142	262936	139.87	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263019.D
Acq On : 14 Mar 2019 10:23 pm
Operator : juntaep
Sample : ic10606-200
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 15 14:31:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:05:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263022.D
Acq On : 14 Mar 2019 11:49 pm
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 15 14:34:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 14:33:32 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.473	65	94030	500.00	ug/L		0.00
5) pentafluorobenzene	9.727	168	203543	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.684	114	301725	50.00	ug/L		0.00
75) chlorobenzene-d5	14.094	117	298120	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.735	152	190044	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.758	113	95211	49.58	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.16%				
55) 1,2-dichloroethane-d4 (s)	10.187	65	109047	48.21	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.42%				
76) toluene-d8 (s)	12.420	98	369681	50.85	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.70%				
100) 4-bromofluorobenzene (s)	15.412	95	166448	47.27	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.54%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.577	59	65894	264.33	ug/L		98
4) 1,4-dioxane	11.359	88	31213	1373.36	ug/L		95
6) chlorodifluoromethane	4.413	51	191561	44.61	ug/L		98
7) dichlorodifluoromethane	4.424	85	255834	43.29	ug/L		100
8) chloromethane	4.701	50	223274	45.12	ug/L		99
9) 1,3-butadiene	4.983	54	148778	54.28	ug/L		96
10) vinyl chloride	4.957	62	228226	45.33	ug/L		100
11) bromomethane	5.532	94	126806	48.90	ug/L		99
12) chloroethane	5.663	64	105444	47.81	ug/L		99
13) trichlorofluoromethane	6.155	101	222248	49.01	ug/L		98
14) vinyl bromide	6.024	106	113896	49.24	ug/L		99
15) ethyl ether	6.474	74	57124	50.90	ug/L		96
16) 2-chloropropane	6.678	43	215514	44.52	ug/L		98
17) acrolein	6.662	56	20324	54.56	ug/L		98
18) freon 113	6.929	151	136460	51.27	ug/L		98
19) 1,1-dichloroethene	6.892	96	111482	44.42	ug/L		98
20) acetone	6.845	58	33996	215.48	ug/L		96
22) iodomethane	7.138	142	218998	55.48	ug/L		98
23) carbon disulfide	7.300	76	486772	59.49	ug/L		99
24) methylene chloride	7.541	84	126090	47.80	ug/L		99
25) methyl acetate	7.295	43	70895	50.76	ug/L		98
26) methyl tert butyl ether	7.912	73	746919	97.95	ug/L		99
27) trans-1,2-dichloroethene	7.938	96	109576	47.61	ug/L		98
28) hexane	8.315	56	61148	41.29	ug/L		99
29) di-isopropyl ether	8.498	45	406667	46.64	ug/L		100
30) 2-butanone	9.105	72	40737	218.42	ug/L		97
31) 1,1-dichloroethane	8.487	63	196778	48.03	ug/L		98
32) chloroprene	8.602	53	186540	50.98	ug/L		98
33) acrylonitrile	7.776	53	33052	51.43	ug/L		96
34) vinyl acetate	8.409	86	22011	49.01	ug/L		97
35) ethyl tert-butyl ether	8.958	59	416090	48.37	ug/L		99
36) ethyl acetate	9.131	45	14933	56.86	ug/L	#	58
37) 2,2-dichloropropane	9.251	77	200120	45.53	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263022.D
Acq On : 14 Mar 2019 11:49 pm
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 15 14:34:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 14:33:32 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) cis-1,2-dichloroethene	9.193	96	124268	49.35	ug/L		98
39) propionitrile	9.146	54	145574	519.13	ug/L		95
40) methyl acrylate	9.220	85	13887	50.30	ug/L	#	88
41) methacrylonitrile	9.361	67	37804	51.45	ug/L		98
42) bromochloromethane	9.486	128	59245	52.14	ug/L		97
43) tetrahydrofuran	9.528	42	27254	49.84	ug/L		96
44) chloroform	9.570	83	193041	46.64	ug/L		98
45) tert-butyl formate	9.622	59	100663	43.13	ug/L		98
47) 1,1,1-trichloroethane	9.868	97	200658	47.26	ug/L		99
48) cyclohexane	10.015	84	206243	48.30	ug/L		99
50) 1,1-dichloropropene	10.035	75	151017	48.16	ug/L		99
51) carbon tetrachloride	10.083	117	175674	48.47	ug/L		98
52) tert-amyl alcohol	10.119	73	33134	257.92	ug/L		96
53) isopropyl acetate	10.161	87	23840	48.98	ug/L		96
56) n-butyl alcohol	10.694	56	163392	2242.03	ug/L		99
57) 2,2,4-trimethylpentane	10.412	57	361116	48.28	ug/L		99
58) benzene	10.281	78	445504	48.63	ug/L		99
59) tert-amyl methyl ether	10.370	73	393227	47.04	ug/L		100
60) heptane	10.564	57	62733	51.25	ug/L		98
61) 1,2-dichloroethane	10.276	62	152865	47.45	ug/L		98
62) ethyl acrylate	10.982	55	123699	52.47	ug/L		99
63) trichloroethene	11.024	95	111069	48.80	ug/L		99
64) 2-chloroethyl vinyl ether	11.819	63	321022	269.01	ug/L		99
65) methyl methacrylate	11.259	100	29092	56.46	ug/L		95
66) methylcyclohexane	11.369	83	181476	46.73	ug/L		97
67) 1,2-dichloropropane	11.301	63	114309	50.27	ug/L		100
68) dibromomethane	11.411	93	69724	53.04	ug/L		99
69) bromodichloromethane	11.573	83	152573	50.05	ug/L		98
70) 2-nitropropane	11.751	41	24952	52.48	ug/L		99
71) epichlorohydrin	11.897	57	57341	260.94	ug/L		98
72) cis-1,3-dichloropropene	12.065	75	187031	50.95	ug/L		99
73) 4-methyl-2-pentanone	12.159	58	164911	207.85	ug/L		99
74) isoamyl alcohol	12.148	70	68594	1103.40	ug/L		99
77) toluene	12.499	92	287995	50.50	ug/L		99
78) ethyl methacrylate	12.682	69	139716	51.73	ug/L		99
79) trans-1,3-dichloropropene	12.671	75	165262	49.88	ug/L		97
80) 1,1,2-trichloroethane	12.917	83	78409	51.57	ug/L		98
82) 2-hexanone	13.095	58	148451	215.89	ug/L		98
83) 1,3-dichloropropane	13.116	76	171158	52.28	ug/L		98
84) butyl acetate	13.205	56	73312	52.36	ug/L		98
85) dibromochloromethane	13.398	129	117730	54.96	ug/L		99
86) 1,2-dibromoethane	13.576	107	124852	52.82	ug/L		98
87) n-butyl ether	14.105	57	525666	50.58	ug/L		99
88) chlorobenzene	14.131	112	328973	49.82	ug/L		99
89) 1,1,1,2-tetrachloroethane	14.199	131	135682	53.48	ug/L		99
90) ethylbenzene	14.209	91	569165	50.36	ug/L		100
91) m,p-xylene	14.345	106	436110	101.28	ug/L		99
92) o-xylene	14.795	91	478588	50.59	ug/L		100
93) styrene	14.805	104	387457	52.82	ug/L		98
94) butyl acrylate	14.591	55	246552	55.60	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263022.D
Acq On : 14 Mar 2019 11:49 pm
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 15 14:34:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 14:33:32 2019
Response via : Initial Calibration

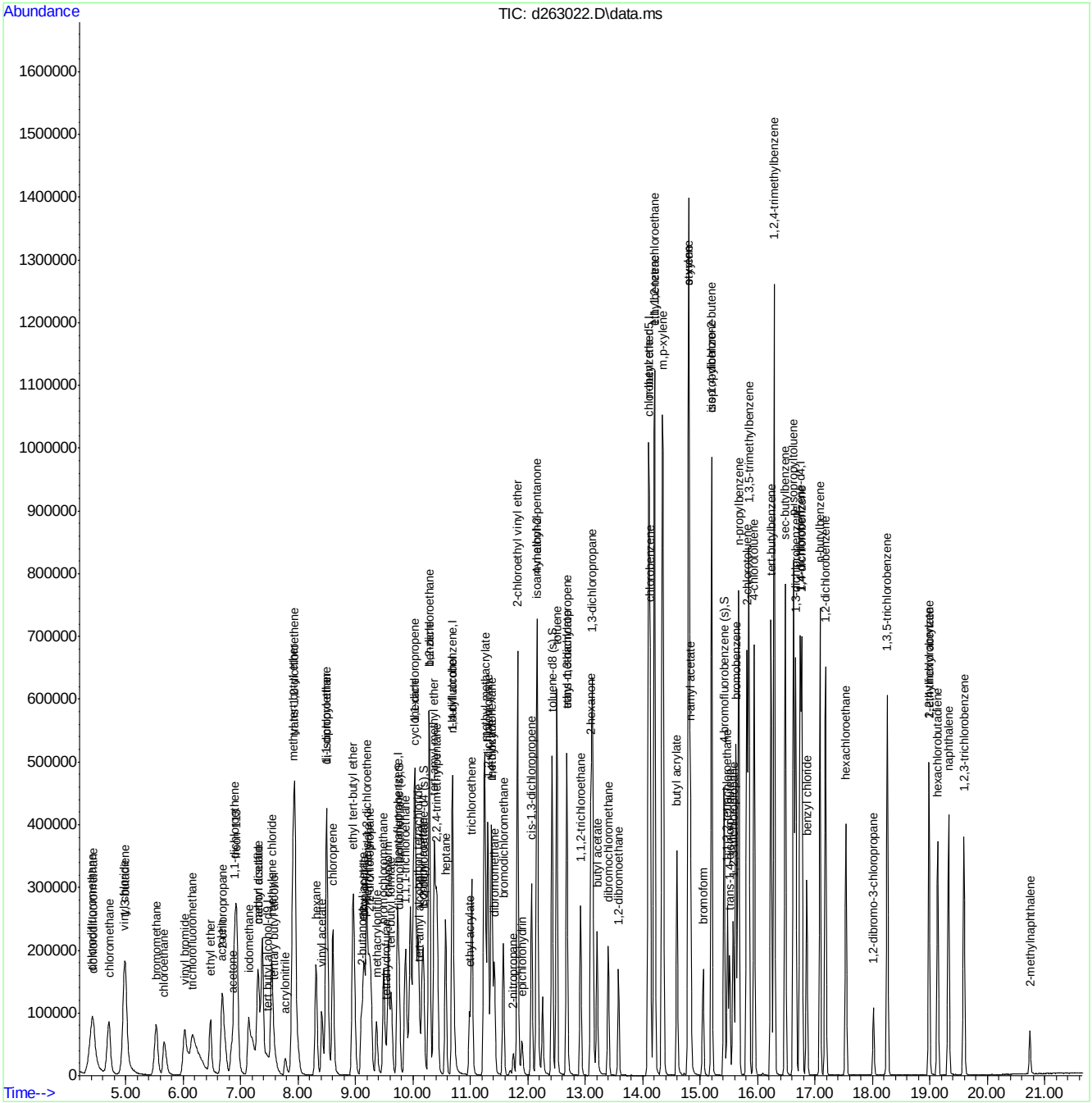
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) n-amyl acetate	14.832	70	93566	49.84	ug/L	99
96) isopropylbenzene	15.198	105	556849	50.44	ug/L	100
97) bromoform	15.051	173	87668	56.79	ug/L	99
98) cis-1,4-dichloro-2-butene	15.203	88	52444	51.18	ug/L	92
101) 1,1,2,2-tetrachloroethane	15.475	83	138830	47.27	ug/L	99
102) trans-1,4-dichloro-2-b...	15.511	53	42994	58.48	ug/L	99
103) 1,2,3-trichloropropane	15.574	110	41806	49.38	ug/L	91
104) bromobenzene	15.621	156	163193	48.99	ug/L	98
105) n-propylbenzene	15.668	91	628198	47.73	ug/L	100
106) 2-chlorotoluene	15.815	126	142016	48.15	ug/L	97
107) 4-chlorotoluene	15.935	91	430848	49.59	ug/L	98
108) 1,3,5-trimethylbenzene	15.846	105	482334	47.95	ug/L	99
109) tert-butylbenzene	16.228	119	376662	48.28	ug/L	99
110) 1,2,4-trimethylbenzene	16.285	105	506357	50.49	ug/L	100
111) sec-butylbenzene	16.479	105	566485	49.29	ug/L	100
112) p-isopropyltoluene	16.625	119	491230	51.35	ug/L	100
113) 1,3-dichlorobenzene	16.662	146	292903	50.34	ug/L	99
114) 1,4-dichlorobenzene	16.767	146	301869	50.02	ug/L	100
115) 1,2-dichlorobenzene	17.180	146	291208	49.94	ug/L	99
116) benzyl chloride	16.856	91	240569	42.48	ug/L	99
117) n-butylbenzene	17.086	92	237076	53.06	ug/L	99
118) 2-ethylhexyl acrylate	18.984	70	7389	7.85	ug/L	95
119) hexachloroethane	17.535	201	77707	52.32	ug/L	97
120) 1,2-dibromo-3-chloropr...	18.017	75	28101	53.39	ug/L	99
121) 1,3,5-trichlorobenzene	18.257	180	214748	54.74	ug/L	99
122) 1,2,4-trichlorobenzene	18.984	180	173152	48.67	ug/L	100
123) hexachlorobutadiene	19.136	225	94106	52.63	ug/L	99
124) naphthalene	19.324	128	388539	49.04	ug/L	100
125) 1,2,3-trichlorobenzene	19.591	180	149079	47.61	ug/L	99
126) 2-methylnaphthalene	20.742	142	40206	23.68	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263022.D
Acq On : 14 Mar 2019 11:49 pm
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 15 14:34:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 14:33:32 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263023.D
Acq On : 15 Mar 2019 12:18 am
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 15 14:35:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:17:57 2019
Response via : Initial Calibration

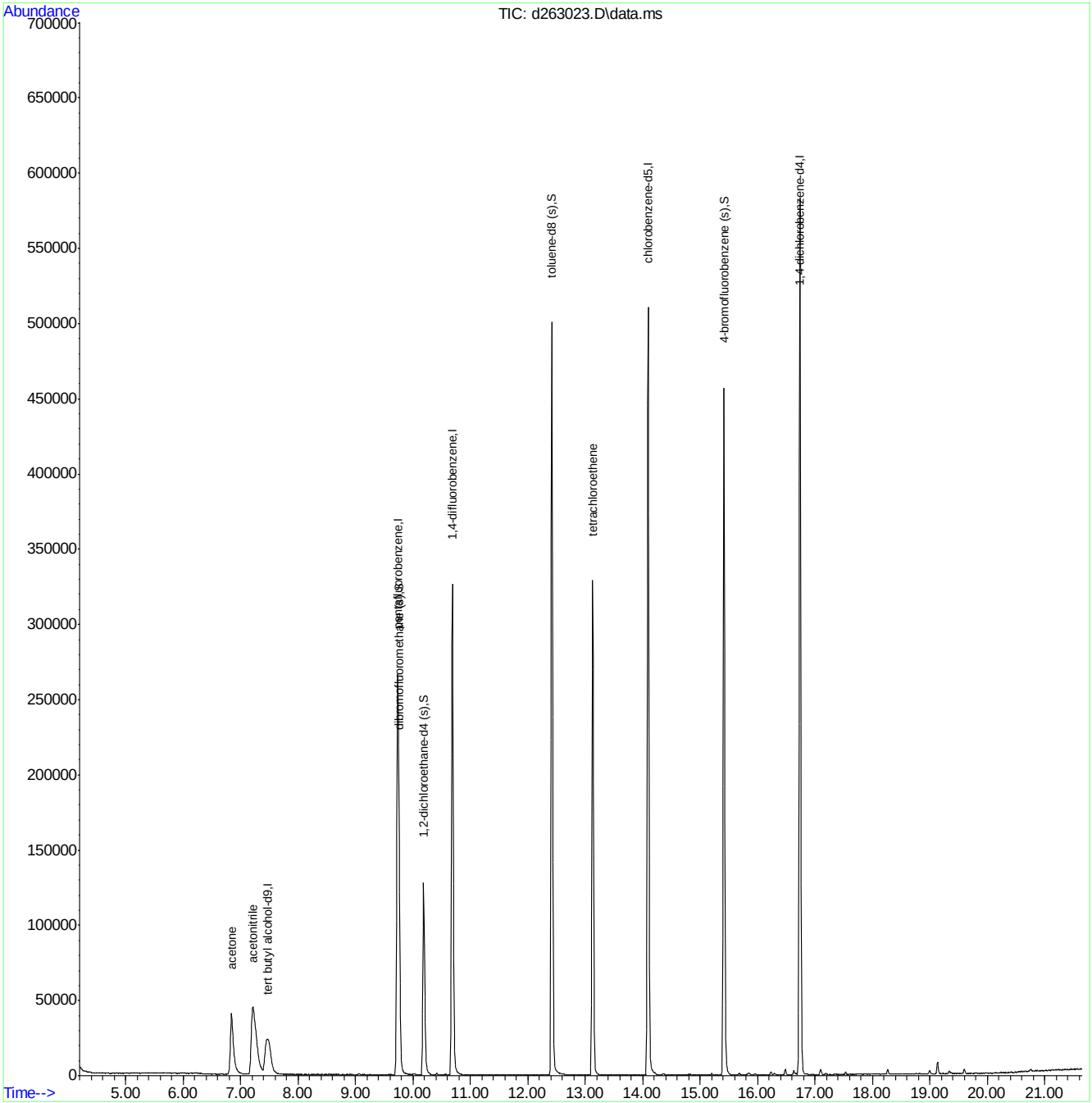
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.472	65	91042	500.00	ug/L	0.00
5) pentafluorobenzene	9.731	168	206407	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.683	114	301306	50.00	ug/L	0.00
75) chlorobenzene-d5	14.093	117	309279	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.740	152	169188	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.757	113	94924	48.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.48%			
55) 1,2-dichloroethane-d4 (s)	10.186	65	111263	49.26	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.52%			
76) toluene-d8 (s)	12.419	98	372100	49.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.68%			
100) 4-bromofluorobenzene (s)	15.416	95	170097	54.26	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 108.52%			
Target Compounds						Qvalue
20) acetone	6.844	58	31777	198.62	ug/L #	84
21) acetonitrile	7.210	41	152143	449.61	ug/L	99
81) tetrachloroethene	13.131	164	85904	44.58	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10606\
Data File : d263023.D
Acq On : 15 Mar 2019 12:18 am
Operator : juntaep
Sample : icv10606-50
Misc : ms33018,vd10606,5,,100,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 15 14:35:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Fri Mar 15 07:17:57 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264041.d
Acq On : 25 Apr 2019 7:36 am
Operator : thienn
Sample : CC10606-50 Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:18:19 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.472	65	91504	500.00	ug/L		0.00
5) pentafluorobenzene	9.721	168	171607	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.678	114	266981	50.00	ug/L		0.00
75) chlorobenzene-d5	14.088	117	253643	50.00	ug/L		0.00
99) 1,4-dichlorobenzene-d4	16.735	152	154212	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.752	113	80206	49.54	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.08%				
55) 1,2-dichloroethane-d4 (s)	10.181	65	88297	44.12	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 88.24%				
76) toluene-d8 (s)	12.414	98	314101	50.78	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.56%				
100) 4-bromofluorobenzene (s)	15.406	95	130825	45.78	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 91.56%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.566	59	57929	238.79	ug/L		96
4) 1,4-dioxane	11.347	88	29514	1334.46	ug/L		92
6) chlorodifluoromethane	4.418	51	165735	45.78	ug/L		96
7) dichlorodifluoromethane	4.412	85	180418	36.21	ug/L		98
8) chloromethane	4.695	50	181203	43.44	ug/L		99
9) 1,3-butadiene	4.977	54	117508	50.85	ug/L		97
10) vinyl chloride	4.951	62	197033	46.42	ug/L		100
11) bromomethane	5.521	94	115851	52.99	ug/L		98
12) chloroethane	5.662	64	91291	49.10	ug/L		97
13) trichlorofluoromethane	6.154	101	175349	45.86	ug/L		99
14) vinyl bromide	6.018	106	88089	45.17	ug/L		98
15) ethyl ether	6.468	74	52485	55.47	ug/L		95
16) 2-chloropropane	6.672	43	189182	46.36	ug/L		94
17) acrolein	6.651	56	21328	67.91	ug/L		91
18) freon 113	6.928	151	109414	48.76	ug/L		99
19) 1,1-dichloroethene	6.881	96	104981	49.61	ug/L		95
20) acetone	6.839	58	33356	250.76	ug/L	#	74
21) acetonitrile	7.210	41	153487	546.94	ug/L		99
22) iodomethane	7.127	142	162263	48.75	ug/L		98
23) carbon disulfide	7.294	76	365552	52.99	ug/L		98
24) methylene chloride	7.529	84	113998	51.26	ug/L		100
25) methyl acetate	7.289	43	62475	53.05	ug/L		95
26) methyl tert butyl ether	7.906	73	313784	48.81	ug/L		97
27) trans-1,2-dichloroethene	7.937	96	98705	50.87	ug/L		96
28) hexane	8.309	56	69543	55.69	ug/L		97
29) di-isopropyl ether	8.492	45	364381	49.57	ug/L		98
30) 2-butanone	9.093	72	35474	225.60	ug/L		91
31) 1,1-dichloroethane	8.481	63	170087	49.24	ug/L		99
32) chloroprene	8.596	53	142091	46.06	ug/L		95
33) acrylonitrile	7.770	53	31752	58.61	ug/L		95
34) vinyl acetate	8.408	86	19047	50.30	ug/L		96
35) ethyl tert-butyl ether	8.952	59	355017	48.95	ug/L		99
36) ethyl acetate	9.130	45	12948	58.48	ug/L		94
37) 2,2-dichloropropane	9.240	77	173717	46.88	ug/L		96
38) cis-1,2-dichloroethene	9.187	96	106421	50.12	ug/L		97
39) propionitrile	9.135	54	132181	559.09	ug/L		97
40) methyl acrylate	9.219	85	11282	48.53	ug/L	#	89
41) methacrylonitrile	9.360	67	32443	52.37	ug/L		94
42) bromochloromethane	9.480	128	48460	50.59	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264041.d
Acq On : 25 Apr 2019 7:36 am
Operator : thienn
Sample : CC10606-50 Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:18:19 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.517	42	23380	50.71	ug/L		98
44) chloroform	9.559	83	159132	45.60	ug/L		95
45) tert-butyl formate	9.611	59	93631	47.59	ug/L		94
47) 1,1,1-trichloroethane	9.862	97	165916	46.35	ug/L		97
48) cyclohexane	10.009	84	204363	56.77	ug/L		97
50) 1,1-dichloropropene	10.029	75	123370	46.66	ug/L		99
51) carbon tetrachloride	10.077	117	139742	45.73	ug/L		99
52) tert-amyl alcohol	10.108	73	27739	256.11	ug/L		92
53) isopropyl acetate	10.155	87	20243	49.33	ug/L	#	87
56) n-butyl alcohol	10.688	56	155832	2416.56	ug/L		95
57) 2,2,4-trimethylpentane	10.406	57	348837	52.70	ug/L		96
58) benzene	10.275	78	388702	47.95	ug/L		99
59) tert-amyl methyl ether	10.364	73	335366	45.34	ug/L		99
60) heptane	10.563	57	56924	52.56	ug/L		97
61) 1,2-dichloroethane	10.270	62	113021	39.65	ug/L		98
62) ethyl acrylate	10.976	55	93187	44.67	ug/L		99
63) trichloroethene	11.018	95	92128	45.75	ug/L		99
64) 2-chloroethyl vinyl ether	11.813	63	261356	247.51	ug/L		99
65) methyl methacrylate	11.259	100	21461	47.07	ug/L	#	84
66) methylcyclohexane	11.363	83	174381	50.75	ug/L		99
67) 1,2-dichloropropane	11.295	63	98613	49.01	ug/L		99
68) dibromomethane	11.405	93	54294	46.68	ug/L		100
69) bromodichloromethane	11.567	83	124043	45.98	ug/L		100
70) 2-nitropropane	11.740	41	18043	42.88	ug/L		94
71) epichlorohydrin	11.891	57	48945	251.72	ug/L		98
72) cis-1,3-dichloropropene	12.059	75	153719	47.32	ug/L		94
73) 4-methyl-2-pentanone	12.153	58	139455	198.64	ug/L		91
74) isoamyl alcohol	12.142	70	60809	1105.47	ug/L		94
77) toluene	12.493	92	233863	48.20	ug/L		97
78) ethyl methacrylate	12.676	69	109926	47.84	ug/L		96
79) trans-1,3-dichloropropene	12.665	75	131973	46.81	ug/L		89
80) 1,1,2-trichloroethane	12.911	83	63961	49.44	ug/L		97
81) tetrachloroethene	13.120	164	75748	47.93	ug/L		99
82) 2-hexanone	13.089	58	120530	206.02	ug/L		96
83) 1,3-dichloropropane	13.110	76	130261	46.77	ug/L		95
84) butyl acetate	13.199	56	60400	50.70	ug/L		89
85) dibromochloromethane	13.392	129	87879	48.22	ug/L		98
86) 1,2-dibromoethane	13.570	107	104933	52.17	ug/L		99
87) n-butyl ether	14.104	57	421243	47.64	ug/L		99
88) chlorobenzene	14.125	112	251274	44.72	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.193	131	103458	47.93	ug/L		99
90) ethylbenzene	14.203	91	449487	46.75	ug/L		100
91) m,p-xylene	14.339	106	348106	95.02	ug/L		97
92) o-xylene	14.789	91	384650	47.79	ug/L		99
93) styrene	14.799	104	292952	46.94	ug/L		96
94) butyl acrylate	14.590	55	189264	50.16	ug/L		99
95) n-amyl acetate	14.826	70	78426	49.10	ug/L		95
96) isopropylbenzene	15.192	105	474731	50.54	ug/L		99
97) bromoform	15.045	173	61854	47.09	ug/L		99
98) cis-1,4-dichloro-2-butene	15.197	88	38950	44.68	ug/L		94
101) 1,1,2,2-tetrachloroethane	15.469	83	115537	48.48	ug/L		97
102) trans-1,4-dichloro-2-b...	15.505	53	28892	48.43	ug/L		92
103) 1,2,3-trichloropropane	15.568	110	32306	47.03	ug/L		97
104) bromobenzene	15.615	156	121524	44.96	ug/L		96
105) n-propylbenzene	15.662	91	533019	49.91	ug/L		99
106) 2-chlorotoluene	15.809	126	113381	47.38	ug/L		97
107) 4-chlorotoluene	15.934	91	334095	47.39	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264041.d
Acq On : 25 Apr 2019 7:36 am
Operator : thienn
Sample : CC10606-50 Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:18:19 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

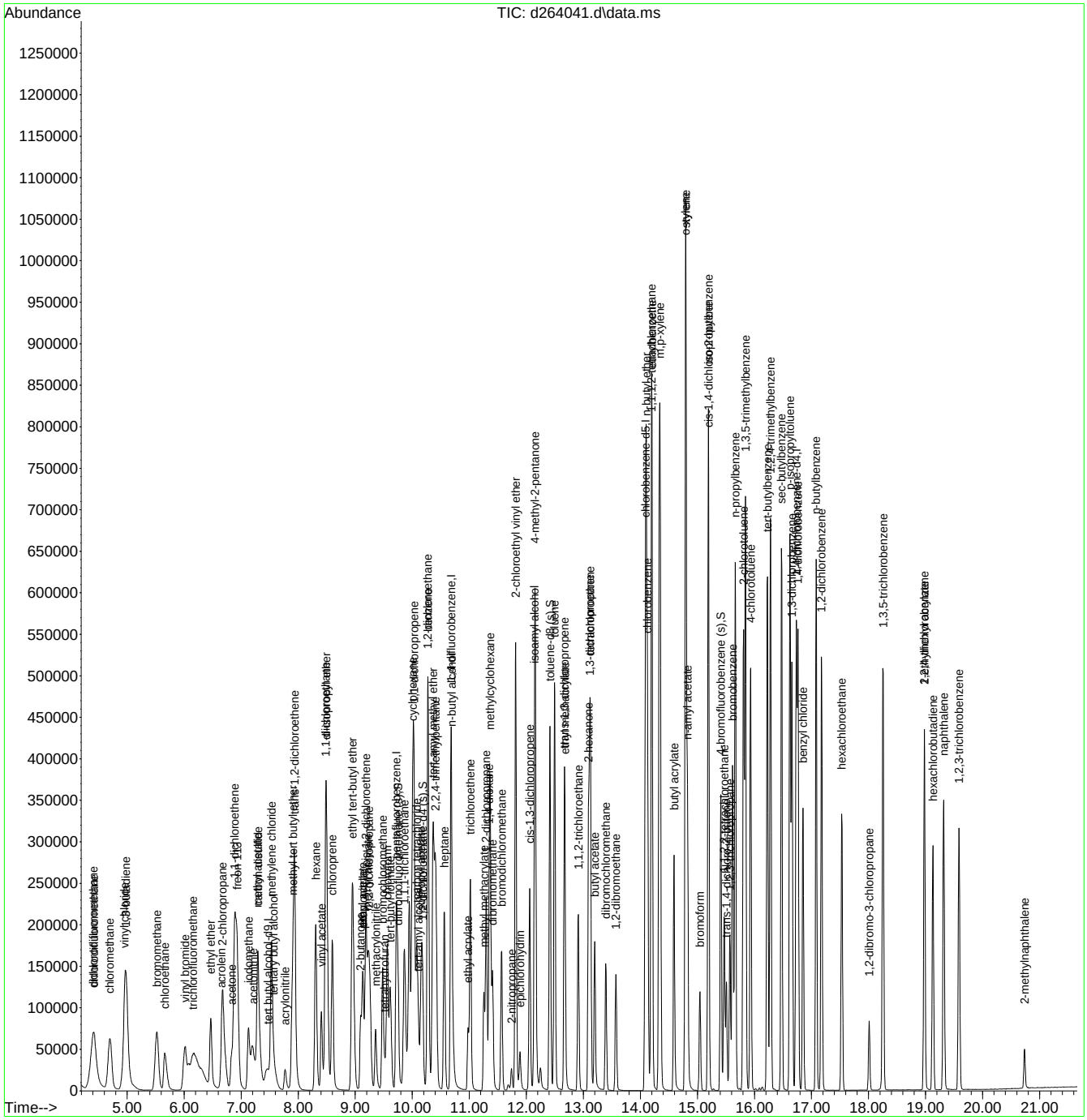
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.840	105	413525	50.67	ug/L	99
109) tert-butylbenzene	16.227	119	324992	51.33	ug/L	97
110) 1,2,4-trimethylbenzene	16.279	105	415986	51.12	ug/L	99
111) sec-butylbenzene	16.473	105	487049	52.23	ug/L	98
112) p-isopropyltoluene	16.619	119	414222	53.36	ug/L	97
113) 1,3-dichlorobenzene	16.656	146	232393	49.22	ug/L	99
114) 1,4-dichlorobenzene	16.761	146	238483	48.70	ug/L	100
115) 1,2-dichlorobenzene	17.174	146	239644	50.64	ug/L	99
116) benzyl chloride	16.850	91	271641	59.11	ug/L	98
117) n-butylbenzene	17.080	92	208382	57.48	ug/L	97
118) 2-ethylhexyl acrylate	18.978	70	8253	10.80	ug/L	92
119) hexachloroethane	17.529	201	68246	56.63	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.011	75	22508	52.70	ug/L	97
121) 1,3,5-trichlorobenzene	18.256	180	185846	58.38	ug/L	99
122) 1,2,4-trichlorobenzene	18.978	180	148415	51.33	ug/L	99
123) hexachlorobutadiene	19.130	225	74284	51.19	ug/L	97
124) naphthalene	19.318	128	325289	50.54	ug/L	99
125) 1,2,3-trichlorobenzene	19.585	180	121791	47.92	ug/L	100
126) 2-methylnaphthalene	20.736	142	28548	20.72	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\04-26-19\vd10643\
Data File : d264041.d
Acq On : 25 Apr 2019 7:36 am
Operator : thienn
Sample : CC10606-50 Inst : MSD
Misc : ms31989,vd10643,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 25 21:18:19 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264064.d
Acq On : 26 Apr 2019 7:54 am
Operator : juntaep
Sample : cc10606-50 Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.452	65	91507	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	176410	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	268631	50.00	ug/L	0.00
75) chlorobenzene-d5	14.089	117	273243	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	162951	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.753	113	81743	49.11	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.22%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	88118	43.76	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 87.52%			
76) toluene-d8 (s)	12.415	98	320514	48.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.20%			
100) 4-bromofluorobenzene (s)	15.407	95	143724	47.60	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.20%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	54325	223.93	ug/L	95
4) 1,4-dioxane	11.348	88	25603	1157.58	ug/L	93
6) chlorodifluoromethane	4.408	51	151794	40.79	ug/L	98
7) dichlorodifluoromethane	4.413	85	201515	39.35	ug/L	100
8) chloromethane	4.696	50	187784	43.79	ug/L	98
9) 1,3-butadiene	4.978	54	106981	45.03	ug/L	95
10) vinyl chloride	4.952	62	199296	45.67	ug/L	98
11) bromomethane	5.522	94	118608	52.78	ug/L	96
12) chloroethane	5.668	64	92314	48.29	ug/L	97
13) trichlorofluoromethane	6.150	101	175591	44.67	ug/L	98
14) vinyl bromide	6.019	106	87042	43.42	ug/L	96
15) ethyl ether	6.469	74	51638	53.09	ug/L	96
16) 2-chloropropane	6.678	43	184081	43.88	ug/L	96
17) acrolein	6.652	56	17620	54.57	ug/L	93
18) freon 113	6.929	151	103527	44.88	ug/L	98
19) 1,1-dichloroethene	6.887	96	101774	46.78	ug/L	93
20) acetone	6.830	58	31162	227.89	ug/L #	74
21) acetonitrile	7.201	41	145439	504.15	ug/L	99
22) iodomethane	7.133	142	159591	46.64	ug/L	97
23) carbon disulfide	7.295	76	349125	49.23	ug/L	100
24) methylene chloride	7.536	84	111270	48.67	ug/L	97
25) methyl acetate	7.290	43	60394	49.89	ug/L	95
26) methyl tert butyl ether	7.907	73	305880	46.28	ug/L	95
27) trans-1,2-dichloroethene	7.938	96	96980	48.62	ug/L	94
28) hexane	8.305	56	65720	51.20	ug/L	98
29) di-isopropyl ether	8.493	45	354242	46.88	ug/L	98
30) 2-butanone	9.094	72	34067	210.76	ug/L	97
31) 1,1-dichloroethane	8.482	63	164463	46.31	ug/L	99
32) chloroprene	8.597	53	137453	43.34	ug/L	96
33) acrylonitrile	7.771	53	29963	53.80	ug/L	98
34) vinyl acetate	8.409	86	18549	47.65	ug/L #	84
35) ethyl tert-butyl ether	8.948	59	348365	46.72	ug/L	98
36) ethyl acetate	9.126	45	12177	53.50	ug/L #	86
37) 2,2-dichloropropane	9.246	77	166684	43.76	ug/L	95
38) cis-1,2-dichloroethene	9.188	96	103771	47.54	ug/L	98
39) propionitrile	9.136	54	125586	516.73	ug/L	99
40) methyl acrylate	9.215	85	10862	45.56	ug/L #	91
41) methacrylonitrile	9.356	67	31052	48.76	ug/L	92
42) bromochloromethane	9.481	128	47351	48.09	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264064.d
Acq On : 26 Apr 2019 7:54 am
Operator : juntaep
Sample : cc10606-50 Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.523	42	22327	47.11	ug/L		98
44) chloroform	9.560	83	154361	43.03	ug/L		97
45) tert-butyl formate	9.617	59	91348	45.16	ug/L		95
47) 1,1,1-trichloroethane	9.863	97	159872	43.45	ug/L		97
48) cyclohexane	10.010	84	192482	52.01	ug/L		95
50) 1,1-dichloropropene	10.030	75	117883	43.37	ug/L		98
51) carbon tetrachloride	10.078	117	133345	42.45	ug/L		98
52) tert-amyl alcohol	10.109	73	25676	230.61	ug/L		97
53) isopropyl acetate	10.156	87	18756	44.46	ug/L		97
56) n-butyl alcohol	10.689	56	139431	2148.94	ug/L		95
57) 2,2,4-trimethylpentane	10.412	57	335469	50.37	ug/L		96
58) benzene	10.276	78	370466	45.42	ug/L		98
59) tert-amyl methyl ether	10.365	73	326311	43.85	ug/L		98
60) heptane	10.559	57	54144	49.69	ug/L		96
61) 1,2-dichloroethane	10.271	62	107766	37.57	ug/L		96
62) ethyl acrylate	10.977	55	91365	43.53	ug/L		99
63) trichloroethene	11.019	95	86812	42.84	ug/L		98
64) 2-chloroethyl vinyl ether	11.814	63	259406	244.16	ug/L		99
65) methyl methacrylate	11.254	100	21246	46.31	ug/L	#	85
66) methylcyclohexane	11.364	83	166952	48.29	ug/L		99
67) 1,2-dichloropropane	11.296	63	93920	46.39	ug/L		99
68) dibromomethane	11.406	93	51205	43.75	ug/L		99
69) bromodichloromethane	11.563	83	115523	42.56	ug/L		98
70) 2-nitropropane	11.741	41	17685	41.78	ug/L		98
71) epichlorohydrin	11.887	57	46840	239.41	ug/L		98
72) cis-1,3-dichloropropene	12.060	75	148301	45.37	ug/L		95
73) 4-methyl-2-pentanone	12.154	58	134049	189.76	ug/L		91
74) isoamyl alcohol	12.143	70	55326	999.62	ug/L		97
77) toluene	12.494	92	227135	43.46	ug/L		97
78) ethyl methacrylate	12.672	69	110676	44.71	ug/L		96
79) trans-1,3-dichloropropene	12.666	75	131311	43.24	ug/L		91
80) 1,1,2-trichloroethane	12.907	83	62451	44.81	ug/L		96
81) tetrachloroethene	13.121	164	73356	43.09	ug/L		97
82) 2-hexanone	13.090	58	121143	192.21	ug/L		96
83) 1,3-dichloropropane	13.111	76	128753	42.91	ug/L		93
84) butyl acetate	13.200	56	62393	48.62	ug/L		89
85) dibromochloromethane	13.393	129	87495	44.57	ug/L		96
86) 1,2-dibromoethane	13.571	107	105497	48.69	ug/L		100
87) n-butyl ether	14.099	57	421537	44.25	ug/L		98
88) chlorobenzene	14.126	112	253900	41.95	ug/L		97
89) 1,1,1,2-tetrachloroethane	14.194	131	99657	42.86	ug/L		98
90) ethylbenzene	14.204	91	450399	43.48	ug/L		99
91) m,p-xylene	14.340	106	348785	88.38	ug/L		99
92) o-xylene	14.790	91	382210	44.08	ug/L		98
93) styrene	14.800	104	296073	44.04	ug/L		95
94) butyl acrylate	14.591	55	191810	47.19	ug/L		98
95) n-amyl acetate	14.826	70	79664	46.30	ug/L		93
96) isopropylbenzene	15.193	105	470825	46.53	ug/L		98
97) bromoform	15.046	173	63792	45.08	ug/L		99
98) cis-1,4-dichloro-2-butene	15.193	88	39373	41.92	ug/L		95
101) 1,1,2,2-tetrachloroethane	15.470	83	114136	45.32	ug/L		99
102) trans-1,4-dichloro-2-b...	15.506	53	28852	45.77	ug/L		92
103) 1,2,3-trichloropropane	15.569	110	32462	44.72	ug/L		98
104) bromobenzene	15.616	156	123163	43.12	ug/L		96
105) n-propylbenzene	15.663	91	536101	47.50	ug/L		100
106) 2-chlorotoluene	15.810	126	114608	45.32	ug/L		97
107) 4-chlorotoluene	15.930	91	342320	45.95	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264064.d
Acq On : 26 Apr 2019 7:54 am
Operator : juntaep
Sample : cc10606-50 Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration

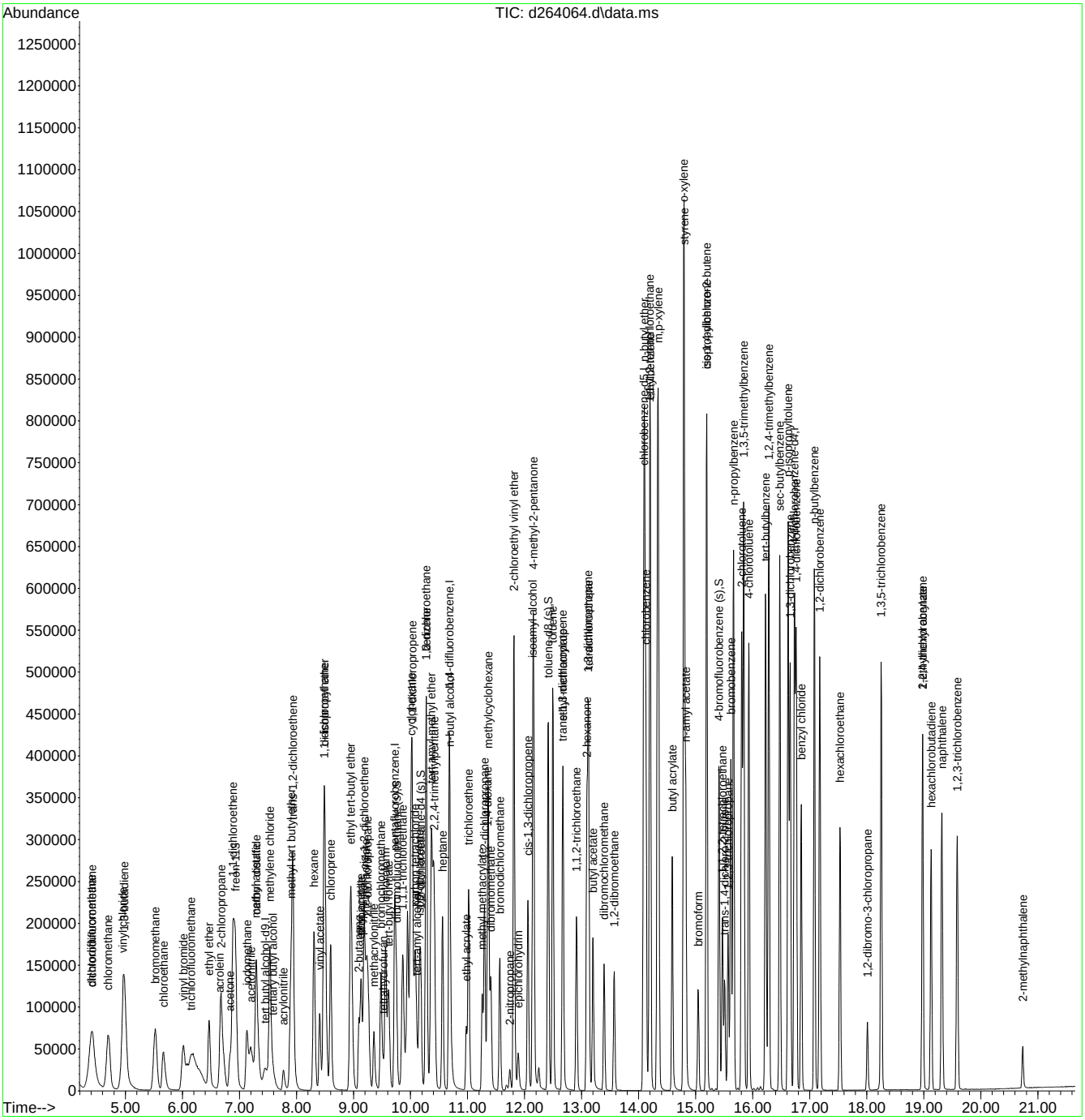
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.841	105	410023	47.54	ug/L	100
109) tert-butylbenzene	16.228	119	312776	46.75	ug/L	97
110) 1,2,4-trimethylbenzene	16.280	105	417238	48.52	ug/L	100
111) sec-butylbenzene	16.474	105	478861	48.59	ug/L	98
112) p-isopropyltoluene	16.620	119	410519	50.05	ug/L	97
113) 1,3-dichlorobenzene	16.657	146	233842	46.87	ug/L	99
114) 1,4-dichlorobenzene	16.762	146	239875	46.36	ug/L	100
115) 1,2-dichlorobenzene	17.175	146	236121	47.22	ug/L	99
116) benzyl chloride	16.851	91	268116	55.21	ug/L	98
117) n-butylbenzene	17.081	92	205215	53.57	ug/L	99
118) 2-ethylhexyl acrylate	18.979	70	9351	11.58	ug/L	89
119) hexachloroethane	17.530	201	64575	50.71	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.012	75	20976	46.48	ug/L	93
121) 1,3,5-trichlorobenzene	18.252	180	181413	53.93	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	145610	47.76	ug/L	98
123) hexachlorobutadiene	19.131	225	73465	47.91	ug/L	99
124) naphthalene	19.319	128	314252	46.36	ug/L	99
125) 1,2,3-trichlorobenzene	19.586	180	119551	44.65	ug/L	99
126) 2-methylnaphthalene	20.737	142	30980	21.28	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\apr 29\vd10644\
Data File : d264064.d
Acq On : 26 Apr 2019 7:54 am
Operator : juntaep
Sample : cc10606-50 Inst : MSD
Misc : ms34034,vd10644,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 29 01:39:52 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Wed Mar 27 14:25:51 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
04/30/19 16:06

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:33:40 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.456	65	89251	500.00	ug/L		-0.02
5) pentafluorobenzene	9.716	168	161321	50.00	ug/L		-0.01
54) 1,4-difluorobenzene	10.673	114	251738	50.00	ug/L		-0.01
75) chlorobenzene-d5	14.083	117	253983	50.00	ug/L		-0.01
99) 1,4-dichlorobenzene-d4	16.729	152	159027	50.00	ug/L		-0.01
System Monitoring Compounds							
46) dibromofluoromethane (s)	9.742	113	78175	51.36	ug/L		-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.72%				
55) 1,2-dichloroethane-d4 (s)	10.171	65	79427	42.09	ug/L		-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 84.18%				
76) toluene-d8 (s)	12.409	98	296525	47.88	ug/L		-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.76%				
100) 4-bromofluorobenzene (s)	15.406	95	133207	45.21	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 90.42%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.566	59	53249	225.04	ug/L		96
4) 1,4-dioxane	11.342	88	27092	1255.87	ug/L		90
6) chlorodifluoromethane	4.407	51	151296	44.45	ug/L		96
7) dichlorodifluoromethane	4.412	85	202543	43.25	ug/L		99
8) chloromethane	4.690	50	166020	42.33	ug/L		99
9) 1,3-butadiene	4.972	54	103160	47.49	ug/L		97
10) vinyl chloride	4.946	62	183073	45.88	ug/L		99
11) bromomethane	5.516	94	106409	51.78	ug/L		99
12) chloroethane	5.657	64	81952	46.88	ug/L		94
13) trichlorofluoromethane	6.144	101	166550	46.34	ug/L		98
14) vinyl bromide	6.002	106	81575	44.50	ug/L		98
15) ethyl ether	6.463	74	51156	57.51	ug/L		96
16) 2-chloropropane	6.667	43	179061	46.67	ug/L		94
17) acrolein	6.646	56	21925	74.26	ug/L		91
18) freon 113	6.918	151	110264	52.27	ug/L		99
19) 1,1-dichloroethene	6.881	96	103530	52.04	ug/L		92
20) acetone	6.829	58	31460	251.59	ug/L	#	85
21) acetonitrile	7.195	41	140496	532.57	ug/L		99
22) iodomethane	7.122	142	165971	53.05	ug/L		98
23) carbon disulfide	7.289	76	354295	54.63	ug/L		99
24) methylene chloride	7.524	84	114654	54.84	ug/L		99
25) methyl acetate	7.284	43	57603	52.03	ug/L		92
26) methyl tert butyl ether	7.901	73	306938	50.79	ug/L		96
27) trans-1,2-dichloroethene	7.927	96	96713	53.02	ug/L		95
28) hexane	8.298	56	63401	54.01	ug/L		96
29) di-isopropyl ether	8.487	45	342906	49.62	ug/L		98
30) 2-butanone	9.088	72	32572	220.35	ug/L	#	85
31) 1,1-dichloroethane	8.476	63	164091	50.53	ug/L		99
32) chloroprene	8.591	53	133930	46.18	ug/L		93
33) acrylonitrile	7.765	53	29385	57.69	ug/L		94
34) vinyl acetate	8.403	86	18002	50.57	ug/L	#	84
35) ethyl tert-butyl ether	8.942	59	344609	50.54	ug/L		98
36) ethyl acetate	9.120	45	11377	54.66	ug/L	#	93
37) 2,2-dichloropropane	9.240	77	174734	50.16	ug/L		90
38) cis-1,2-dichloroethene	9.182	96	104397	52.31	ug/L		97
39) propionitrile	9.130	54	120170	540.69	ug/L		99
40) methyl acrylate	9.214	85	10384	47.55	ug/L		97
41) methacrylonitrile	9.350	67	30305	52.04	ug/L		88
42) bromochloromethane	9.475	128	48120	53.44	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:33:40 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	9.512	42	20560	47.43	ug/L		97
44) chloroform	9.554	83	154414	47.07	ug/L		95
45) tert-butyl formate	9.606	59	91828	49.65	ug/L		93
47) 1,1,1-trichloroethane	9.857	97	163911	48.71	ug/L		98
48) cyclohexane	10.003	84	175725	51.93	ug/L		98
50) 1,1-dichloropropene	10.024	75	117808	47.40	ug/L		98
51) carbon tetrachloride	10.071	117	138881	48.34	ug/L		98
52) tert-amyl alcohol	10.098	73	25443	249.89	ug/L		96
53) isopropyl acetate	10.150	87	18861m	48.89	ug/L		
56) n-butyl alcohol	10.678	56	135612	2230.34	ug/L		93
57) 2,2,4-trimethylpentane	10.406	57	346833	55.57	ug/L		96
58) benzene	10.270	78	368339	48.19	ug/L		98
59) tert-amyl methyl ether	10.359	73	327686	46.99	ug/L		98
60) heptane	10.558	57	53350	52.24	ug/L		95
61) 1,2-dichloroethane	10.265	62	106079	39.47	ug/L		98
62) ethyl acrylate	10.971	55	85584	43.51	ug/L		99
63) trichloroethene	11.013	95	87180	45.91	ug/L		99
64) 2-chloroethyl vinyl ether	11.808	63	247904	248.99	ug/L		100
65) methyl methacrylate	11.253	100	20077	46.70	ug/L	#	80
66) methylcyclohexane	11.358	83	171195	52.84	ug/L		99
67) 1,2-dichloropropane	11.290	63	91767	48.37	ug/L		99
68) dibromomethane	11.400	93	51419	46.88	ug/L		99
69) bromodichloromethane	11.557	83	117166	46.06	ug/L		99
70) 2-nitropropane	11.735	41	16851	42.48	ug/L		100
71) epichlorohydrin	11.886	57	42890	233.93	ug/L		98
72) cis-1,3-dichloropropene	12.054	75	143501	46.85	ug/L		92
73) 4-methyl-2-pentanone	12.148	58	125279	189.25	ug/L		91
74) isoamyl alcohol	12.137	70	53288	1027.40	ug/L		90
77) toluene	12.488	92	223808	46.07	ug/L		98
78) ethyl methacrylate	12.671	69	103074	44.80	ug/L		97
79) trans-1,3-dichloropropene	12.660	75	126846	44.94	ug/L		86
80) 1,1,2-trichloroethane	12.906	83	61213	47.26	ug/L		96
81) tetrachloroethene	13.121	164	73698	46.57	ug/L		98
82) 2-hexanone	13.084	58	110919	189.34	ug/L		92
83) 1,3-dichloropropane	13.110	76	124574	44.67	ug/L		88
84) butyl acetate	13.194	56	55028	46.13	ug/L		91
85) dibromochloromethane	13.387	129	85648	46.93	ug/L		98
86) 1,2-dibromoethane	13.565	107	99263	49.29	ug/L		99
87) n-butyl ether	14.099	57	394998	44.61	ug/L		100
88) chlorobenzene	14.120	112	246131	43.75	ug/L		99
89) 1,1,1,2-tetrachloroethane	14.188	131	101542	46.98	ug/L		98
90) ethylbenzene	14.198	91	436684	45.36	ug/L		99
91) m,p-xylene	14.334	106	338753	92.34	ug/L		97
92) o-xylene	14.789	91	371360	46.08	ug/L		98
93) styrene	14.794	104	286733	45.88	ug/L		97
94) butyl acrylate	14.585	55	173987	46.05	ug/L		96
95) n-amyl acetate	14.820	70	73094	45.70	ug/L		92
96) isopropylbenzene	15.187	105	462667	49.19	ug/L		98
97) bromoform	15.040	173	61876	47.04	ug/L		99
98) cis-1,4-dichloro-2-butene	15.192	88	37613	43.08	ug/L		94
101) 1,1,2,2-tetrachloroethane	15.464	83	109639	44.61	ug/L		100
102) trans-1,4-dichloro-2-b...	15.506	53	27092	44.04	ug/L		88
103) 1,2,3-trichloropropane	15.563	110	31662	44.69	ug/L		96
104) bromobenzene	15.615	156	120946	43.39	ug/L		96
105) n-propylbenzene	15.657	91	519294	47.15	ug/L		99
106) 2-chlorotoluene	15.804	126	112156	45.44	ug/L		99
107) 4-chlorotoluene	15.929	91	325228	44.74	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:33:40 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration

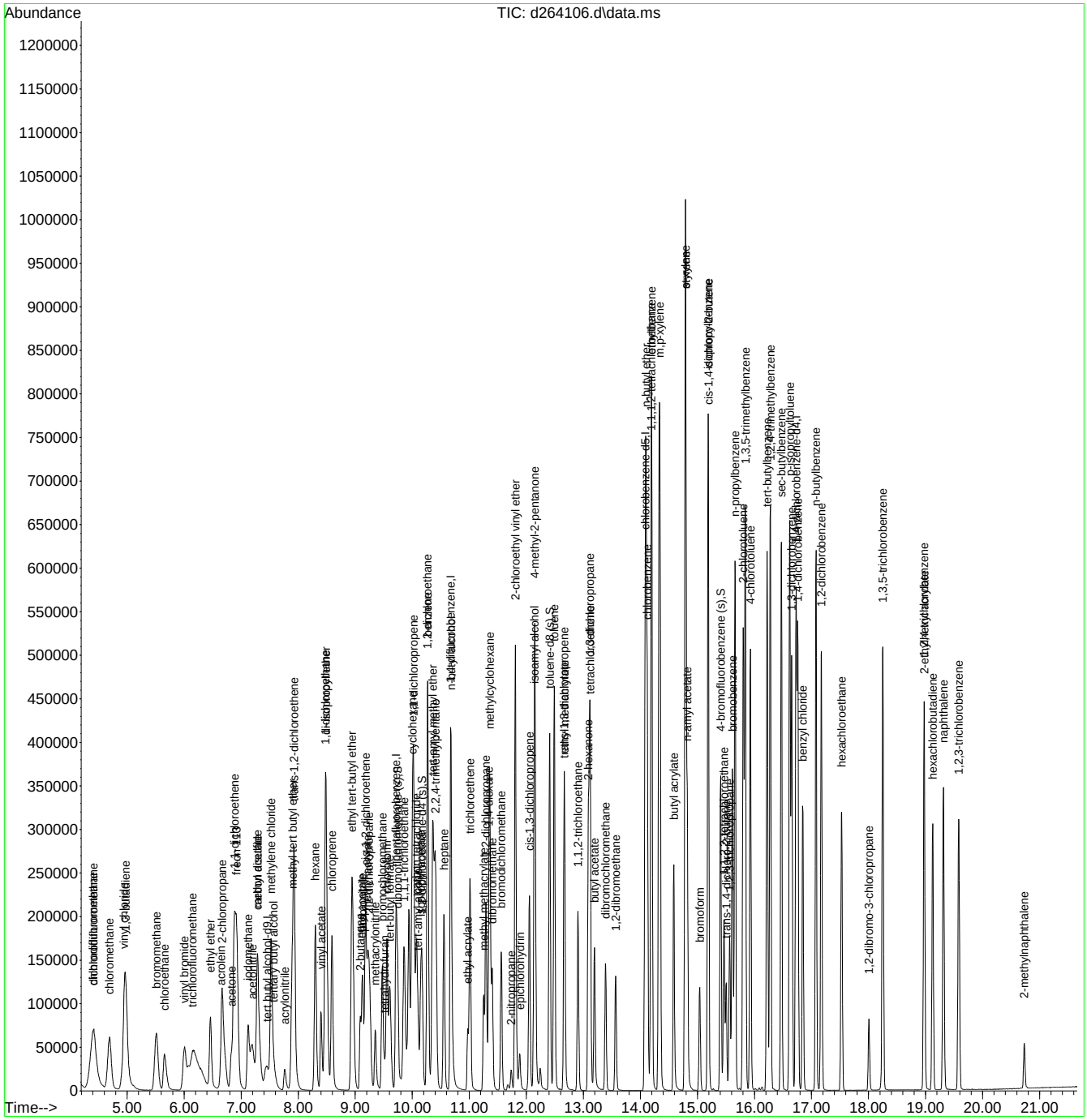
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.840	105	402245	47.79	ug/L	99
109) tert-butylbenzene	16.222	119	317449	48.62	ug/L	97
110) 1,2,4-trimethylbenzene	16.280	105	405077	48.27	ug/L	99
111) sec-butylbenzene	16.473	105	476839	49.58	ug/L	99
112) p-isopropyltoluene	16.620	119	408467	51.03	ug/L	97
113) 1,3-dichlorobenzene	16.651	146	228450	46.92	ug/L	99
114) 1,4-dichlorobenzene	16.761	146	235926	46.72	ug/L	98
115) 1,2-dichlorobenzene	17.174	146	237388	48.65	ug/L	99
116) benzyl chloride	16.845	91	263212	55.54	ug/L	99
117) n-butylbenzene	17.080	92	203287	54.37	ug/L	99
118) 2-ethylhexyl acrylate	18.978	70	10225	12.98	ug/L	81
119) hexachloroethane	17.530	201	67859	54.60	ug/L	95
120) 1,2-dibromo-3-chloropr...	18.006	75	21630	49.11	ug/L	96
121) 1,3,5-trichlorobenzene	18.251	180	187416	57.09	ug/L	99
122) 1,2,4-trichlorobenzene	18.973	180	151897	50.95	ug/L	98
123) hexachlorobutadiene	19.125	225	77881	52.05	ug/L	97
124) naphthalene	19.313	128	324999	49.02	ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	123745	47.24	ug/L	98
126) 2-methylnaphthalene	20.730	142	31310	22.04	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:33:40 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



Manual Integration Approval Summary

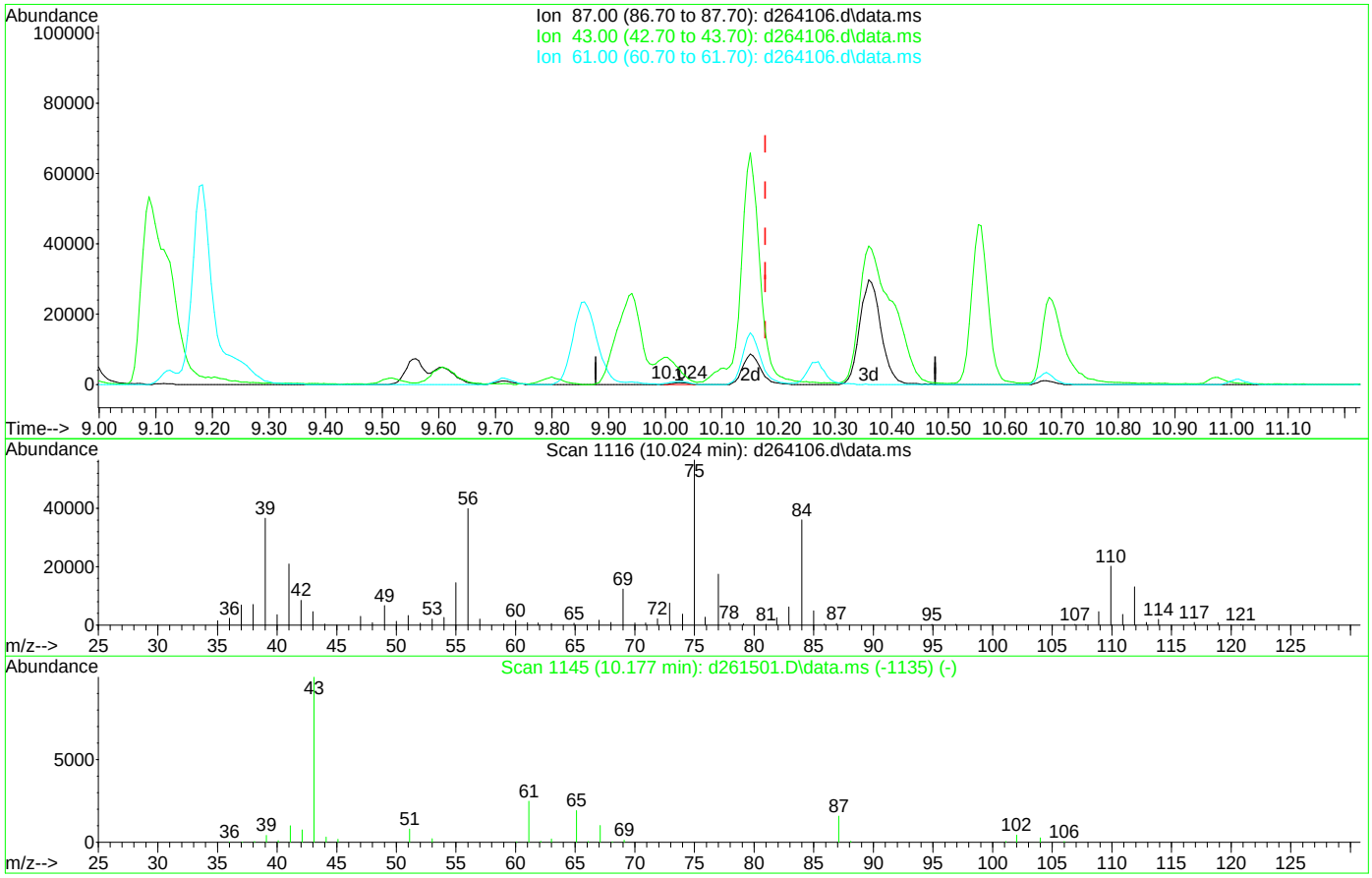
Sample Number:	VD10645-CC10606	**Method:**	SW846 8260C
Lab FileID:	D264106.D	**Analyst approved:**	04/30/19 14:36 Lotus Acosta
Injection Time:	04/29/19 10:24	**Supervisor approved:**	04/30/19 16:06 Mei Chen

Parameter	CAS	Sig#	R.T. (min.)	Reason
Isopropyl Acetate	108-21-4		10.15	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:29:13 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



TIC: d264106.d\data.ms

(53) isopropyl acetate

10.024min (-0.153) 2.21ug/L

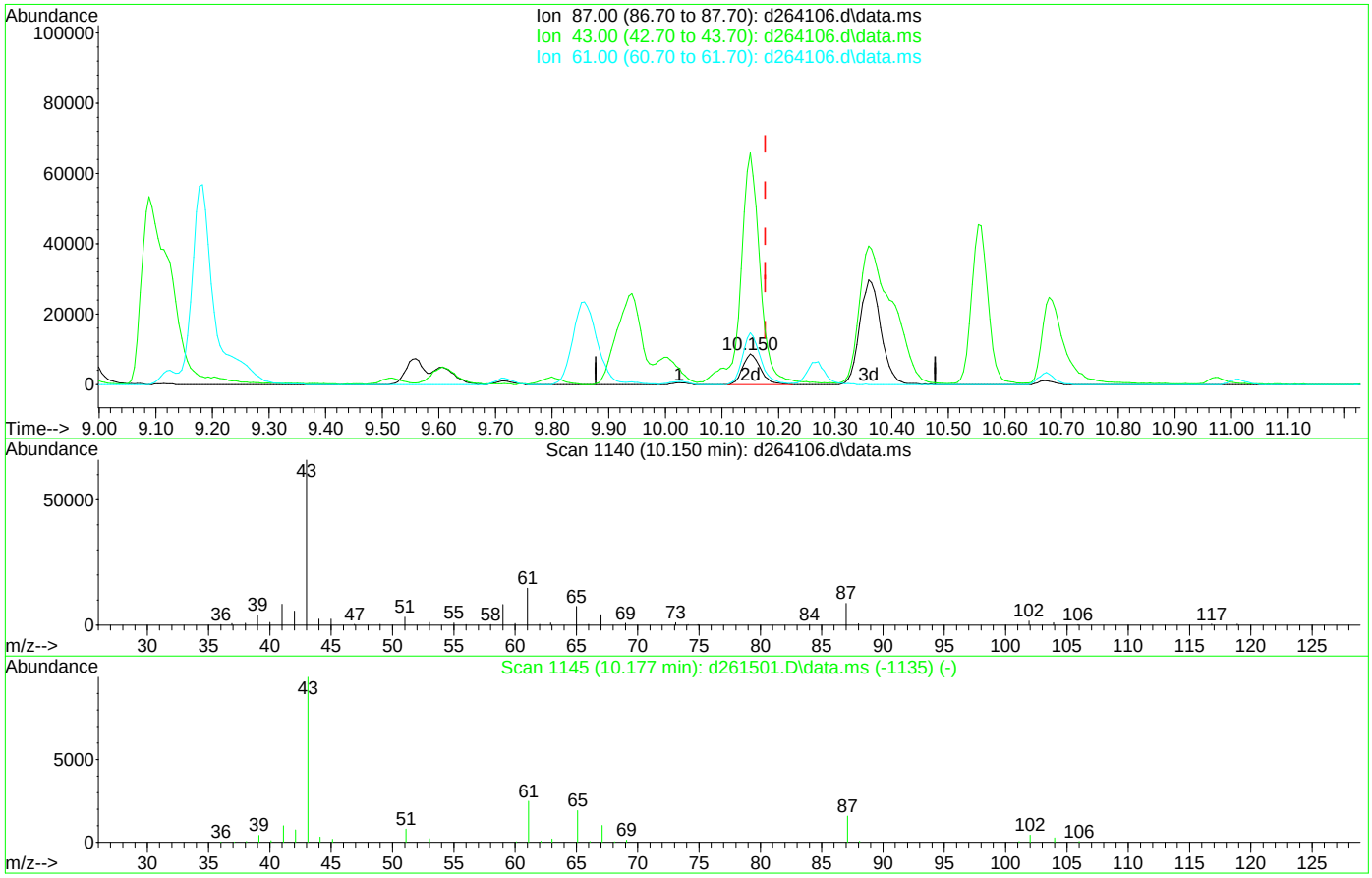
response 854

Ion	Exp%	Act%
87.00	100	100
43.00	797.10	792.15
61.00	162.10	168.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vd10645\
Data File : d264106.d
Acq On : 29 Apr 2019 10:24 am
Operator : thienn
Sample : cc10606-50 Inst : MSD
Misc : ms34269,vd10645,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: Apr 30 14:29:13 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 29 10:50:03 2019
Response via : Initial Calibration



TIC: d264106.d\data.ms

(53) isopropyl acetate

10.150min (-0.027) 48.89ug/L m

response 18861

Ion	Exp%	Act%
87.00	100	100
43.00	797.10	758.39#
61.00	162.10	168.99
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223175.D
Acq On : 27 Nov 2018 6:23 pm
Operator : thienn
Sample : IC8986-0.5
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 28 13:28:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.369	65	56717	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	177083	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	226913	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	188157	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109073	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	69022	49.60	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.20%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	70764	49.98	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.96%				
74) toluene-d8 (s)	12.280	98	244147	50.62	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.24%				
97) 4-bromofluorobenzene (s)	14.947	95	84146	50.61	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.22%				
Target Compounds							Qvalue
7) chloromethane	4.278	50	759	0.53	ug/L	#	49
8) vinyl chloride	4.529	62	520	0.43	ug/L		91
10) bromomethane	5.198	94	391	0.49	ug/L		72
13) trichlorofluoromethane	5.873	101	764	0.41	ug/L		83
28) hexane	8.242	57	909	0.48	ug/L		84
35) 2,2-dichloropropane	9.178	77	759	0.44	ug/L	#	48
54) 1,2-dichloroethane	10.256	62	631	0.42	ug/L	#	50
55) benzene	10.240	78	1799	0.41	ug/L		91
56) 2,2,4-trimethylpentane	10.345	57	1790	0.39	ug/L		90
70) cis-1,3-dichloropropene	11.966	75	684	0.39	ug/L		91
75) toluene	12.353	92	1045	0.40	ug/L		96
76) trans-1,3-dichloropropene	12.536	75	621	0.40	ug/L	#	69
79) 1,3-dichloropropane	12.928	76	554	0.40	ug/L	#	50
80) tetrachloroethene	12.918	166	505	0.39	ug/L		88
83) n-butyl ether	13.791	57	1859	0.43	ug/L	#	7
86) chlorobenzene	13.823	112	1084	0.39	ug/L		97
88) ethylbenzene	13.880	91	1965	0.40	ug/L		87
89) m,p-xylene	14.011	106	1536	0.81	ug/L	#	70
95) isopropylbenzene	14.754	105	1838	0.38	ug/L		97
101) bromobenzene	15.136	156	559	0.42	ug/L		91
102) n-propylbenzene	15.167	91	2280	0.41	ug/L		96
103) 2-chlorotoluene	15.298	126	454	0.39	ug/L		85
104) 4-chlorotoluene	15.413	91	1388	0.42	ug/L		88
105) 1,3,5-trimethylbenzene	15.329	105	1611	0.38	ug/L		96
107) 1,2,4-trimethylbenzene	15.721	105	1787	0.41	ug/L		100
109) p-isopropyltoluene	16.030	119	1974	0.42	ug/l		93
110) benzyl chloride	16.244	91	1167	0.44	ug/L		85
111) 1,3-dichlorobenzene	16.061	146	1009	0.39	ug/L		81
112) 1,4-dichlorobenzene	16.155	146	1058	0.40	ug/L		88
113) 1,2-dichlorobenzene	16.542	146	969	0.39	ug/L		82
114) n-butylbenzene	16.448	92	936	0.38	ug/L		93
118) 1,3,5-trichlorobenzene	17.547	180	1094	0.43	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223175.D
Acq On : 27 Nov 2018 6:23 pm
Operator : thienn
Sample : IC8986-0.5
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 28 13:28:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

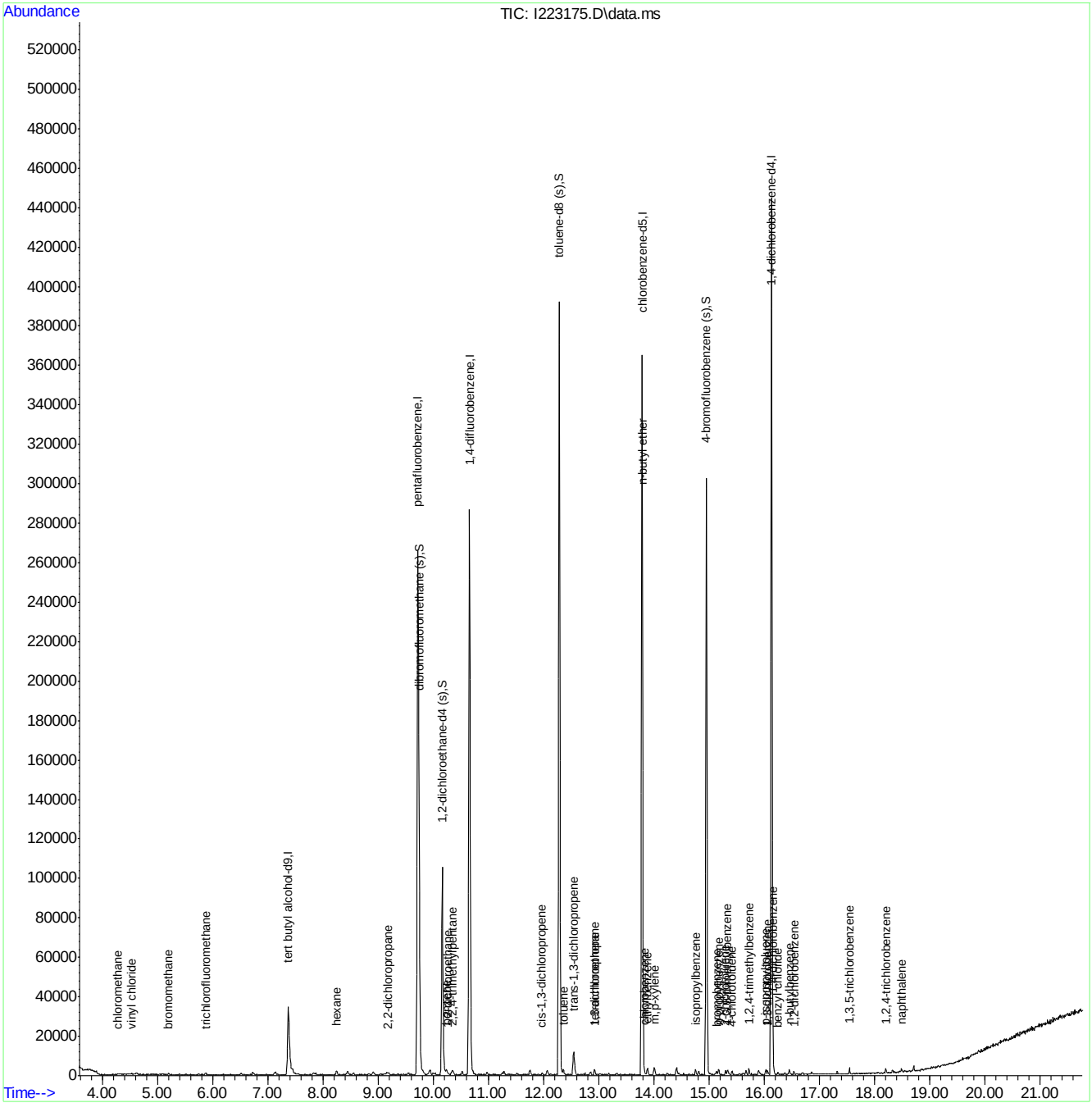
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) 1,2,4-trichlorobenzene	18.206	180	943	0.41	ug/L	79
122) naphthalene	18.488	128	1835	0.41	ug/L	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223175.D
Acq On : 27 Nov 2018 6:23 pm
Operator : thienn
Sample : IC8986-0.5
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 28 13:28:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.369	65	56032	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	178959	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	224797	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	190466	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109248	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	70424	50.08	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.16%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	71945	51.29	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.58%				
74) toluene-d8 (s)	12.280	98	246014	50.39	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%				
97) 4-bromofluorobenzene (s)	14.947	95	85952	51.61	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.22%				
Target Compounds							Qvalue
5) dichlorodifluoromethane	3.891	85	1456	0.95	ug/L		89
6) chlorodifluoromethane	3.922	51	1313	0.93	ug/L		65
7) chloromethane	4.278	50	1522	1.05	ug/L		89
8) vinyl chloride	4.534	62	1167	0.96	ug/L		80
9) 1,3-butadiene	4.618	54	766	0.95	ug/L		92
10) bromomethane	5.198	94	821	1.01	ug/L		94
11) chloroethane	5.397	64	609	0.86	ug/L	#	44
12) vinyl bromide	5.747	106	766	0.87	ug/L		89
13) trichlorofluoromethane	5.873	101	1854	0.99	ug/L		89
17) freon 113	6.736	151	747	0.82	ug/L	#	89
18) 1,1-dichloroethene	6.731	61	1436	0.90	ug/L		98
24) methylene chloride	7.447	84	1306	1.07	ug/L		76
26) methyl tert butyl ether	7.818	73	2605	0.93	ug/L		93
27) trans-1,2-dichloroethene	7.860	61	1356	0.89	ug/L		92
28) hexane	8.242	57	1988	1.04	ug/L		96
29) 1,1-dichloroethane	8.441	63	1866	0.96	ug/L		84
31) di-isopropyl ether	8.441	45	3129	0.90	ug/L		87
32) chloroprene	8.545	53	1384	0.84	ug/L		88
33) ethyl tert-butyl ether	8.912	59	3099	0.92	ug/L		86
35) 2,2-dichloropropane	9.189	77	1703	0.97	ug/L		90
37) cis-1,2-dichloroethene	9.152	96	1226	0.97	ug/L	#	78
41) bromochloromethane	9.456	128	440	0.81	ug/L	#	66
43) chloroform	9.544	83	1989	0.99	ug/L		90
44) carbon tetrachloride	10.020	117	1548	0.94	ug/L	#	77
45) 1,1-dichloropropene	9.994	75	1424	0.95	ug/L		94
48) 1,1,1-trichloroethane	9.816	97	1746	0.97	ug/L		86
49) cyclohexane	9.942	84	1519	0.92	ug/L		89
54) 1,2-dichloroethane	10.256	62	1633	1.11	ug/L		92
55) benzene	10.240	78	4193	0.95	ug/L		98
56) 2,2,4-trimethylpentane	10.350	57	4640	1.03	ug/L		98
57) tert-amyl methyl ether	10.324	87	552	0.74	ug/L	#	60
58) heptane	10.523	57	794	0.88	ug/L	#	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
60)	trichloroethene	10.978	95	1039	0.92	ug/L		89
62)	methylcyclohexane	11.281	83	1997	1.03	ug/L		94
63)	1,2-dichloropropane	11.250	63	1072	0.99	ug/L		87
65)	dibromomethane	11.354	93	547	0.84	ug/L		92
66)	bromodichloromethane	11.511	83	1425	0.95	ug/L		93
68)	2-chloroethyl vinyl ether	11.752	63	2773	4.39	ug/L		92
70)	cis-1,3-dichloropropene	11.966	75	1687	0.96	ug/L		90
71)	4-methyl-2-pentanone	12.065	58	1182	3.57	ug/L		93
75)	toluene	12.353	92	2505	0.95	ug/L		99
76)	trans-1,3-dichloropropene	12.526	75	1695	1.07	ug/L		85
77)	ethyl methacrylate	12.536	69	1080	0.95	ug/L		90
78)	1,1,2-trichloroethane	12.751	83	638	0.89	ug/L	#	81
79)	1,3-dichloropropane	12.928	76	1301	0.92	ug/L		90
80)	tetrachloroethene	12.913	166	1332	1.01	ug/L		82
81)	2-hexanone	12.913	58	1107	3.35	ug/L		94
83)	n-butyl ether	13.786	57	4146	0.95	ug/L	#	57
84)	dibromochloromethane	13.174	129	1082	0.93	ug/L		93
85)	1,2-dibromoethane	13.336	107	894	0.87	ug/L		82
86)	chlorobenzene	13.818	112	2734	0.97	ug/L		98
87)	1,1,1,2-tetrachloroethane	13.880	131	960	0.91	ug/L		95
88)	ethylbenzene	13.886	91	4814	0.98	ug/L		98
89)	m,p-xylene	14.006	106	3829	1.98	ug/L		93
90)	o-xylene	14.403	106	1805	0.98	ug/L		95
91)	styrene	14.414	104	2757	0.88	ug/L		95
92)	butyl acrylate	14.231	55	1530	0.87	ug/L		96
93)	cis-1,4-dichloro-2-butene	14.769	88	406	0.86	ug/L	#	77
94)	bromoform	14.639	173	692	0.86	ug/L		93
95)	isopropylbenzene	14.754	105	4645	0.96	ug/L		95
98)	1,1,2,2-tetrachloroethane	15.015	83	992	0.90	ug/L		90
100)	1,2,3-trichloropropane	15.099	110	272	0.93	ug/L	#	33
101)	bromobenzene	15.130	156	1333	0.99	ug/L		91
102)	n-propylbenzene	15.172	91	5703	1.02	ug/L		95
103)	2-chlorotoluene	15.303	126	1178	1.00	ug/L	#	59
104)	4-chlorotoluene	15.408	91	3501	1.05	ug/L		97
105)	1,3,5-trimethylbenzene	15.329	105	4084	0.97	ug/L		97
106)	tert-butylbenzene	15.669	134	750	0.98	ug/L	#	70
107)	1,2,4-trimethylbenzene	15.721	105	4262	0.99	ug/L		96
108)	sec-butylbenzene	15.889	105	5415	1.03	ug/L		94
109)	p-isopropyltoluene	16.030	119	4595	0.97	ug/l		99
110)	benzyl chloride	16.244	91	2575	0.97	ug/L		98
111)	1,3-dichlorobenzene	16.061	146	2661	1.03	ug/L		95
112)	1,4-dichlorobenzene	16.161	146	2663	1.01	ug/L		97
113)	1,2-dichlorobenzene	16.537	146	2492	0.99	ug/L		92
114)	n-butylbenzene	16.448	92	2414	0.98	ug/L		96
115)	hexachloroethane	16.856	201	834	0.93	ug/L	#	84
118)	1,3,5-trichlorobenzene	17.547	180	2660	1.04	ug/L		92
119)	1,2,4-trichlorobenzene	18.201	180	2465	1.07	ug/L		93
121)	hexachlorobutadiene	18.326	225	1623	1.11	ug/L	#	68
122)	naphthalene	18.488	128	4141	0.93	ug/L		98
123)	1,2,3-trichlorobenzene	18.708	180	2093	0.95	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

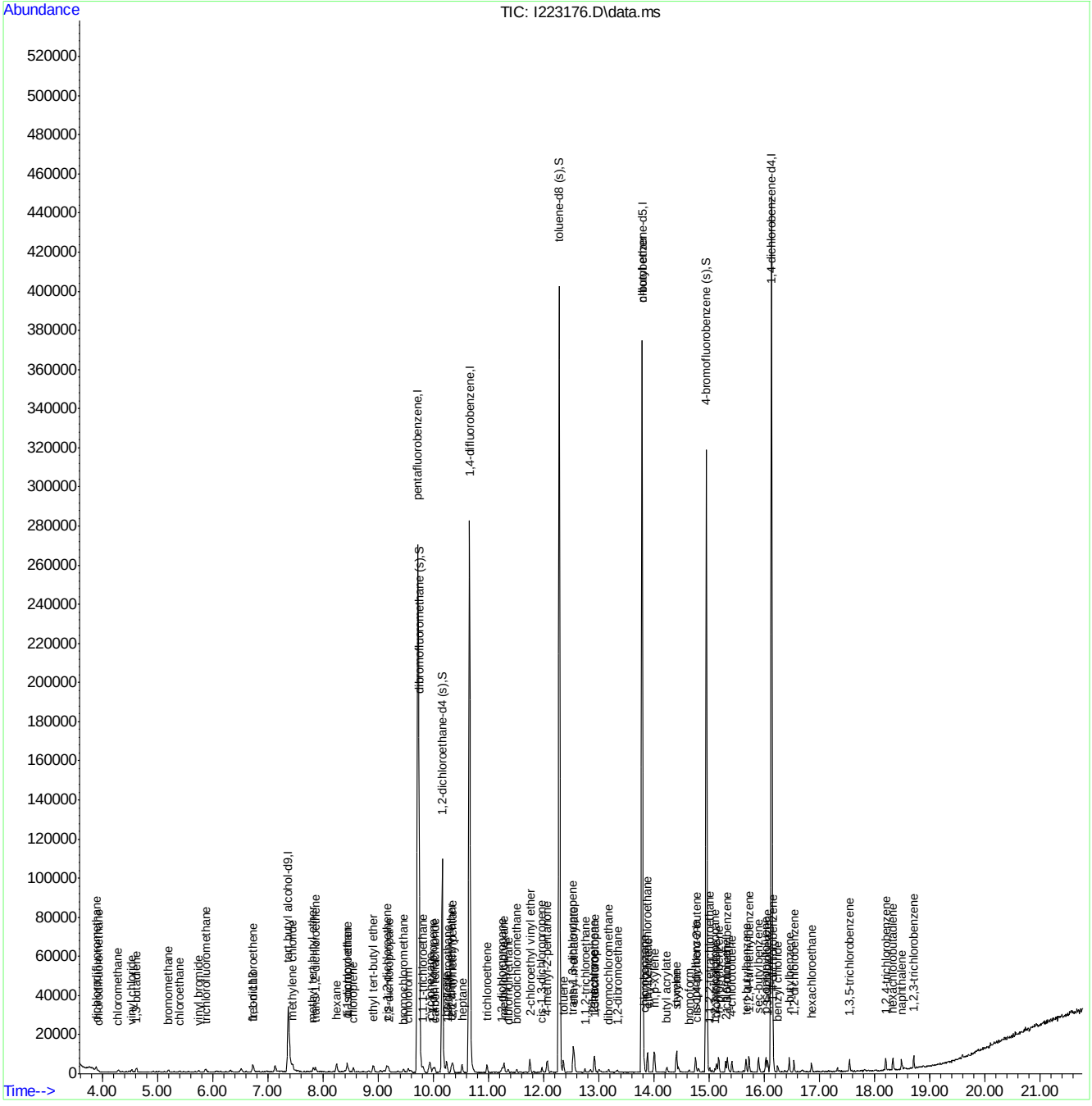
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	56476	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	176188	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	224153	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	187440	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109015	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	69313	50.07	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.14%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	71103	50.83	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.66%				
74) toluene-d8 (s)	12.280	98	241740	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
97) 4-bromofluorobenzene (s)	14.947	95	84776	51.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.02%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.505	59	1050	8.94	ug/L		76
5) dichlorodifluoromethane	3.891	85	2742	1.82	ug/L		89
6) chlorodifluoromethane	3.927	51	2757	1.98	ug/L		86
7) chloromethane	4.283	50	2832	1.99	ug/L		88
8) vinyl chloride	4.529	62	2087	1.74	ug/L		87
9) 1,3-butadiene	4.618	54	1510	1.91	ug/L		88
10) bromomethane	5.198	94	1470	1.84	ug/L		83
11) chloroethane	5.407	64	1344	1.94	ug/L		93
12) vinyl bromide	5.747	106	1633	1.88	ug/L		86
13) trichlorofluoromethane	5.878	101	3389	1.85	ug/L		98
14) ethyl ether	6.317	74	719	1.44	ug/L		93
15) 2-chloropropane	6.516	63	742	1.85	ug/L	#	81
17) freon 113	6.731	151	1623	1.80	ug/L		95
18) 1,1-dichloroethene	6.731	61	3194	2.03	ug/L		95
19) acetone	6.731	43	2015	6.96	ug/L		94
21) carbon disulfide	7.133	76	7561	2.04	ug/L		98
22) acetonitrile	7.144	41	2525	17.06	ug/L		80
24) methylene chloride	7.447	84	2538	2.11	ug/L		98
26) methyl tert butyl ether	7.824	73	5390	1.95	ug/L		94
27) trans-1,2-dichloroethene	7.866	61	3045	2.04	ug/L		95
28) hexane	8.242	57	3614	1.92	ug/L		90
29) 1,1-dichloroethane	8.436	63	3877	2.02	ug/L		97
31) di-isopropyl ether	8.446	45	6524	1.90	ug/L		93
32) chloroprene	8.556	53	2952	1.83	ug/L		97
33) ethyl tert-butyl ether	8.912	59	6171	1.87	ug/L		97
34) 2-butanone	9.095	72	589	5.29	ug/L	#	28
35) 2,2-dichloropropane	9.189	77	3470	2.01	ug/L		94
37) cis-1,2-dichloroethene	9.163	96	2503	2.01	ug/L		93
38) propionitrile	9.147	54	2576	15.79	ug/L		95
41) bromochloromethane	9.461	128	1091	2.03	ug/L		88
43) chloroform	9.550	83	3825	1.93	ug/L		94
44) carbon tetrachloride	10.026	117	3197	1.96	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) 1,1-dichloropropene	9.994	75	3019	2.04	ug/L		94
48) 1,1,1-trichloroethane	9.816	97	3293	1.85	ug/L		88
49) cyclohexane	9.937	84	3029	1.87	ug/L		88
54) 1,2-dichloroethane	10.256	62	3023	2.05	ug/L		94
55) benzene	10.240	78	8591	1.96	ug/L		99
56) 2,2,4-trimethylpentane	10.350	57	8690	1.94	ug/L		94
57) tert-amyl methyl ether	10.329	87	1372	1.84	ug/L		98
58) heptane	10.523	57	1835	2.05	ug/L	#	88
59) n-butyl alcohol	10.695	56	3163	90.54	ug/L		84
60) trichloroethene	10.972	95	2311	2.06	ug/L		85
61) ethyl acrylate	10.962	55	2236	1.86	ug/L		77
62) methylcyclohexane	11.281	83	3672	1.91	ug/L		95
63) 1,2-dichloropropane	11.250	63	2198	2.04	ug/L		91
65) dibromomethane	11.354	93	1284	1.97	ug/L		94
66) bromodichloromethane	11.511	83	2980	1.99	ug/L		84
68) 2-chloroethyl vinyl ether	11.752	63	6041	9.60	ug/L		93
69) epichlorohydrin	11.830	57	1010	9.24	ug/L		91
70) cis-1,3-dichloropropene	11.966	75	3306	1.89	ug/L		95
71) 4-methyl-2-pentanone	12.060	58	2454	7.43	ug/L		98
72) 3-methyl-1-butanol	12.060	70	1046	35.95	ug/L		92
75) toluene	12.358	92	5141	1.98	ug/L		97
76) trans-1,3-dichloropropene	12.526	75	2889	1.85	ug/L		95
77) ethyl methacrylate	12.531	69	2090	1.87	ug/L		83
78) 1,1,2-trichloroethane	12.751	83	1373	1.96	ug/L		95
79) 1,3-dichloropropane	12.928	76	2659	1.92	ug/L		97
80) tetrachloroethene	12.913	166	2619	2.01	ug/L		95
81) 2-hexanone	12.913	58	2581	7.93	ug/L		97
82) butyl acetate	13.002	56	927	1.63	ug/L	#	73
83) n-butyl ether	13.791	57	8237	1.92	ug/L		85
84) dibromochloromethane	13.174	129	2246	1.96	ug/L		99
85) 1,2-dibromoethane	13.331	107	1805	1.79	ug/L		97
86) chlorobenzene	13.818	112	5437	1.97	ug/L		96
87) 1,1,1,2-tetrachloroethane	13.880	131	2123	2.04	ug/L		97
88) ethylbenzene	13.880	91	9613	1.99	ug/L		95
89) m,p-xylene	14.001	106	7621	4.01	ug/L		98
90) o-xylene	14.403	106	3682	2.03	ug/L		89
91) styrene	14.414	104	6116	1.99	ug/L		95
92) butyl acrylate	14.231	55	3324	1.91	ug/L		94
93) cis-1,4-dichloro-2-butene	14.770	88	809	1.74	ug/L		93
94) bromoform	14.639	173	1591	2.00	ug/L		92
95) isopropylbenzene	14.754	105	9268	1.95	ug/L		97
98) 1,1,2,2-tetrachloroethane	15.015	83	2151	1.96	ug/L		97
100) 1,2,3-trichloropropane	15.099	110	499	1.72	ug/L		93
101) bromobenzene	15.130	156	2679	1.99	ug/L		94
102) n-propylbenzene	15.172	91	10946	1.96	ug/L		99
103) 2-chlorotoluene	15.298	126	2364	2.01	ug/L		89
104) 4-chlorotoluene	15.413	91	6491	1.94	ug/L		96
105) 1,3,5-trimethylbenzene	15.329	105	8685	2.07	ug/L		95
106) tert-butylbenzene	15.669	134	1254	1.65	ug/L	#	56
107) 1,2,4-trimethylbenzene	15.721	105	9128	2.12	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

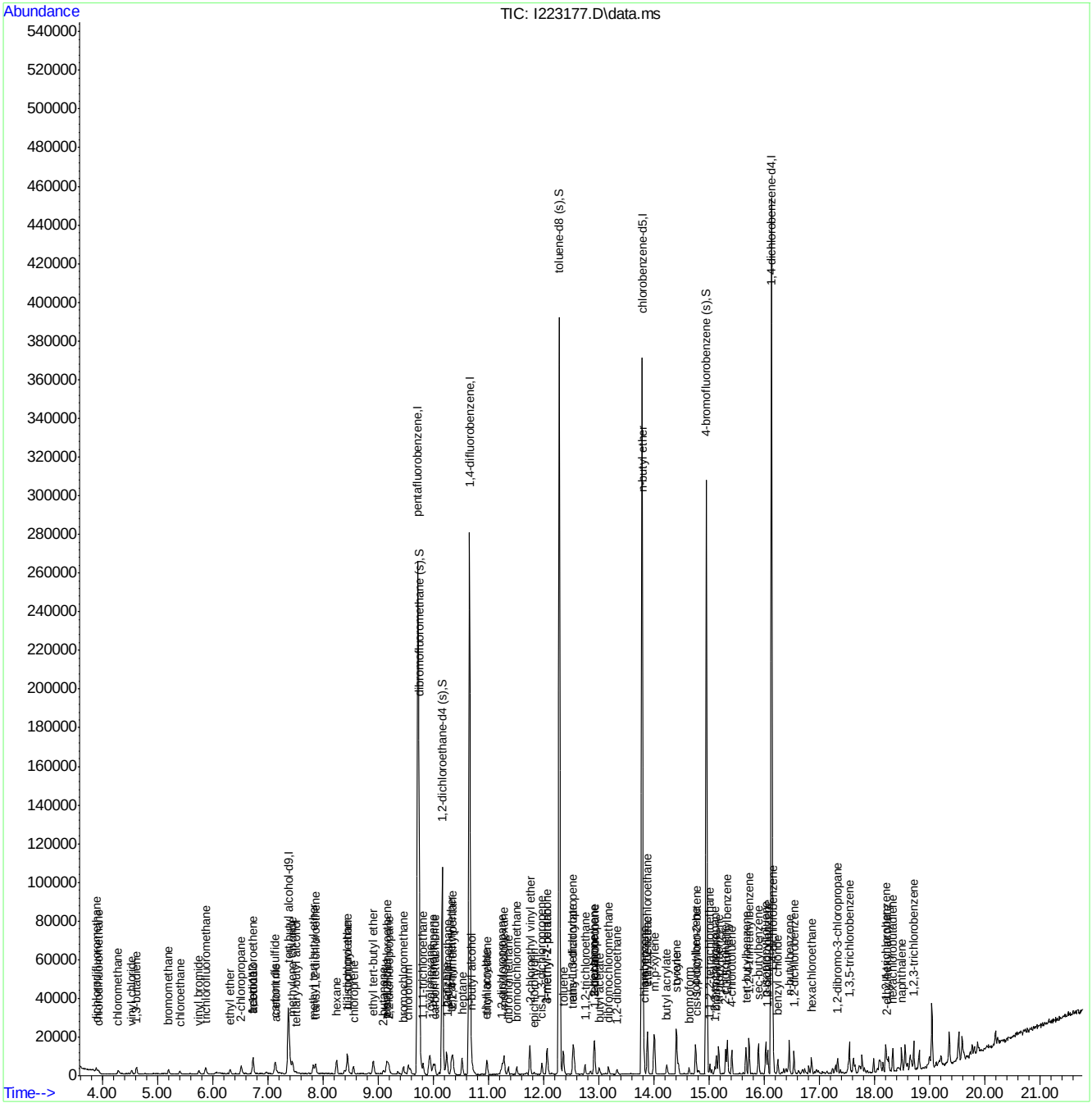
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) sec-butylbenzene	15.894	105	10453	2.00	ug/L		97
109) p-isopropyltoluene	16.030	119	9645	2.05	ug/l		97
110) benzyl chloride	16.244	91	5252	1.99	ug/L		97
111) 1,3-dichlorobenzene	16.056	146	5215	2.03	ug/L		90
112) 1,4-dichlorobenzene	16.156	146	5379	2.05	ug/L		96
113) 1,2-dichlorobenzene	16.537	146	4876	1.94	ug/L		97
114) n-butylbenzene	16.448	92	5110	2.09	ug/L		99
115) hexachloroethane	16.856	201	1719	1.92	ug/L		92
116) 1,2-dibromo-3-chloropr...	17.327	157	597	1.71	ug/L		80
118) 1,3,5-trichlorobenzene	17.542	180	5150	2.02	ug/L		97
119) 1,2,4-trichlorobenzene	18.201	180	4515	1.97	ug/L		94
120) 2-ethylhexyl acrylate	18.227	55	734	0.39	ug/L	#	84
121) hexachlorobutadiene	18.326	225	2825	1.93	ug/L		97
122) naphthalene	18.488	128	9080	2.05	ug/L		95
123) 1,2,3-trichlorobenzene	18.708	180	4541	2.07	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223178.D
Acq On : 27 Nov 2018 7:51 pm
Operator : thienn
Sample : IC8986-4
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 28 13:31:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	56246	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	176556	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	225937	50.00	ug/L		0.00
73) chlorobenzene-d5	13.781	117	190137	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	111558	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	69434	50.05	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.10%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	71923	51.01	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.02%				
74) toluene-d8 (s)	12.280	98	244882	50.24	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.48%				
97) 4-bromofluorobenzene (s)	14.947	95	85555	50.31	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.62%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.500	59	2079	17.77	ug/L		93
3) 1,4-dioxane	11.307	88	1177	89.79	ug/L		91
5) dichlorodifluoromethane	3.891	85	6572	4.35	ug/L		98
6) chlorodifluoromethane	3.917	51	5802	4.15	ug/L		95
7) chloromethane	4.283	50	5907	4.14	ug/L		94
8) vinyl chloride	4.529	62	5065	4.21	ug/L		92
9) 1,3-butadiene	4.618	54	3121	3.94	ug/L		97
10) bromomethane	5.193	94	3291	4.11	ug/L		85
11) chloroethane	5.402	64	2881	4.14	ug/L		89
12) vinyl bromide	5.742	106	3983	4.57	ug/L		91
13) trichlorofluoromethane	5.868	101	7415	4.03	ug/L		94
14) ethyl ether	6.317	74	1856	3.72	ug/L		84
15) 2-chloropropane	6.516	63	1728	4.30	ug/L		94
17) freon 113	6.731	151	3568	3.96	ug/L		93
18) 1,1-dichloroethene	6.725	61	6304	4.00	ug/L		96
19) acetone	6.725	43	4188	14.43	ug/L		89
20) iodomethane	6.976	142	2576	2.19	ug/L		97
21) carbon disulfide	7.128	76	14445	3.88	ug/L		99
22) acetonitrile	7.123	41	5289	35.65	ug/L		96
23) methyl acetate	7.217	74	297	4.73	ug/L	#	32
24) methylene chloride	7.447	84	4671	3.87	ug/L		88
26) methyl tert butyl ether	7.824	73	10938	3.95	ug/L		97
27) trans-1,2-dichloroethene	7.860	61	6302	4.21	ug/L		96
28) hexane	8.242	57	7243	3.84	ug/L		94
29) 1,1-dichloroethane	8.436	63	7996	4.16	ug/L		97
31) di-isopropyl ether	8.446	45	13729	4.00	ug/L		95
32) chloroprene	8.551	53	6628	4.10	ug/L		98
33) ethyl tert-butyl ether	8.912	59	12990	3.92	ug/L		96
34) 2-butanone	9.090	72	1455	13.05	ug/L	#	69
35) 2,2-dichloropropane	9.189	77	7138	4.12	ug/L		94
36) ethyl acetate	9.131	45	349	2.44	ug/L	#	34
37) cis-1,2-dichloroethene	9.163	96	5131	4.12	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223178.D
Acq On : 27 Nov 2018 7:51 pm
Operator : thienn
Sample : IC8986-4
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 28 13:31:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) propionitrile	9.142	54	5988	36.63	ug/L		89
39) methyl acrylate	9.215	85	334	2.30	ug/L	#	61
40) methacrylonitrile	9.351	67	1288	3.31	ug/L		87
41) bromochloromethane	9.461	128	2348	4.37	ug/L		92
42) tetrahydrofuran	9.492	71	385	3.00	ug/L		80
43) chloroform	9.550	83	8299	4.17	ug/L		93
44) carbon tetrachloride	10.026	117	6868	4.21	ug/L		89
45) 1,1-dichloropropene	9.994	75	6056	4.09	ug/L		95
48) 1,1,1-trichloroethane	9.811	97	7418	4.17	ug/L		96
49) cyclohexane	9.942	84	6917	4.25	ug/L		87
50) tert-amyl alcohol	10.104	55	446	10.75	ug/L	#	61
53) isopropyl acetate	10.156	87	543	2.65	ug/L	#	34
54) 1,2-dichloroethane	10.256	62	6182	4.16	ug/L		96
55) benzene	10.240	78	17835	4.04	ug/L		99
56) 2,2,4-trimethylpentane	10.350	57	18780	4.16	ug/L		96
57) tert-amyl methyl ether	10.324	87	2943	3.91	ug/L	#	87
58) heptane	10.523	57	3749	4.15	ug/L		95
59) n-butyl alcohol	10.695	56	6210	176.35	ug/L		85
60) trichloroethene	10.967	95	4719	4.17	ug/L	#	80
61) ethyl acrylate	10.957	55	4276	3.53	ug/L		98
62) methylcyclohexane	11.281	83	7925	4.09	ug/L		98
63) 1,2-dichloropropane	11.250	63	4432	4.08	ug/L		93
64) methyl methacrylate	11.223	100	861	3.38	ug/L	#	83
65) dibromomethane	11.354	93	2569	3.90	ug/L		92
66) bromodichloromethane	11.506	83	6102	4.05	ug/L		98
67) 2-nitropropane	11.684	41	1087	4.18	ug/L		89
68) 2-chloroethyl vinyl ether	11.746	63	12802	20.17	ug/L		99
69) epichlorohydrin	11.825	57	2136	19.38	ug/L		88
70) cis-1,3-dichloropropene	11.966	75	7213	4.08	ug/L		93
71) 4-methyl-2-pentanone	12.060	58	5298	15.91	ug/L		96
72) 3-methyl-1-butanol	12.060	70	2062	70.31	ug/L		95
75) toluene	12.358	92	11007	4.18	ug/L		99
76) trans-1,3-dichloropropene	12.531	75	6206	3.92	ug/L		95
77) ethyl methacrylate	12.531	69	4545	4.00	ug/L		99
78) 1,1,2-trichloroethane	12.751	83	3155	4.43	ug/L	#	84
79) 1,3-dichloropropane	12.929	76	5622	4.00	ug/L		93
80) tetrachloroethene	12.913	166	5461	4.13	ug/L		92
81) 2-hexanone	12.908	58	5119	15.51	ug/L		93
82) butyl acetate	13.002	56	2274	3.95	ug/L		86
83) n-butyl ether	13.791	57	17588	4.05	ug/L		91
84) dibromochloromethane	13.180	129	4648	4.00	ug/L		91
85) 1,2-dibromoethane	13.331	107	4108	4.02	ug/L		91
86) chlorobenzene	13.818	112	11335	4.04	ug/L		97
87) 1,1,1,2-tetrachloroethane	13.880	131	4380	4.15	ug/L		98
88) ethylbenzene	13.880	91	20145	4.11	ug/L		97
89) m,p-xylene	14.006	106	15542	8.06	ug/L		96
90) o-xylene	14.403	106	7506	4.07	ug/L		98
91) styrene	14.414	104	12462	3.99	ug/L		98
92) butyl acrylate	14.231	55	7007	3.97	ug/L		93
93) cis-1,4-dichloro-2-butene	14.775	88	1826	3.86	ug/L		87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223178.D
Acq On : 27 Nov 2018 7:51 pm
Operator : thienn
Sample : IC8986-4
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 28 13:31:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

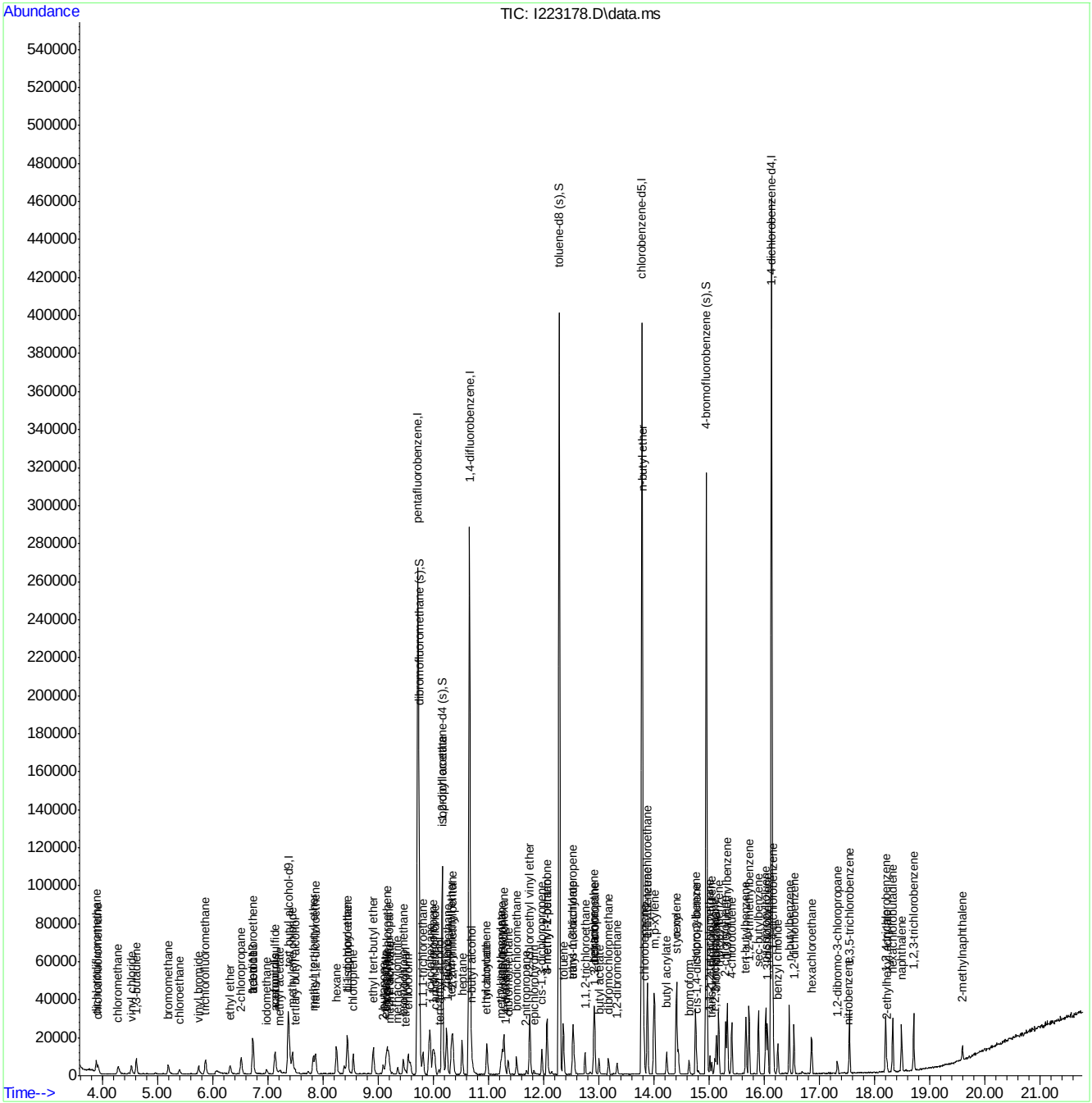
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) bromoform	14.634	173	3228	4.00	ug/L		99
95) isopropylbenzene	14.754	105	19237	3.98	ug/L		98
98) 1,1,2,2-tetrachloroethane	15.015	83	4469	3.98	ug/L		97
99) trans-1,4-dichloro-2-b...	15.047	53	1081	3.85	ug/L		97
100) 1,2,3-trichloropropane	15.099	110	1108	3.73	ug/L		90
101) bromobenzene	15.130	156	5691	4.13	ug/L		93
102) n-propylbenzene	15.167	91	23225	4.06	ug/L		99
103) 2-chlorotoluene	15.298	126	5120	4.26	ug/L		88
104) 4-chlorotoluene	15.408	91	13909	4.07	ug/L		96
105) 1,3,5-trimethylbenzene	15.329	105	17906	4.16	ug/L		99
106) tert-butylbenzene	15.664	134	3131	4.02	ug/L	#	91
107) 1,2,4-trimethylbenzene	15.721	105	17951	4.07	ug/L		97
108) sec-butylbenzene	15.889	105	21516	4.02	ug/L		97
109) p-isopropyltoluene	16.030	119	18768	3.90	ug/l		98
110) benzyl chloride	16.244	91	10717	3.97	ug/L		95
111) 1,3-dichlorobenzene	16.061	146	10674	4.06	ug/L		99
112) 1,4-dichlorobenzene	16.156	146	11005	4.10	ug/L		96
113) 1,2-dichlorobenzene	16.537	146	10429	4.05	ug/L		97
114) n-butylbenzene	16.448	92	9980	3.99	ug/L		99
115) hexachloroethane	16.856	201	3672	4.01	ug/L		95
116) 1,2-dibromo-3-chloropr...	17.322	157	1323	3.70	ug/L		94
117) nitrobenzene	17.521	77	403	3.28	ug/L	#	49
118) 1,3,5-trichlorobenzene	17.542	180	10294	3.94	ug/L		93
119) 1,2,4-trichlorobenzene	18.201	180	9335	3.97	ug/L		98
120) 2-ethylhexyl acrylate	18.227	55	1548	0.81	ug/L		94
121) hexachlorobutadiene	18.326	225	6284	4.20	ug/L		96
122) naphthalene	18.488	128	18133	3.99	ug/L		97
123) 1,2,3-trichlorobenzene	18.708	180	9247	4.12	ug/L		94
124) 2-methylnaphthalene	19.587	142	3360	1.86	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223178.D
Acq On : 27 Nov 2018 7:51 pm
Operator : thienn
Sample : IC8986-4
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 28 13:31:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223179.D
Acq On : 27 Nov 2018 8:21 pm
Operator : thienn
Sample : IC8986-8
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 28 12:54:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	57167	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	177523	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	226737	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	188963	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109400	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	70072	50.23	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.46%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	72263	51.08	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.16%				
74) toluene-d8 (s)	12.280	98	241205	49.79	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.58%				
97) 4-bromofluorobenzene (s)	14.947	95	84595	50.72	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.44%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.494	59	4938	41.52	ug/L		95
3) 1,4-dioxane	11.307	88	2896	217.37	ug/L		93
5) dichlorodifluoromethane	3.891	85	12278	8.09	ug/L		98
6) chlorodifluoromethane	3.922	51	11960	8.51	ug/L		97
7) chloromethane	4.283	50	10548	7.35	ug/L		97
8) vinyl chloride	4.529	62	9571	7.92	ug/L		95
9) 1,3-butadiene	4.618	54	6813	8.55	ug/L		94
10) bromomethane	5.198	94	6613	8.22	ug/L		91
11) chloroethane	5.402	64	5935	8.48	ug/L		97
12) vinyl bromide	5.747	106	7369	8.41	ug/L		95
13) trichlorofluoromethane	5.873	101	14953	8.08	ug/L		97
14) ethyl ether	6.317	74	4326	8.62	ug/L		98
15) 2-chloropropane	6.511	63	3588	8.88	ug/L	#	82
16) acrolein	6.532	56	1017	6.45	ug/L		86
17) freon 113	6.731	151	7945	8.76	ug/L		93
18) 1,1-dichloroethene	6.725	61	13985	8.83	ug/L		92
19) acetone	6.720	43	9957	34.12	ug/L		99
20) iodomethane	6.976	142	6495	5.43	ug/L		99
21) carbon disulfide	7.133	76	29142	7.79	ug/L		98
22) acetonitrile	7.118	41	12419	83.26	ug/L		97
23) methyl acetate	7.222	74	1138	9.23	ug/L	#	45
24) methylene chloride	7.447	84	9752	8.04	ug/L		95
25) acrylonitrile	7.730	53	2519	7.61	ug/L		91
26) methyl tert butyl ether	7.824	73	23303	8.36	ug/L		98
27) trans-1,2-dichloroethene	7.860	61	13077	8.69	ug/L		96
28) hexane	8.247	57	15412	8.12	ug/L		96
29) 1,1-dichloroethane	8.436	63	17089	8.84	ug/L		96
30) vinyl acetate	8.389	86	1298	7.24	ug/L	#	22
31) di-isopropyl ether	8.446	45	29622	8.58	ug/L		95
32) chloroprene	8.551	53	14599	8.97	ug/L		97
33) ethyl tert-butyl ether	8.912	59	28041	8.41	ug/L		98
34) 2-butanone	9.089	72	3576	31.90	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223179.D
Acq On : 27 Nov 2018 8:21 pm
Operator : thienn
Sample : IC8986-8
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 28 12:54:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	14913	8.55	ug/L		98
36) ethyl acetate	9.121	45	953	6.63	ug/L	#	77
37) cis-1,2-dichloroethene	9.157	96	10944	8.74	ug/L		97
38) propionitrile	9.142	54	13778	83.83	ug/L		93
39) methyl acrylate	9.205	85	994	6.79	ug/L	#	75
40) methacrylonitrile	9.351	67	3176	8.13	ug/L		97
41) bromochloromethane	9.456	128	4948	9.16	ug/L		94
42) tetrahydrofuran	9.497	71	1059	8.20	ug/L		86
43) chloroform	9.550	83	17415	8.70	ug/L		96
44) carbon tetrachloride	10.026	117	14463	8.82	ug/L		98
45) 1,1-dichloropropene	9.994	75	12924	8.67	ug/L		97
48) 1,1,1-trichloroethane	9.811	97	16146	9.02	ug/L		96
49) cyclohexane	9.942	84	13156	8.05	ug/L		96
50) tert-amyl alcohol	10.094	55	1692	40.55	ug/L		84
53) isopropyl acetate	10.156	87	1638	7.97	ug/L	#	58
54) 1,2-dichloroethane	10.256	62	12400	8.32	ug/L		91
55) benzene	10.240	78	38197	8.62	ug/L		99
56) 2,2,4-trimethylpentane	10.350	57	39687	8.75	ug/L		97
57) tert-amyl methyl ether	10.324	87	6544	8.66	ug/L	#	83
58) heptane	10.523	57	8295	9.15	ug/L		96
59) n-butyl alcohol	10.690	56	14176	401.15	ug/L		98
60) trichloroethene	10.972	95	10146	8.94	ug/L		90
61) ethyl acrylate	10.957	55	10143	8.34	ug/L		97
62) methylcyclohexane	11.281	83	16451	8.45	ug/L		94
63) 1,2-dichloropropane	11.250	63	9387	8.61	ug/L		92
64) methyl methacrylate	11.218	100	2002	7.83	ug/L		95
65) dibromomethane	11.354	93	5573	8.44	ug/L		98
66) bromodichloromethane	11.511	83	13342	8.83	ug/L		96
67) 2-nitropropane	11.689	41	2054	7.87	ug/L		92
68) 2-chloroethyl vinyl ether	11.746	63	27553	43.26	ug/L		97
69) epichlorohydrin	11.820	57	4510	40.78	ug/L		91
70) cis-1,3-dichloropropene	11.966	75	15109	8.52	ug/L		95
71) 4-methyl-2-pentanone	12.060	58	12035	36.00	ug/L		95
72) 3-methyl-1-butanol	12.060	70	4973	168.96	ug/L		97
75) toluene	12.358	92	22761	8.70	ug/L		95
76) trans-1,3-dichloropropene	12.531	75	13646	8.67	ug/L		98
77) ethyl methacrylate	12.526	69	10126	8.97	ug/L		92
78) 1,1,2-trichloroethane	12.745	83	6458	9.13	ug/L		98
79) 1,3-dichloropropane	12.928	76	12230	8.76	ug/L		96
80) tetrachloroethene	12.918	166	11344	8.64	ug/L		96
81) 2-hexanone	12.913	58	11762	35.85	ug/L		89
82) butyl acetate	13.002	56	4930	8.62	ug/L		99
83) n-butyl ether	13.791	57	36936	8.55	ug/L		97
84) dibromochloromethane	13.180	129	9932	8.59	ug/L		96
85) 1,2-dibromoethane	13.331	107	8785	8.65	ug/L		100
86) chlorobenzene	13.818	112	24105	8.65	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.880	131	9408	8.98	ug/L		92
88) ethylbenzene	13.880	91	41922	8.60	ug/L		100
89) m,p-xylene	14.001	106	32874	17.16	ug/L		98
90) o-xylene	14.403	106	15947	8.71	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223179.D
Acq On : 27 Nov 2018 8:21 pm
Operator : thienn
Sample : IC8986-8
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 28 12:54:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

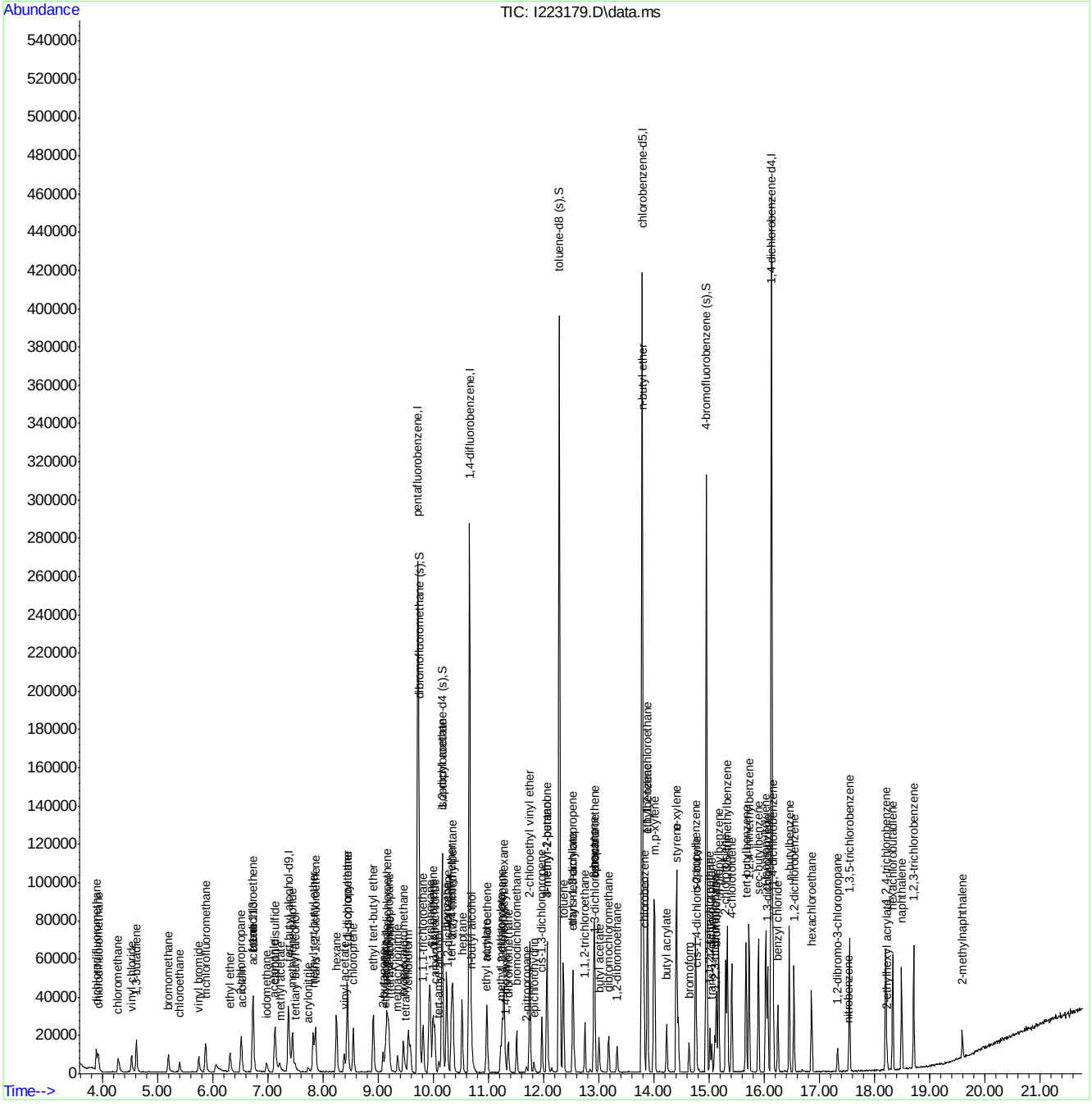
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.414	104	27074	8.72	ug/L	99
92) butyl acrylate	14.231	55	14603	8.33	ug/L	99
93) cis-1,4-dichloro-2-butene	14.770	88	3954	8.42	ug/L	94
94) bromoform	14.634	173	6780	8.45	ug/L	98
95) isopropylbenzene	14.754	105	41159	8.57	ug/L	99
98) 1,1,2,2-tetrachloroethane	15.015	83	9707	8.82	ug/L	97
99) trans-1,4-dichloro-2-b...	15.047	53	2565	9.31	ug/L	91
100) 1,2,3-trichloropropane	15.099	110	2584	8.87	ug/L	91
101) bromobenzene	15.130	156	11885	8.80	ug/L	96
102) n-propylbenzene	15.167	91	49243	8.78	ug/L	98
103) 2-chlorotoluene	15.298	126	10390	8.82	ug/L	95
104) 4-chlorotoluene	15.408	91	28928	8.63	ug/L	97
105) 1,3,5-trimethylbenzene	15.329	105	37155	8.81	ug/L	96
106) tert-butylbenzene	15.669	134	6855	8.98	ug/L	95
107) 1,2,4-trimethylbenzene	15.721	105	36736	8.50	ug/L	99
108) sec-butylbenzene	15.894	105	45123	8.60	ug/L	98
109) p-isopropyltoluene	16.030	119	39972	8.47	ug/l	98
110) benzyl chloride	16.244	91	22222	8.39	ug/L	95
111) 1,3-dichlorobenzene	16.061	146	21514	8.35	ug/L	95
112) 1,4-dichlorobenzene	16.156	146	22113	8.40	ug/L	96
113) 1,2-dichlorobenzene	16.537	146	21629	8.57	ug/L	99
114) n-butylbenzene	16.448	92	21121	8.60	ug/L	96
115) hexachloroethane	16.856	201	7837	8.73	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.327	157	2959	8.43	ug/L	85
117) nitrobenzene	17.515	77	890	7.38	ug/L	98
118) 1,3,5-trichlorobenzene	17.542	180	21999	8.59	ug/L	98
119) 1,2,4-trichlorobenzene	18.201	180	19496	8.46	ug/L	99
120) 2-ethylhexyl acrylate	18.227	55	3118	1.66	ug/L	98
121) hexachlorobutadiene	18.326	225	12855	8.76	ug/L	97
122) naphthalene	18.488	128	37654	8.45	ug/L	98
123) 1,2,3-trichlorobenzene	18.708	180	19464	8.84	ug/L	99
124) 2-methylnaphthalene	19.587	142	6525	3.69	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223179.D
Acq On : 27 Nov 2018 8:21 pm
Operator : thienn
Sample : IC8986-8
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 28 12:54:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223180.D
Acq On : 27 Nov 2018 8:51 pm
Operator : thienn
Sample : IC8986-20
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 28 12:53:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	60757	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	178537	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	231620	50.00	ug/L		0.00
73) chlorobenzene-d5	13.781	117	192374	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	115697	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	70783	50.45	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.90%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	73197	50.64	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.28%				
74) toluene-d8 (s)	12.280	98	249239	50.54	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.08%				
97) 4-bromofluorobenzene (s)	14.947	95	87552	49.64	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.28%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.494	59	12593	99.62	ug/L		94
3) 1,4-dioxane	11.302	88	7334	517.94	ug/L		94
5) dichlorodifluoromethane	3.890	85	32106	21.03	ug/L		99
6) chlorodifluoromethane	3.922	51	29986	21.21	ug/L		99
7) chloromethane	4.283	50	26635	18.44	ug/L		99
8) vinyl chloride	4.529	62	24948	20.52	ug/L		95
9) 1,3-butadiene	4.617	54	17316	21.61	ug/L		95
10) bromomethane	5.193	94	15986	19.75	ug/L		95
11) chloroethane	5.397	64	15576	22.14	ug/L		99
12) vinyl bromide	5.747	106	19632	22.29	ug/L		98
13) trichlorofluoromethane	5.873	101	38133	20.49	ug/L		96
14) ethyl ether	6.312	74	11049	21.88	ug/L		94
15) 2-chloropropane	6.516	63	9402	23.13	ug/L		98
16) acrolein	6.516	56	3141	19.80	ug/L		94
17) freon 113	6.730	151	19068	20.91	ug/L		97
18) 1,1-dichloroethene	6.730	61	34307	21.54	ug/L		97
19) acetone	6.715	43	24864	84.71	ug/L		98
20) iodomethane	6.976	142	21998	18.17	ug/L		94
21) carbon disulfide	7.128	76	69460	18.46	ug/L		99
22) acetonitrile	7.123	41	31184	207.87	ug/L		91
23) methyl acetate	7.212	74	3028	19.27	ug/L		94
24) methylene chloride	7.447	84	23654	19.38	ug/L		96
25) acrylonitrile	7.719	53	6886	20.68	ug/L		95
26) methyl tert butyl ether	7.824	73	60125	21.45	ug/L		99
27) trans-1,2-dichloroethene	7.860	61	32787	21.66	ug/L		97
28) hexane	8.242	57	39016	20.44	ug/L		98
29) 1,1-dichloroethane	8.436	63	41243	21.21	ug/L		98
30) vinyl acetate	8.383	86	3660	20.30	ug/L	#	95
31) di-isopropyl ether	8.446	45	73396	21.14	ug/L		96
32) chloroprene	8.551	53	36442	22.27	ug/L		99
33) ethyl tert-butyl ether	8.911	59	70796	21.12	ug/L		99
34) 2-butanone	9.084	72	9429	83.62	ug/L	#	80

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223180.D
Acq On : 27 Nov 2018 8:51 pm
Operator : thienn
Sample : IC8986-20
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 28 12:53:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	36440	20.78	ug/L		96
36) ethyl acetate	9.115	45	3029	20.94	ug/L	#	85
37) cis-1,2-dichloroethene	9.157	96	26335	20.90	ug/L		96
38) propionitrile	9.142	54	34122	206.43	ug/L		97
39) methyl acrylate	9.204	85	2951	20.05	ug/L		95
40) methacrylonitrile	9.351	67	8240	20.97	ug/L	#	84
41) bromochloromethane	9.455	128	12346	22.72	ug/L		90
42) tetrahydrofuran	9.487	71	2571	19.79	ug/L		95
43) chloroform	9.544	83	43044	21.38	ug/L		99
44) carbon tetrachloride	10.026	117	35816	21.72	ug/L		98
45) 1,1-dichloropropene	9.994	75	31941	21.31	ug/L		96
48) 1,1,1-trichloroethane	9.816	97	38625	21.46	ug/L		98
49) cyclohexane	9.942	84	33831	20.57	ug/L		97
50) tert-amyl alcohol	10.099	55	4282	102.05	ug/L		92
53) isopropyl acetate	10.151	87	4201	20.02	ug/L	#	91
54) 1,2-dichloroethane	10.250	62	30514	20.05	ug/L		95
55) benzene	10.235	78	94269	20.83	ug/L		99
56) 2,2,4-trimethylpentane	10.355	57	97151	20.97	ug/L		99
57) tert-amyl methyl ether	10.329	87	16375	21.20	ug/L		97
58) heptane	10.522	57	20464	22.10	ug/L		97
59) n-butyl alcohol	10.685	56	40458	1120.74	ug/L		93
60) trichloroethene	10.972	95	24857	21.43	ug/L		97
61) ethyl acrylate	10.951	55	25658	20.66	ug/L		99
62) methylcyclohexane	11.281	83	42109	21.18	ug/L		98
63) 1,2-dichloropropane	11.249	63	23215	20.85	ug/L		97
64) methyl methacrylate	11.218	100	5362	20.54	ug/L		95
65) dibromomethane	11.354	93	13934	20.65	ug/L		95
66) bromodichloromethane	11.506	83	32780	21.23	ug/L		95
67) 2-nitropropane	11.689	41	5485	20.58	ug/L		99
68) 2-chloroethyl vinyl ether	11.746	63	70174	107.87	ug/L		100
69) epichlorohydrin	11.820	57	11247	99.55	ug/L		98
70) cis-1,3-dichloropropene	11.966	75	38343	21.16	ug/L		93
71) 4-methyl-2-pentanone	12.060	58	29969	87.76	ug/L		97
72) 3-methyl-1-butanol	12.055	70	12205	405.93	ug/L		93
75) toluene	12.353	92	55539	20.86	ug/L		97
76) trans-1,3-dichloropropene	12.531	75	33741	21.06	ug/L		99
77) ethyl methacrylate	12.531	69	25725	22.38	ug/L		99
78) 1,1,2-trichloroethane	12.745	83	16074	22.32	ug/L		97
79) 1,3-dichloropropane	12.928	76	30585	21.51	ug/L		98
80) tetrachloroethene	12.918	166	28015	20.95	ug/L		95
81) 2-hexanone	12.907	58	28960	86.71	ug/L		99
82) butyl acetate	13.002	56	12738	21.88	ug/L		96
83) n-butyl ether	13.791	57	89919	20.45	ug/L		99
84) dibromochloromethane	13.174	129	25290	21.48	ug/L		99
85) 1,2-dibromoethane	13.331	107	22074	21.36	ug/L		98
86) chlorobenzene	13.817	112	59344	20.92	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.880	131	22847	21.42	ug/L		96
88) ethylbenzene	13.880	91	102489	20.66	ug/L		98
89) m,p-xylene	14.006	106	81162	41.60	ug/L		95
90) o-xylene	14.403	106	38989	20.91	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223180.D
Acq On : 27 Nov 2018 8:51 pm
Operator : thienn
Sample : IC8986-20
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 28 12:53:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

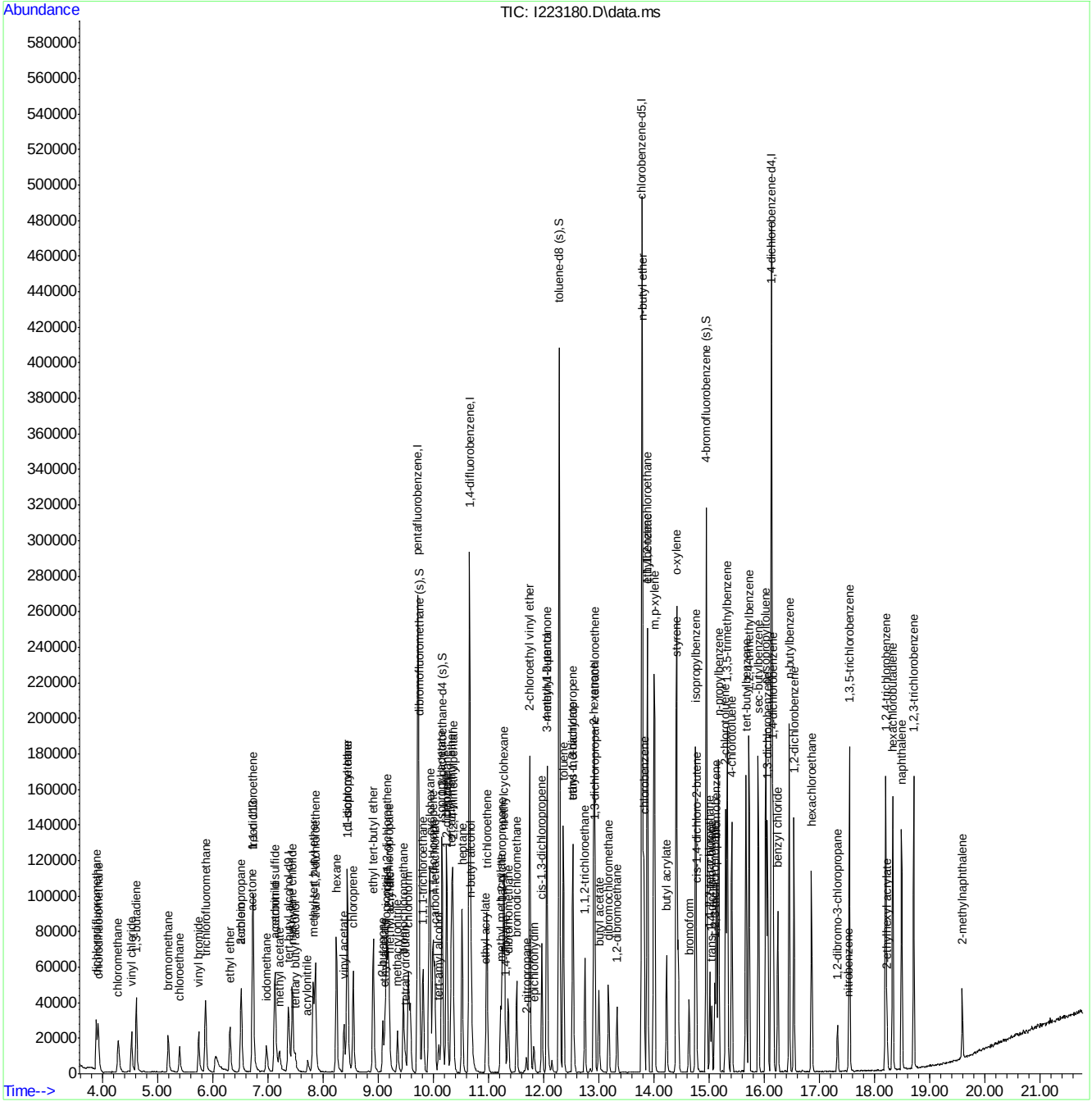
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.414	104	66528	21.04	ug/L	98
92) butyl acrylate	14.231	55	38824	21.75	ug/L	99
93) cis-1,4-dichloro-2-butene	14.769	88	10054	21.03	ug/L	97
94) bromoform	14.633	173	17668	21.64	ug/L	98
95) isopropylbenzene	14.754	105	103238	21.12	ug/L	99
98) 1,1,2,2-tetrachloroethane	15.015	83	24199	20.80	ug/L	100
99) trans-1,4-dichloro-2-b...	15.047	53	6126	21.03	ug/L	94
100) 1,2,3-trichloropropane	15.099	110	6423	20.84	ug/L	95
101) bromobenzene	15.130	156	29145	20.40	ug/L	94
102) n-propylbenzene	15.167	91	121831	20.55	ug/L	99
103) 2-chlorotoluene	15.298	126	25087	20.14	ug/L	99
104) 4-chlorotoluene	15.407	91	73277	20.67	ug/L	99
105) 1,3,5-trimethylbenzene	15.329	105	93027	20.85	ug/L	99
106) tert-butylbenzene	15.669	134	17215	21.32	ug/L	91
107) 1,2,4-trimethylbenzene	15.721	105	93166	20.38	ug/L	99
108) sec-butylbenzene	15.894	105	116356	20.97	ug/L	98
109) p-isopropyltoluene	16.025	119	103616	20.76	ug/l	98
110) benzyl chloride	16.244	91	57589	20.57	ug/L	100
111) 1,3-dichlorobenzene	16.061	146	56399	20.69	ug/L	99
112) 1,4-dichlorobenzene	16.155	146	57261	20.57	ug/L	100
113) 1,2-dichlorobenzene	16.537	146	55735	20.89	ug/L	98
114) n-butylbenzene	16.448	92	53936	20.77	ug/L	98
115) hexachloroethane	16.856	201	20274	21.36	ug/L	98
116) 1,2-dibromo-3-chloropr...	17.327	157	7256	19.55	ug/L	95
117) nitrobenzene	17.520	77	2497	19.58	ug/L	100
118) 1,3,5-trichlorobenzene	17.541	180	56685	20.92	ug/L	99
119) 1,2,4-trichlorobenzene	18.200	180	52254	21.44	ug/L	98
120) 2-ethylhexyl acrylate	18.221	55	8371	4.22	ug/L	96
121) hexachlorobutadiene	18.326	225	32109	20.70	ug/L	98
122) naphthalene	18.488	128	96578	20.50	ug/L	98
123) 1,2,3-trichlorobenzene	18.708	180	49571	21.28	ug/L	97
124) 2-methylnaphthalene	19.586	142	16725	8.94	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223180.D
Acq On : 27 Nov 2018 8:51 pm
Operator : thienn
Sample : IC8986-20
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 28 12:53:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223181.D
Acq On : 27 Nov 2018 9:20 pm
Operator : thienn
Sample : ICC8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 28 12:50:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.374	65	65148	500.00	ug/L	0.00
4) pentafluorobenzene	9.717	168	183720	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.653	114	241012	50.00	ug/L	0.00
73) chlorobenzene-d5	13.786	117	199224	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	16.129	152	122046	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.738	113	72211	50.02	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.04%			
52) 1,2-dichloroethane-d4 (s)	10.162	65	75307	50.07	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.14%			
74) toluene-d8 (s)	12.280	98	255884	50.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.20%			
97) 4-bromofluorobenzene (s)	14.947	95	92076	49.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.98%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.494	59	34280	252.91	ug/L	98
3) 1,4-dioxane	11.302	88	18969	1249.34	ug/L	100
5) dichlorodifluoromethane	3.890	85	82853	52.75	ug/L	100
6) chlorodifluoromethane	3.922	51	77914	53.54	ug/L	100
7) chloromethane	4.283	50	69250	46.60	ug/L	100
8) vinyl chloride	4.529	62	64684	51.69	ug/L	100
9) 1,3-butadiene	4.617	54	45024	54.60	ug/L	100
10) bromomethane	5.193	94	40805	48.98	ug/L	100
11) chloroethane	5.397	64	38247	52.83	ug/L	100
12) vinyl bromide	5.747	106	50347	55.54	ug/L	100
13) trichlorofluoromethane	5.868	101	100710	52.58	ug/L	100
14) ethyl ether	6.312	74	28730	55.30	ug/L	100
15) 2-chloropropane	6.516	63	23431	56.01	ug/L	100
16) acrolein	6.516	56	8859	54.27	ug/L	100
17) freon 113	6.731	151	49395	52.64	ug/L	100
18) 1,1-dichloroethene	6.725	61	86853	52.99	ug/L	100
19) acetone	6.715	43	63698	210.89	ug/L	100
20) iodomethane	6.976	142	66995	53.67	ug/L	100
21) carbon disulfide	7.128	76	176684	45.64	ug/L	100
22) acetonitrile	7.118	41	79332	513.90	ug/L	100
23) methyl acetate	7.206	74	8566	47.49	ug/L	100
24) methylene chloride	7.442	84	60413	48.11	ug/L	100
25) acrylonitrile	7.724	53	18124	52.90	ug/L	100
26) methyl tert butyl ether	7.824	73	155389	53.88	ug/L	100
27) trans-1,2-dichloroethene	7.860	61	83571	53.66	ug/L	100
28) hexane	8.242	57	98027	49.90	ug/L	100
29) 1,1-dichloroethane	8.436	63	102884	51.42	ug/L	100
30) vinyl acetate	8.383	86	9922	53.47	ug/L	100
31) di-isopropyl ether	8.446	45	190053	53.20	ug/L	100
32) chloroprene	8.545	53	92917	55.18	ug/L	100
33) ethyl tert-butyl ether	8.912	59	184714	53.54	ug/L	100
34) 2-butanone	9.079	72	25416	219.05	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223181.D
Acq On : 27 Nov 2018 9:20 pm
Operator : thienn
Sample : ICC8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 28 12:50:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) 2,2-dichloropropane	9.189	77	90897	50.37	ug/L	100
36) ethyl acetate	9.121	45	8039	54.01	ug/L	100
37) cis-1,2-dichloroethene	9.157	96	67177	51.81	ug/L	100
38) propionitrile	9.136	54	87315	513.33	ug/L	100
39) methyl acrylate	9.199	85	8450	55.80	ug/L	100
40) methacrylonitrile	9.351	67	22466	55.56	ug/L	100
41) bromochloromethane	9.455	128	30983	55.40	ug/L	100
42) tetrahydrofuran	9.492	71	6656	49.78	ug/L	100
43) chloroform	9.544	83	109285	52.76	ug/L	100
44) carbon tetrachloride	10.026	117	90565	53.38	ug/L	100
45) 1,1-dichloropropene	9.994	75	84007	54.47	ug/L	100
48) 1,1,1-trichloroethane	9.816	97	97406	52.58	ug/L	100
49) cyclohexane	9.942	84	84523	49.94	ug/L	100
50) tert-amyl alcohol	10.099	55	11866	274.81	ug/L	100
53) isopropyl acetate	10.151	87	11857	54.30	ug/L	100
54) 1,2-dichloroethane	10.250	62	78466	49.56	ug/L	100
55) benzene	10.240	78	241521	51.30	ug/L	100
56) 2,2,4-trimethylpentane	10.355	57	243178	50.45	ug/L	100
57) tert-amyl methyl ether	10.329	87	42313	52.65	ug/L	100
58) heptane	10.522	57	50398	52.30	ug/L	100
59) n-butyl alcohol	10.685	56	102871	2738.62	ug/L	100
60) trichloroethene	10.972	95	63521	52.64	ug/L	100
61) ethyl acrylate	10.951	55	69289	53.60	ug/L	100
62) methylcyclohexane	11.281	83	107265	51.85	ug/L	100
63) 1,2-dichloropropane	11.249	63	60142	51.91	ug/L	100
64) methyl methacrylate	11.218	100	14863	54.72	ug/L	100
65) dibromomethane	11.354	93	35998	51.26	ug/L	100
66) bromodichloromethane	11.511	83	84631	52.67	ug/L	100
67) 2-nitropropane	11.689	41	14807	53.40	ug/L	100
68) 2-chloroethyl vinyl ether	11.746	63	183023	270.36	ug/L	100
69) epichlorohydrin	11.820	57	29222	248.58	ug/L	100
70) cis-1,3-dichloropropene	11.966	75	97561	51.75	ug/L	100
71) 4-methyl-2-pentanone	12.060	58	76900	216.43	ug/L	100
72) 3-methyl-1-butanol	12.055	70	33344	1065.77	ug/L	100
75) toluene	12.358	92	140631	51.00	ug/L	100
76) trans-1,3-dichloropropene	12.531	75	86461	52.10	ug/L	100
77) ethyl methacrylate	12.531	69	64346	54.06	ug/L	100
78) 1,1,2-trichloroethane	12.751	83	42156	56.53	ug/L	100
79) 1,3-dichloropropane	12.928	76	76864	52.20	ug/L	100
80) tetrachloroethene	12.918	166	71605	51.72	ug/L	100
81) 2-hexanone	12.907	58	75911	219.48	ug/L	100
82) butyl acetate	13.002	56	32690	54.22	ug/L	100
83) n-butyl ether	13.791	57	228731	50.23	ug/L	100
84) dibromochloromethane	13.179	129	65396	53.65	ug/L	100
85) 1,2-dibromoethane	13.331	107	58082	54.27	ug/L	100
86) chlorobenzene	13.817	112	150447	51.21	ug/L	100
87) 1,1,1,2-tetrachloroethane	13.880	131	59902	54.22	ug/L	100
88) ethylbenzene	13.880	91	260298	50.67	ug/L	100
89) m,p-xylene	14.006	106	205051	101.50	ug/L	100
90) o-xylene	14.403	106	101602	52.63	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223181.D
Acq On : 27 Nov 2018 9:20 pm
Operator : thienn
Sample : ICC8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 28 12:50:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

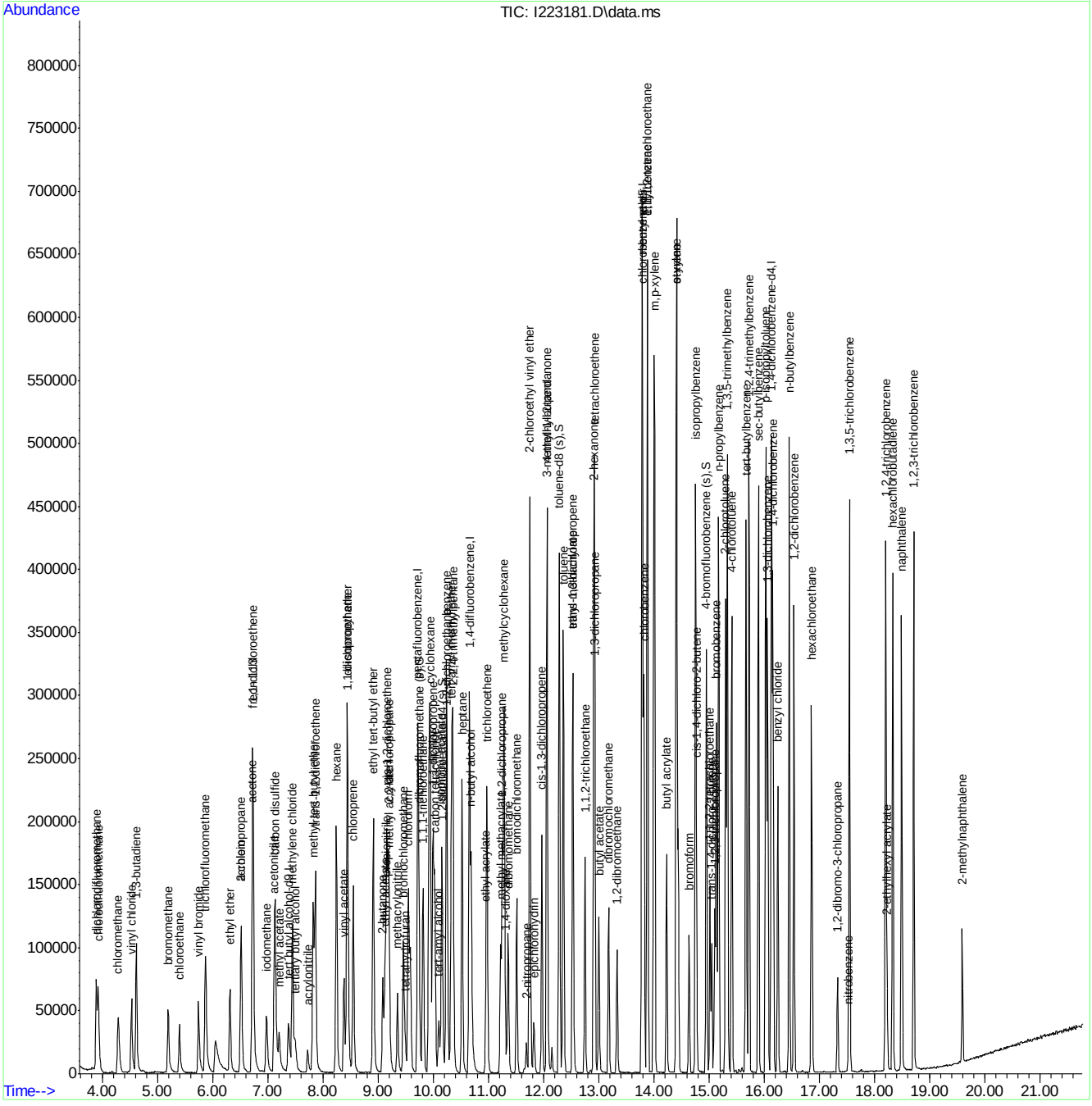
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.408	104	172884	52.80	ug/L	100
92)	butyl acrylate	14.231	55	100199	54.20	ug/L	100
93)	cis-1,4-dichloro-2-butene	14.769	88	25823	52.16	ug/L	100
94)	bromoform	14.633	173	47214	55.83	ug/L	100
95)	isopropylbenzene	14.754	105	263065	51.96	ug/L	100
98)	1,1,2,2-tetrachloroethane	15.015	83	64444	52.51	ug/L	100
99)	trans-1,4-dichloro-2-b...	15.047	53	16492	53.68	ug/L	100
100)	1,2,3-trichloropropane	15.099	110	16683	51.31	ug/L	100
101)	bromobenzene	15.130	156	75742	50.27	ug/L	100
102)	n-propylbenzene	15.167	91	315832	50.49	ug/L	100
103)	2-chlorotoluene	15.298	126	65757	50.04	ug/L	100
104)	4-chlorotoluene	15.407	91	184609	49.37	ug/L	100
105)	1,3,5-trimethylbenzene	15.329	105	236332	50.21	ug/L	100
106)	tert-butylbenzene	15.669	134	44702	52.48	ug/L	100
107)	1,2,4-trimethylbenzene	15.721	105	241376	50.05	ug/L	100
108)	sec-butylbenzene	15.894	105	300121	51.27	ug/L	100
109)	p-isopropyltoluene	16.030	119	268049	50.91	ug/l	100
110)	benzyl chloride	16.244	91	147385	49.90	ug/L	100
111)	1,3-dichlorobenzene	16.061	146	144176	50.15	ug/L	100
112)	1,4-dichlorobenzene	16.155	146	144866	49.33	ug/L	100
113)	1,2-dichlorobenzene	16.537	146	143303	50.92	ug/L	100
114)	n-butylbenzene	16.448	92	141015	51.49	ug/L	100
115)	hexachloroethane	16.856	201	54930	54.85	ug/L	100
116)	1,2-dibromo-3-chloropr...	17.327	157	20444	52.23	ug/L	100
117)	nitrobenzene	17.515	77	7001	52.05	ug/L	100
118)	1,3,5-trichlorobenzene	17.541	180	143456	50.19	ug/L	100
119)	1,2,4-trichlorobenzene	18.200	180	129710	50.46	ug/L	100
120)	2-ethylhexyl acrylate	18.221	55	21424	10.23	ug/L	100
121)	hexachlorobutadiene	18.326	225	84700	51.76	ug/L	100
122)	naphthalene	18.488	128	258072	51.93	ug/L	100
123)	1,2,3-trichlorobenzene	18.708	180	127357	51.83	ug/L	100
124)	2-methylnaphthalene	19.586	142	43391	21.98	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223181.D
Acq On : 27 Nov 2018 9:20 pm
Operator : thienn
Sample : ICC8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 28 12:50:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223182.D
Acq On : 27 Nov 2018 9:50 pm
Operator : thienn
Sample : IC8986-100
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 28 12:50:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.379	65	69203	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	189280	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	248700	50.00	ug/L		0.00
73) chlorobenzene-d5	13.781	117	212816	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	134038	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	74258	49.93	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.86%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	74937	48.29	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.58%				
74) toluene-d8 (s)	12.280	98	268266	49.17	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.34%				
97) 4-bromofluorobenzene (s)	14.947	95	97420	47.68	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.36%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.499	59	78146	542.75	ug/L		98
3) 1,4-dioxane	11.302	88	40972	2540.39	ug/L		99
5) dichlorodifluoromethane	3.891	85	176184	108.87	ug/L		99
6) chlorodifluoromethane	3.922	51	166700	111.19	ug/L		98
7) chloromethane	4.283	50	157470	102.84	ug/L		100
8) vinyl chloride	4.529	62	142534	110.56	ug/L		98
9) 1,3-butadiene	4.618	54	100081	117.81	ug/L		97
10) bromomethane	5.188	94	90734	105.72	ug/L		97
11) chloroethane	5.397	64	85541	114.68	ug/L		97
12) vinyl bromide	5.742	106	108860	116.56	ug/L		99
13) trichlorofluoromethane	5.868	101	217016	109.97	ug/L		99
14) ethyl ether	6.312	74	63564	118.75	ug/L		95
15) 2-chloropropane	6.516	63	45556	105.69	ug/L		94
16) acrolein	6.511	56	20678	122.94	ug/L		96
17) freon 113	6.731	151	103178	106.72	ug/L		99
18) 1,1-dichloroethene	6.725	61	186233	110.28	ug/L		99
19) acetone	6.715	43	142067	456.53	ug/L		99
20) iodomethane	6.976	142	141775	110.20	ug/L		99
21) carbon disulfide	7.128	76	374173	93.82	ug/L		99
22) acetonitrile	7.112	41	174769	1098.87	ug/L		97
23) methyl acetate	7.201	74	19528	101.29	ug/L	#	91
24) methylene chloride	7.442	84	132291	102.26	ug/L		98
25) acrylonitrile	7.719	53	39765	112.65	ug/L		96
26) methyl tert butyl ether	7.824	73	334574	112.61	ug/L		99
27) trans-1,2-dichloroethene	7.860	61	176412	109.95	ug/L		97
28) hexane	8.242	57	208329	102.93	ug/L		98
29) 1,1-dichloroethane	8.436	63	222186	107.77	ug/L		98
30) vinyl acetate	8.378	86	22276	116.53	ug/L	#	91
31) di-isopropyl ether	8.446	45	410783	111.61	ug/L		99
32) chloroprene	8.545	53	197074	113.59	ug/L		99
33) ethyl tert-butyl ether	8.912	59	402408	113.22	ug/L		99
34) 2-butanone	9.079	72	57321	479.51	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223182.D
Acq On : 27 Nov 2018 9:50 pm
Operator : thienn
Sample : IC8986-100
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 28 12:50:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	191102	102.79	ug/L		98
36) ethyl acetate	9.121	45	18847	122.89	ug/L		96
37) cis-1,2-dichloroethene	9.157	96	140883	105.47	ug/L		98
38) propionitrile	9.136	54	193755	1105.64	ug/L		99
39) methyl acrylate	9.199	85	19285	123.61	ug/L	#	82
40) methacrylonitrile	9.351	67	49677	119.26	ug/L		91
41) bromochloromethane	9.455	128	68281	118.50	ug/L		99
42) tetrahydrofuran	9.487	71	15584	113.14	ug/L		94
43) chloroform	9.544	83	230111	107.82	ug/L		100
44) carbon tetrachloride	10.020	117	184881	105.77	ug/L		99
45) 1,1-dichloropropene	9.994	75	175553	110.49	ug/L		97
48) 1,1,1-trichloroethane	9.816	97	207824	108.89	ug/L		98
49) cyclohexane	9.942	84	180226	103.37	ug/L		99
50) tert-amyl alcohol	10.099	55	26521	596.18	ug/L		95
53) isopropyl acetate	10.146	87	25575	113.49	ug/L	#	95
54) 1,2-dichloroethane	10.250	62	163545	100.10	ug/L		98
55) benzene	10.240	78	518978	106.82	ug/L		100
56) 2,2,4-trimethylpentane	10.355	57	501686	100.86	ug/L		100
57) tert-amyl methyl ether	10.324	87	91588	110.44	ug/L		96
58) heptane	10.517	57	105555	106.15	ug/L		98
59) n-butyl alcohol	10.690	56	231177	5964.13	ug/L		98
60) trichloroethene	10.972	95	136990	110.01	ug/L		99
61) ethyl acrylate	10.951	55	153061	114.75	ug/L		98
62) methylcyclohexane	11.281	83	225785	105.77	ug/L		99
63) 1,2-dichloropropane	11.249	63	130133	108.85	ug/L		100
64) methyl methacrylate	11.218	100	32974	117.65	ug/L		95
65) dibromomethane	11.354	93	77688	107.21	ug/L		98
66) bromodichloromethane	11.511	83	182382	110.00	ug/L		97
67) 2-nitropropane	11.684	41	31530	110.18	ug/L		94
68) 2-chloroethyl vinyl ether	11.746	63	400889	573.89	ug/L		99
69) epichlorohydrin	11.820	57	65278	538.13	ug/L		97
70) cis-1,3-dichloropropene	11.966	75	214687	110.35	ug/L		96
71) 4-methyl-2-pentanone	12.060	58	174503	475.93	ug/L		98
72) 3-methyl-1-butanol	12.055	70	77975	2415.27	ug/L		99
75) toluene	12.353	92	309889	105.20	ug/L		99
76) trans-1,3-dichloropropene	12.526	75	186378	105.15	ug/L		98
77) ethyl methacrylate	12.526	69	141493	111.29	ug/L		99
78) 1,1,2-trichloroethane	12.745	83	94005	118.01	ug/L		99
79) 1,3-dichloropropane	12.928	76	168130	106.89	ug/L		100
80) tetrachloroethene	12.918	166	153746	103.95	ug/L		98
81) 2-hexanone	12.907	58	171225	463.43	ug/L		97
82) butyl acetate	12.996	56	73400	113.97	ug/L		93
83) n-butyl ether	13.786	57	516377	106.15	ug/L		99
84) dibromochloromethane	13.174	129	144764	111.17	ug/L		99
85) 1,2-dibromoethane	13.331	107	130212	113.89	ug/L		98
86) chlorobenzene	13.818	112	332404	105.92	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.880	131	131149	111.13	ug/L		98
88) ethylbenzene	13.880	91	572276	104.28	ug/L		100
89) m,p-xylene	14.006	106	450170	208.60	ug/L		100
90) o-xylene	14.403	106	221612	107.46	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223182.D
Acq On : 27 Nov 2018 9:50 pm
Operator : thienn
Sample : IC8986-100
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 28 12:50:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.409	104	382352	109.31	ug/L	98
92)	butyl acrylate	14.231	55	226172	114.54	ug/L	98
93)	cis-1,4-dichloro-2-butene	14.769	88	57787	109.27	ug/L	96
94)	bromoform	14.633	173	103444	114.50	ug/L	99
95)	isopropylbenzene	14.754	105	578201	106.92	ug/L	100
98)	1,1,2,2-tetrachloroethane	15.015	83	144881	107.48	ug/L	99
99)	trans-1,4-dichloro-2-b...	15.047	53	37249	110.39	ug/L	92
100)	1,2,3-trichloropropane	15.099	110	38087	106.67	ug/L	94
101)	bromobenzene	15.130	156	169161	102.22	ug/L	95
102)	n-propylbenzene	15.167	91	705177	102.65	ug/L	100
103)	2-chlorotoluene	15.298	126	147983	102.55	ug/L	100
104)	4-chlorotoluene	15.408	91	420336	102.35	ug/L	99
105)	1,3,5-trimethylbenzene	15.329	105	532314	102.97	ug/L	99
106)	tert-butylbenzene	15.669	134	100081	106.99	ug/L	98
107)	1,2,4-trimethylbenzene	15.721	105	545454	102.98	ug/L	99
108)	sec-butylbenzene	15.894	105	679243	105.66	ug/L	99
109)	p-isopropyltoluene	16.030	119	612311	105.89	ug/l	100
110)	benzyl chloride	16.244	91	344761	106.28	ug/L	100
111)	1,3-dichlorobenzene	16.061	146	330619	104.71	ug/L	99
112)	1,4-dichlorobenzene	16.155	146	337570	104.67	ug/L	99
113)	1,2-dichlorobenzene	16.537	146	331695	107.33	ug/L	99
114)	n-butylbenzene	16.448	92	317398	105.52	ug/L	98
115)	hexachloroethane	16.856	201	123211	112.03	ug/L	98
116)	1,2-dibromo-3-chloropr...	17.327	157	47518	110.53	ug/L	98
117)	nitrobenzene	17.521	77	17131	115.98	ug/L	88
118)	1,3,5-trichlorobenzene	17.541	180	323287	102.99	ug/L	99
119)	1,2,4-trichlorobenzene	18.200	180	292442	103.59	ug/L	99
120)	2-ethylhexyl acrylate	18.221	55	46071	20.04	ug/L	95
121)	hexachlorobutadiene	18.326	225	185278	103.10	ug/L	100
122)	naphthalene	18.488	128	603754	110.62	ug/L	99
123)	1,2,3-trichlorobenzene	18.708	180	284115	105.29	ug/L	99
124)	2-methylnaphthalene	19.586	142	102398	47.22	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

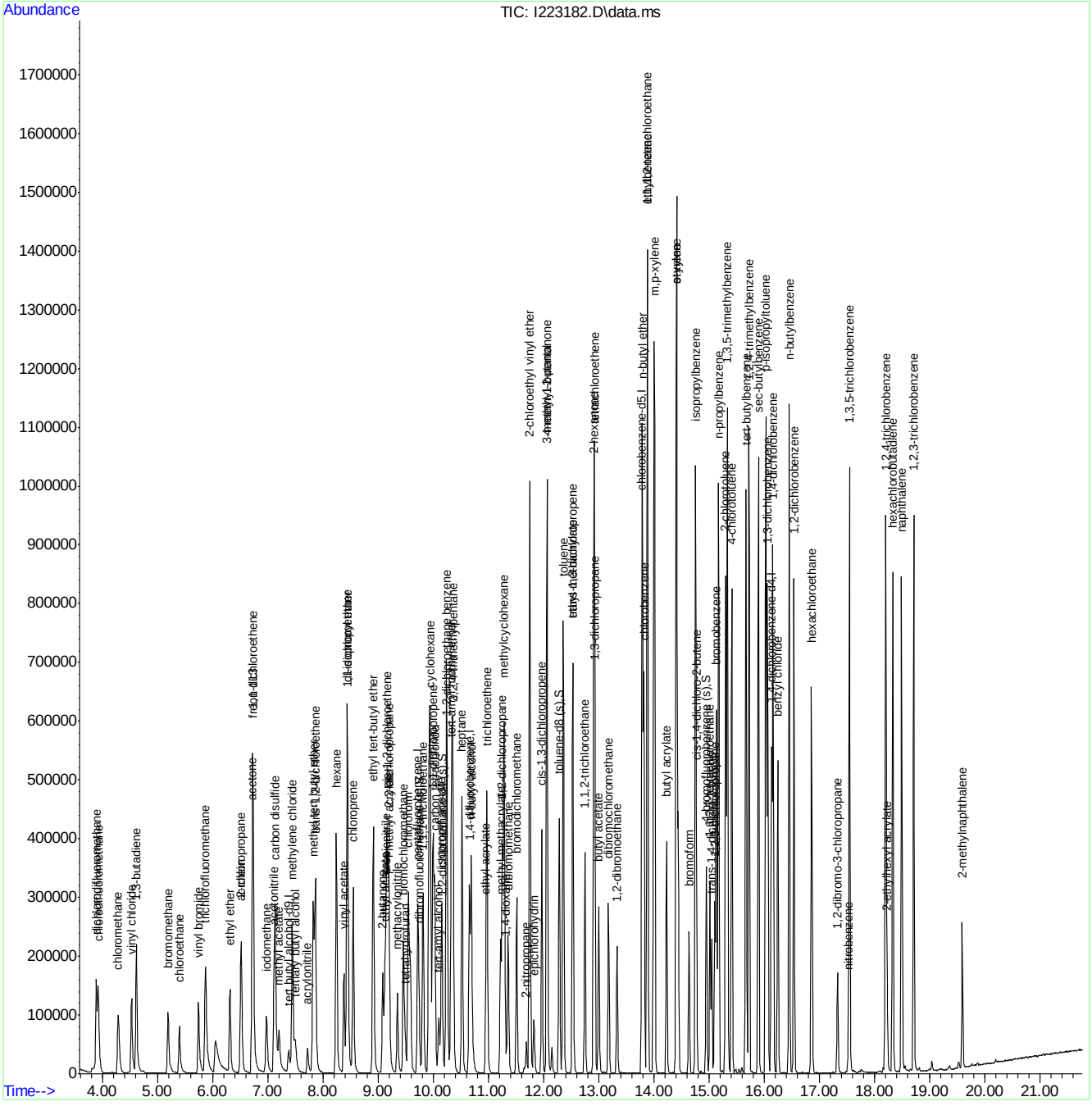
7.7.34

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223182.D
Acq On : 27 Nov 2018 9:50 pm
Operator : thienn
Sample : IC8986-100
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 28 12:50:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.379	65	80301	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	215517	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	290620	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	249804	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	157477	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	83941	49.57	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.14%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	85112	46.93	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 93.86%				
74) toluene-d8 (s)	12.280	98	312894	48.86	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.72%				
97) 4-bromofluorobenzene (s)	14.953	95	117844	49.09	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.18%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.505	59	175497	1050.43	ug/L		98
3) 1,4-dioxane	11.302	88	87551	4678.20	ug/L		95
5) dichlorodifluoromethane	3.891	85	375056	203.55	ug/L		98
6) chlorodifluoromethane	3.922	51	366508	214.71	ug/L		97
7) chloromethane	4.288	50	369957	212.20	ug/L		99
8) vinyl chloride	4.529	62	324334	220.94	ug/L		99
9) 1,3-butadiene	4.618	54	226188	233.83	ug/L		97
10) bromomethane	5.183	94	200309	204.97	ug/L		99
11) chloroethane	5.397	64	191609	225.61	ug/L		97
12) vinyl bromide	5.742	106	243673	229.14	ug/L		98
13) trichlorofluoromethane	5.868	101	477873	212.68	ug/L		100
14) ethyl ether	6.312	74	145655	238.98	ug/L		94
15) 2-chloropropane	6.516	63	94139	191.82	ug/L		99
16) acrolein	6.511	56	49971	260.93	ug/L		99
17) freon 113	6.731	151	227090	206.29	ug/L		99
18) 1,1-dichloroethene	6.726	61	417694	217.24	ug/L		99
19) acetone	6.715	43	306680	865.54	ug/L		98
20) iodomethane	6.977	142	284760	194.36	ug/L		99
21) carbon disulfide	7.128	76	837937	184.52	ug/L		99
22) acetonitrile	7.113	41	383515	2117.82	ug/L		95
23) methyl acetate	7.207	74	44590	199.99	ug/L	#	89
24) methylene chloride	7.442	84	300410	203.94	ug/L		97
25) acrylonitrile	7.719	53	91967	228.81	ug/L		97
26) methyl tert butyl ether	7.824	73	754631	223.07	ug/L		99
27) trans-1,2-dichloroethene	7.860	61	389402	213.15	ug/L		100
28) hexane	8.242	57	472229	204.91	ug/L		99
29) 1,1-dichloroethane	8.436	63	489620	208.58	ug/L		98
30) vinyl acetate	8.378	86	51592	237.02	ug/L	#	81
31) di-isopropyl ether	8.446	45	922197	220.05	ug/L		99
32) chloroprene	8.546	53	429184	217.25	ug/L		99
33) ethyl tert-butyl ether	8.912	59	900394	222.49	ug/L		99
34) 2-butanone	9.084	72	129219	949.37	ug/L	#	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	416394	196.70	ug/L		99
36) ethyl acetate	9.121	45	42114	241.18	ug/L	#	86
37) cis-1,2-dichloroethene	9.158	96	315912	207.71	ug/L		98
38) propionitrile	9.142	54	433186	2170.99	ug/L		99
39) methyl acrylate	9.199	85	43433	244.49	ug/L	#	76
40) methacrylonitrile	9.351	67	111682	235.47	ug/L		93
41) bromochloromethane	9.456	128	148944	227.02	ug/L		95
42) tetrahydrofuran	9.487	71	34806	221.93	ug/L		92
43) chloroform	9.550	83	503070	207.03	ug/L		99
44) carbon tetrachloride	10.026	117	400619	201.30	ug/L		99
45) 1,1-dichloropropene	9.994	75	388889	214.97	ug/L		97
48) 1,1,1-trichloroethane	9.817	97	444595	204.59	ug/L		97
49) cyclohexane	9.942	84	403176	203.08	ug/L		94
50) tert-amyl alcohol	10.104	55	57571	1136.62	ug/L		96
53) isopropyl acetate	10.146	87	58906	223.70	ug/L		99
54) 1,2-dichloroethane	10.251	62	360721	188.93	ug/L		98
55) benzene	10.240	78	1169633	206.01	ug/L		99
56) 2,2,4-trimethylpentane	10.355	57	1175124	202.17	ug/L		100
57) tert-amyl methyl ether	10.329	87	207313	213.93	ug/L		97
58) heptane	10.523	57	244771	210.65	ug/L		98
59) n-butyl alcohol	10.690	56	512441	11313.49	ug/L		98
60) trichloroethene	10.972	95	298082	204.84	ug/L		99
61) ethyl acrylate	10.952	55	346987	222.62	ug/L		98
62) methylcyclohexane	11.281	83	518630	207.91	ug/L		98
63) 1,2-dichloropropane	11.250	63	292151	209.12	ug/L		98
64) methyl methacrylate	11.218	100	74866	228.59	ug/L		97
65) dibromomethane	11.354	93	173143	204.47	ug/L		98
66) bromodichloromethane	11.511	83	401396	207.18	ug/L		97
67) 2-nitropropane	11.689	41	68700	205.45	ug/L		96
68) 2-chloroethyl vinyl ether	11.747	63	896818	1098.66	ug/L		99
69) epichlorohydrin	11.820	57	146825	1035.78	ug/L		98
70) cis-1,3-dichloropropene	11.966	75	475587	209.19	ug/L		96
71) 4-methyl-2-pentanone	12.060	58	389352	908.73	ug/L		99
72) 3-methyl-1-butanol	12.060	70	176133	4668.76	ug/L		98
75) toluene	12.358	92	697159	201.63	ug/L		100
76) trans-1,3-dichloropropene	12.526	75	417558	200.69	ug/L		99
77) ethyl methacrylate	12.531	69	325102	217.84	ug/L		98
78) 1,1,2-trichloroethane	12.751	83	211103	225.77	ug/L		99
79) 1,3-dichloropropane	12.929	76	382489	207.16	ug/L		100
80) tetrachloroethene	12.918	166	340610	196.20	ug/L		99
81) 2-hexanone	12.908	58	382826	882.73	ug/L		96
82) butyl acetate	12.997	56	166560	220.32	ug/L		94
83) n-butyl ether	13.792	57	1202068	210.51	ug/L		99
84) dibromochloromethane	13.180	129	323192	211.44	ug/L		100
85) 1,2-dibromoethane	13.331	107	289004	215.35	ug/L		97
86) chlorobenzene	13.818	112	766299	208.02	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.880	131	301494	217.64	ug/L		99
88) ethylbenzene	13.880	91	1318470	204.67	ug/L		99
89) m,p-xylene	14.006	106	1036588	409.20	ug/L		100
90) o-xylene	14.403	106	514832	212.68	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

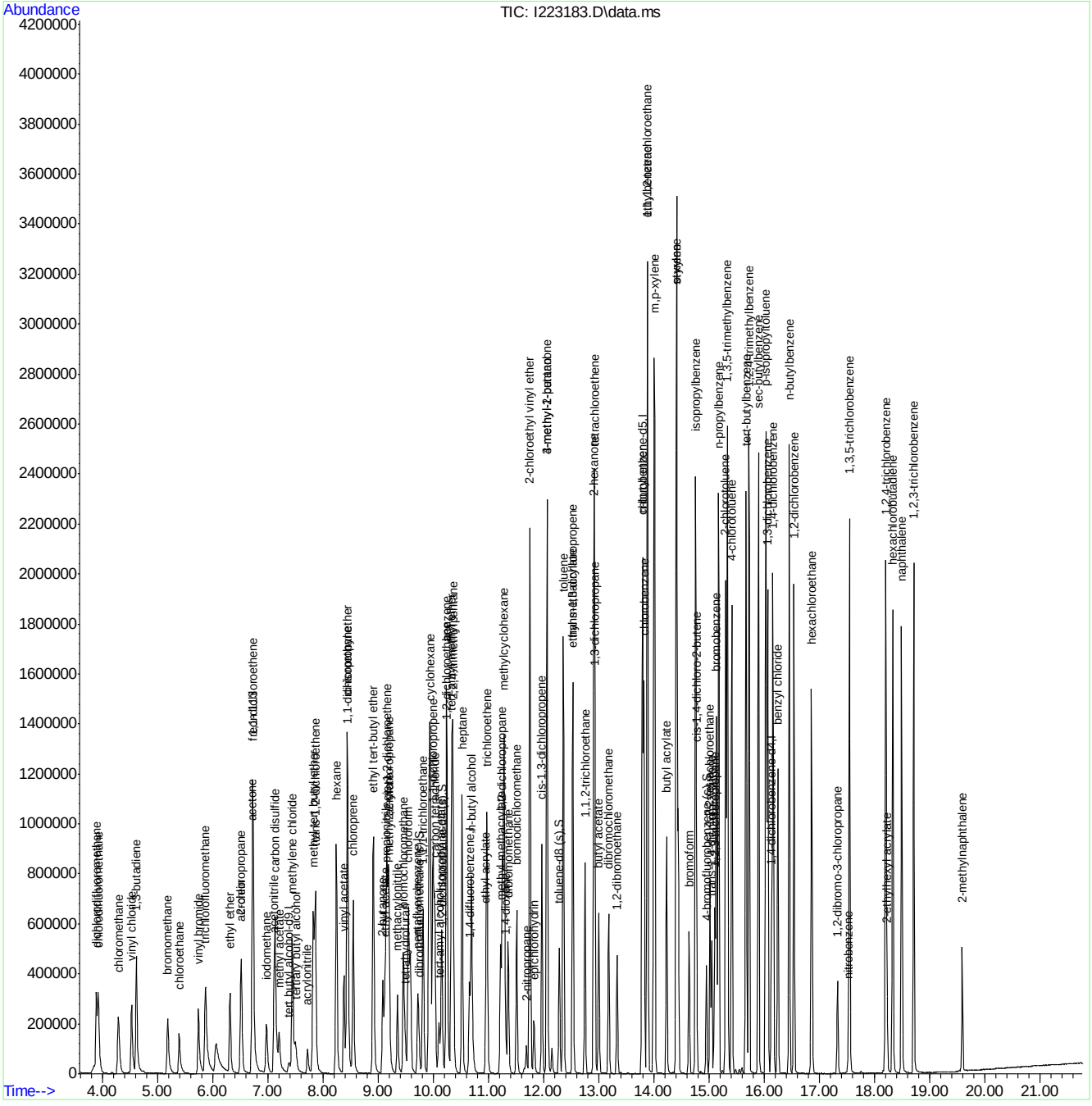
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.414	104	895966	218.22	ug/L	99
92) butyl acrylate	14.231	55	540635	233.25	ug/L	98
93) cis-1,4-dichloro-2-butene	14.770	88	132493	213.44	ug/L	95
94) bromoform	14.634	173	242477	228.66	ug/L	100
95) isopropylbenzene	14.754	105	1355411	213.53	ug/L	99
98) 1,1,2,2-tetrachloroethane	15.015	83	341793	215.83	ug/L	100
99) trans-1,4-dichloro-2-b...	15.047	53	84689	213.63	ug/L	90
100) 1,2,3-trichloropropane	15.104	110	86501	206.20	ug/L	98
101) bromobenzene	15.130	156	391000	201.11	ug/L	95
102) n-propylbenzene	15.172	91	1628828	201.82	ug/L	98
103) 2-chlorotoluene	15.298	126	344609	203.26	ug/L	97
104) 4-chlorotoluene	15.413	91	976268	202.33	ug/L	98
105) 1,3,5-trimethylbenzene	15.329	105	1232897	202.98	ug/L	100
106) tert-butylbenzene	15.669	134	235167	213.97	ug/L	98
107) 1,2,4-trimethylbenzene	15.722	105	1236957	198.78	ug/L	99
108) sec-butylbenzene	15.894	105	1582482	209.52	ug/L	99
109) p-isopropyltoluene	16.030	119	1375296	202.45	ug/l	99
110) benzyl chloride	16.245	91	774742	203.28	ug/L	99
111) 1,3-dichlorobenzene	16.061	146	758085	204.35	ug/L	100
112) 1,4-dichlorobenzene	16.156	146	771469	203.61	ug/L	98
113) 1,2-dichlorobenzene	16.537	146	761290	209.67	ug/L	98
114) n-butylbenzene	16.448	92	714096	202.07	ug/L	99
115) hexachloroethane	16.856	201	288682	223.41	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.327	157	105085	208.05	ug/L	98
117) nitrobenzene	17.521	77	37402	215.52	ug/L	87
118) 1,3,5-trichlorobenzene	17.542	180	706301	191.51	ug/L	99
119) 1,2,4-trichlorobenzene	18.201	180	636181	191.81	ug/L	98
120) 2-ethylhexyl acrylate	18.222	55	96958	35.90	ug/L	99
121) hexachlorobutadiene	18.326	225	402594	190.69	ug/L	100
122) naphthalene	18.488	128	1280487	199.69	ug/L	100
123) 1,2,3-trichlorobenzene	18.708	180	610534	192.58	ug/L	99
124) 2-methylnaphthalene	19.587	142	208098	81.68	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	69539	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	194929	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	259550	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	212734	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	127433	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	77737	50.75	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.50%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	78844	48.67	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 97.34%				
74) toluene-d8 (s)	12.280	98	274637	50.36	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.72%				
97) 4-bromofluorobenzene (s)	14.947	95	97906	50.38	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.76%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.494	59	37883	263.21	ug/L		98
3) 1,4-dioxane	11.302	88	20696	1283.03	ug/L		87
5) dichlorodifluoromethane	3.891	85	93875	55.13	ug/L		97
6) chlorodifluoromethane	3.922	51	84039	52.27	ug/L		97
7) chloromethane	4.283	50	81186	51.49	ug/L		99
8) vinyl chloride	4.529	62	69070	52.01	ug/L		99
9) 1,3-butadiene	4.618	54	55309	59.63	ug/L		98
10) bromomethane	5.193	94	48097	54.36	ug/L		100
11) chloroethane	5.397	64	38659	48.13	ug/L		97
12) vinyl bromide	5.747	106	56399	54.95	ug/L		99
13) trichlorofluoromethane	5.873	101	102637	50.50	ug/L		98
14) ethyl ether	6.312	74	30681	53.29	ug/L		97
15) 2-chloropropane	6.516	63	23652	50.40	ug/L		96
16) acrolein	6.516	56	9584	51.09	ug/L		95
17) freon 113	6.731	151	53795	54.03	ug/L		99
18) 1,1-dichloroethene	6.725	61	84257	46.44	ug/L		98
19) acetone	6.715	43	68872	209.69	ug/L		100
20) iodomethane	6.976	142	73015	54.76	ug/L		98
21) carbon disulfide	7.128	76	199616	51.08	ug/L		99
22) acetonitrile	7.112	41	79045	481.93	ug/L		97
23) methyl acetate	7.212	74	8906	46.41	ug/L		97
24) methylene chloride	7.442	84	64208	47.79	ug/L		96
25) acrylonitrile	7.724	53	19514	50.51	ug/L		98
26) methyl tert butyl ether	7.824	73	335934	105.50	ug/L		100
27) trans-1,2-dichloroethene	7.860	61	85478	49.42	ug/L		99
28) hexane	8.242	57	84532	40.53	ug/L		99
29) 1,1-dichloroethane	8.436	63	109615	49.64	ug/L		99
30) vinyl acetate	8.378	86	10093	48.01	ug/L	#	86
31) di-isopropyl ether	8.446	45	195607	49.97	ug/L		100
32) chloroprene	8.545	53	98669	52.96	ug/L		97
33) ethyl tert-butyl ether	8.912	59	190299	50.37	ug/L		99
34) 2-butanone	9.084	72	27686	224.89	ug/L	#	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	95310	49.78	ug/L		99
36) ethyl acetate	9.121	45	8820	48.20	ug/L	#	83
37) cis-1,2-dichloroethene	9.157	96	72033	50.63	ug/L		99
38) propionitrile	9.136	54	96951	536.96	ug/L		99
39) methyl acrylate	9.204	85	9259	49.18	ug/L		99
40) methacrylonitrile	9.351	67	24916	54.67	ug/L		97
41) bromochloromethane	9.455	128	33565	52.46	ug/L		99
42) tetrahydrofuran	9.487	71	7502	52.89	ug/L		98
43) chloroform	9.550	83	115864	50.71	ug/L		99
44) carbon tetrachloride	10.026	117	91482	49.02	ug/L		100
45) 1,1-dichloropropene	9.994	75	87483	50.86	ug/L		98
48) 1,1,1-trichloroethane	9.816	97	100405	49.24	ug/L		98
49) cyclohexane	9.942	84	94392	52.57	ug/L		97
50) tert-amyl alcohol	10.099	55	12716	246.82	ug/L		97
53) isopropyl acetate	10.146	87	12067	51.31	ug/L		95
54) 1,2-dichloroethane	10.250	62	81716	47.92	ug/L		98
55) benzene	10.235	78	257840	50.84	ug/L		99
56) 2,2,4-trimethylpentane	10.355	57	254360	49.00	ug/L		100
57) tert-amyl methyl ether	10.329	87	42548	49.16	ug/L		98
58) heptane	10.522	57	60458	55.79	ug/L		98
59) n-butyl alcohol	10.685	56	114896	2712.27	ug/L		99
60) trichloroethene	10.972	95	67426	49.64	ug/L		98
61) ethyl acrylate	10.951	55	76668	53.40	ug/L		99
62) methylcyclohexane	11.281	83	110450	48.01	ug/L		99
63) 1,2-dichloropropane	11.249	63	63075	48.59	ug/L		99
64) methyl methacrylate	11.218	100	16067	52.60	ug/L	#	68
65) dibromomethane	11.354	93	39380	52.07	ug/L		97
66) bromodichloromethane	11.511	83	88835	49.40	ug/L		95
67) 2-nitropropane	11.684	41	16633	53.42	ug/L		97
68) 2-chloroethyl vinyl ether	11.746	63	204380	269.09	ug/L		99
69) epichlorohydrin	11.820	57	31827	250.89	ug/L		97
70) cis-1,3-dichloropropene	11.966	75	105534	51.98	ug/L		96
71) 4-methyl-2-pentanone	12.060	58	85135	210.79	ug/L		98
72) 3-methyl-1-butanol	12.055	70	37725	1075.30	ug/L		96
75) toluene	12.358	92	152787	51.89	ug/L		100
76) trans-1,3-dichloropropene	12.526	75	87220	49.23	ug/L		99
77) ethyl methacrylate	12.531	69	66038	49.45	ug/L		97
78) 1,1,2-trichloroethane	12.751	83	44888	51.96	ug/L		98
79) 1,3-dichloropropane	12.928	76	83889	53.36	ug/L		99
80) tetrachloroethene	12.918	166	84530	57.18	ug/L		98
81) 2-hexanone	12.907	58	82193	212.93	ug/L		96
82) butyl acetate	12.996	56	35044	52.18	ug/L		93
83) n-butyl ether	13.791	57	242651	49.90	ug/L		99
84) dibromochloromethane	13.174	129	71293	52.81	ug/L		98
85) 1,2-dibromoethane	13.331	107	63243	53.82	ug/L		97
86) chlorobenzene	13.818	112	162297	51.74	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.880	131	64797	52.03	ug/L		99
88) ethylbenzene	13.880	91	281004	51.23	ug/L		98
89) m,p-xylene	14.006	106	221638	102.75	ug/L		99
90) o-xylene	14.403	106	109006	50.75	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

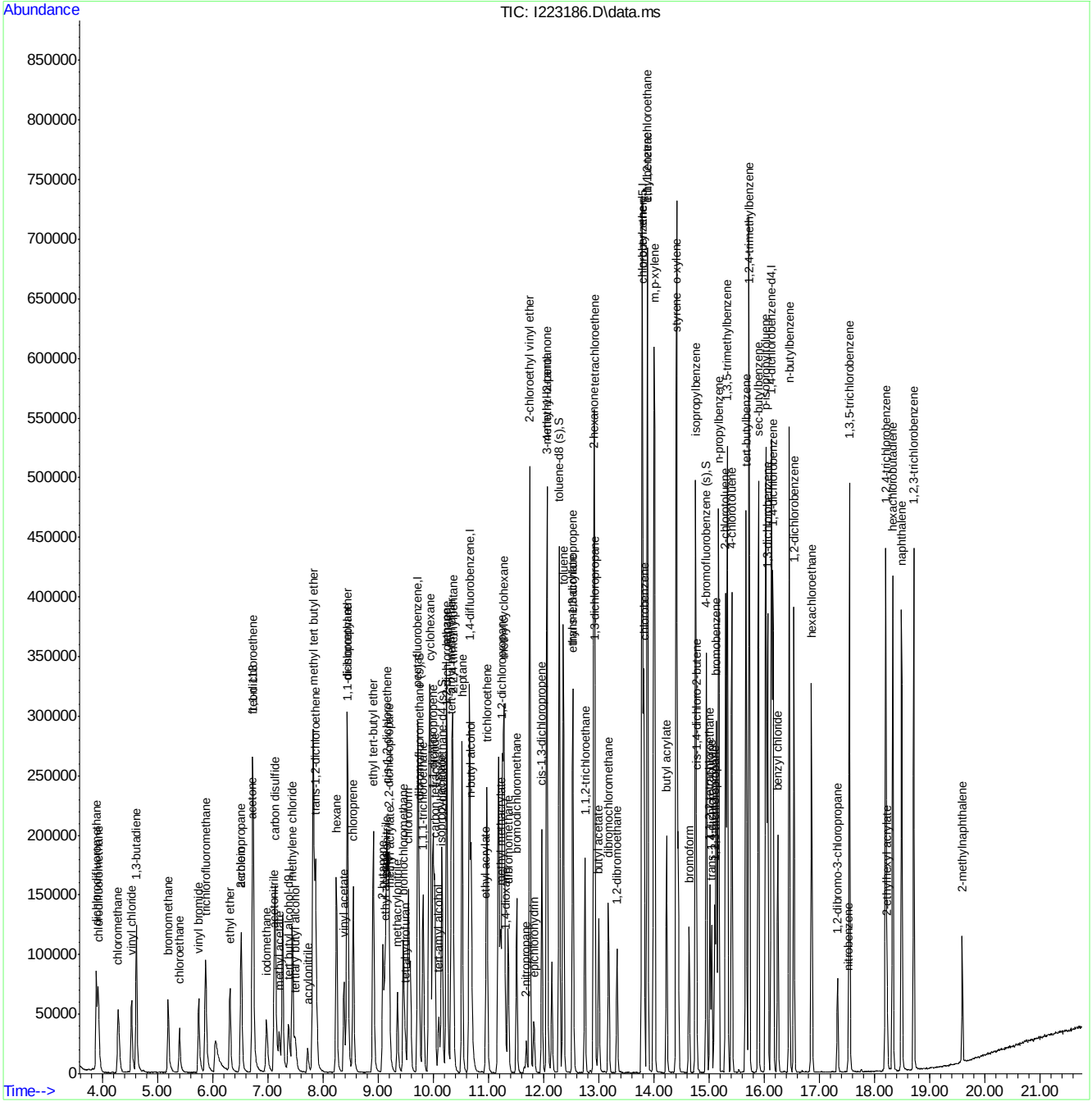
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	186774	51.79	ug/L	99
92)	butyl acrylate	14.231	55	110983	53.94	ug/L	99
93)	cis-1,4-dichloro-2-butene	14.769	88	25935	49.06	ug/L	96
94)	bromoform	14.633	173	51862	54.70	ug/L	99
95)	isopropylbenzene	14.754	105	282968	52.34	ug/L	100
98)	1,1,2,2-tetrachloroethane	15.015	83	67367	51.12	ug/L	99
99)	trans-1,4-dichloro-2-b...	15.047	53	20205	58.83	ug/L	94
100)	1,2,3-trichloropropane	15.099	110	17970	52.93	ug/L	97
101)	bromobenzene	15.130	156	80721	51.31	ug/L	98
102)	n-propylbenzene	15.167	91	334318	51.19	ug/L	100
103)	2-chlorotoluene	15.298	126	70108	51.10	ug/L	96
104)	4-chlorotoluene	15.408	91	202836	51.95	ug/L	100
105)	1,3,5-trimethylbenzene	15.329	105	249455	50.75	ug/L	100
106)	tert-butylbenzene	15.669	134	47992	52.71	ug/L	94
107)	1,2,4-trimethylbenzene	15.721	105	260796	51.79	ug/L	95
108)	sec-butylbenzene	15.894	105	325587	51.40	ug/L	99
109)	p-isopropyltoluene	16.030	119	287328	52.26	ug/l	99
110)	benzyl chloride	16.244	91	129132	41.87	ug/L	99
111)	1,3-dichlorobenzene	16.061	146	153761	51.22	ug/L	100
112)	1,4-dichlorobenzene	16.155	146	155923	50.85	ug/L	98
113)	1,2-dichlorobenzene	16.537	146	152569	51.93	ug/L	99
114)	n-butylbenzene	16.448	92	148138	51.80	ug/L	97
115)	hexachloroethane	16.856	201	60144	54.86	ug/L	95
116)	1,2-dibromo-3-chloropr...	17.327	157	21224	51.93	ug/L	96
117)	nitrobenzene	17.521	77	7476	53.24	ug/L	95
118)	1,3,5-trichlorobenzene	17.541	180	154455	51.75	ug/L	99
119)	1,2,4-trichlorobenzene	18.200	180	134228	50.00	ug/L	99
120)	2-ethylhexyl acrylate	18.221	55	23923	10.93	ug/L	98
121)	hexachlorobutadiene	18.326	225	88466	50.06	ug/L	100
122)	naphthalene	18.488	128	274425	52.87	ug/L	99
123)	1,2,3-trichlorobenzene	18.708	180	131768	49.89	ug/L	99
124)	2-methylnaphthalene	19.586	142	44610	24.10	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223187.D
Acq On : 28 Nov 2018 12:18 am
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 28 14:08:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

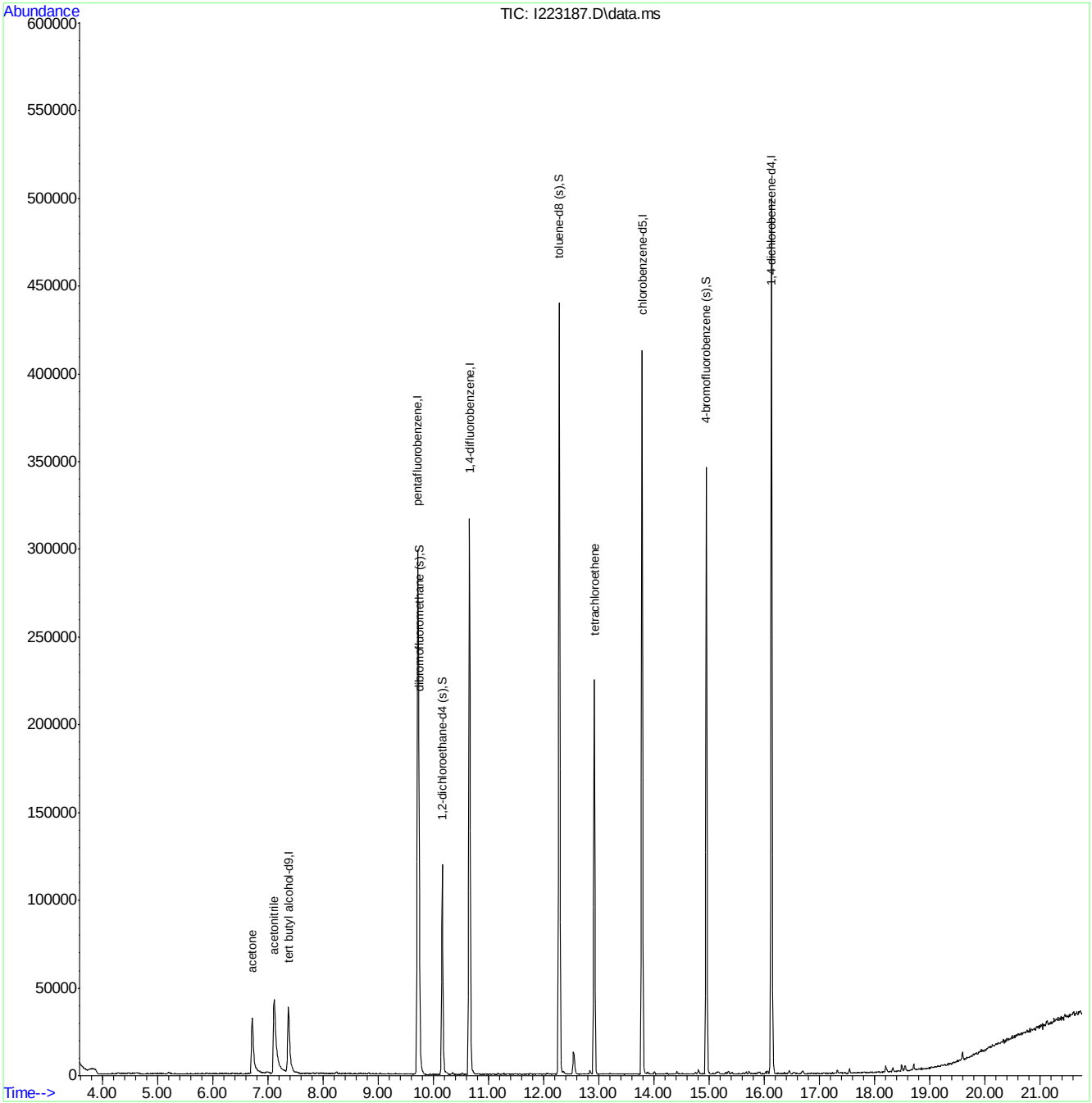
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.374	65	65690	500.00	ug/L	0.00
4) pentafluorobenzene	9.717	168	199145	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.653	114	255513	50.00	ug/L	0.00
73) chlorobenzene-d5	13.786	117	213159	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	16.129	152	119395	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.738	113	78482	50.15	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.30%			
52) 1,2-dichloroethane-d4 (s)	10.162	65	78642	49.31	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.62%			
74) toluene-d8 (s)	12.280	98	275367	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
97) 4-bromofluorobenzene (s)	14.947	95	94502	51.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.80%			
Target Compounds						Qvalue
19) acetone	6.715	43	63003	187.76	ug/L	99
22) acetonitrile	7.118	41	86699	517.40	ug/L	97
80) tetrachloroethene	12.918	166	66283	44.75	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223187.D
Acq On : 28 Nov 2018 12:18 am
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 28 14:08:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225701.d
Acq On : 25 Apr 2019 7:44 am
Operator : juntaep
Sample : cc8986-50 Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:23:53 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.348	65	51063	500.00	ug/L		-0.03
4) pentafluorobenzene	9.696	168	139863	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	184726	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.765	117	158432	50.00	ug/L		-0.02
96) 1,4-dichlorobenzene-d4	16.108	152	94995	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	56647	51.54	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.08%				
52) 1,2-dichloroethane-d4 (s)	10.135	65	62863	54.52	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 109.04%				
74) toluene-d8 (s)	12.259	98	194906	47.99	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.98%				
97) 4-bromofluorobenzene (s)	14.926	95	72591	50.11	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.22%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.468	59	27023	255.69	ug/L		95
3) 1,4-dioxane	11.281	88	15224	1285.29	ug/L		98
5) dichlorodifluoromethane	3.885	85	67327	55.10	ug/L		95
6) chlorodifluoromethane	3.917	51	60502	52.44	ug/L		96
7) chloromethane	4.278	50	52870	46.73	ug/L		94
8) vinyl chloride	4.518	62	52128	54.71	ug/L		94
9) 1,3-butadiene	4.607	54	35268	52.99	ug/L		98
10) bromomethane	5.177	94	35200	55.45	ug/L		99
11) chloroethane	5.381	64	30052	52.14	ug/L		96
12) vinyl bromide	5.726	106	30518	41.44	ug/L		97
13) trichlorofluoromethane	5.857	101	83067	56.97	ug/L		98
14) ethyl ether	6.296	74	19746	47.80	ug/L		90
15) 2-chloropropane	6.495	63	16953	50.34	ug/L		93
16) acrolein	6.495	56	5485	40.75	ug/L		96
17) freon 113	6.715	151	39349	55.08	ug/L		92
18) 1,1-dichloroethene	6.710	61	64687	49.70	ug/L		97
19) acetone	6.689	43	51026	216.53	ug/L		92
20) iodomethane	6.955	142	41170	42.91	ug/L		96
21) carbon disulfide	7.112	76	125115	44.62	ug/L		99
22) acetonitrile	7.086	41	56613	481.06	ug/L		89
23) methyl acetate	7.186	74	5821	42.49	ug/L	#	87
24) methylene chloride	7.421	84	43085	44.69	ug/L		93
25) acrylonitrile	7.693	53	12521	45.17	ug/L		97
26) methyl tert butyl ether	7.803	73	112646	49.30	ug/L		96
27) trans-1,2-dichloroethene	7.839	61	59962	48.32	ug/L		96
28) hexane	8.226	57	61195	40.89	ug/L		97
29) 1,1-dichloroethane	8.409	63	75711	47.78	ug/L		99
30) vinyl acetate	8.357	86	6877	45.59	ug/L	#	92
31) di-isopropyl ether	8.425	45	120923	43.06	ug/L		94
32) chloroprene	8.525	53	68968	51.59	ug/L		94
33) ethyl tert-butyl ether	8.891	59	124654	45.99	ug/L		97
34) 2-butanone	9.053	72	18224	206.32	ug/L		92
35) 2,2-dichloropropane	9.163	77	74706	54.38	ug/L		99
36) ethyl acetate	9.095	45	6381	48.58	ug/L		97
37) cis-1,2-dichloroethene	9.131	96	47988	47.01	ug/L		96
38) propionitrile	9.110	54	65678	506.97	ug/L		95
39) methyl acrylate	9.178	85	6059	45.07	ug/L		99
40) methacrylonitrile	9.325	67	15621	47.77	ug/L		90
41) bromochloromethane	9.429	128	22834	49.74	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225701.d
Acq On : 25 Apr 2019 7:44 am
Operator : juntaep
Sample : cc8986-50 Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:23:53 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42)	tetrahydrofuran	9.466	71	5113	50.24	ug/L		91
43)	chloroform	9.524	83	82079	50.07	ug/L		96
44)	carbon tetrachloride	10.005	117	72722	54.32	ug/L		99
45)	1,1-dichloropropene	9.973	75	60815	49.28	ug/L		95
48)	1,1,1-trichloroethane	9.790	97	79360	54.24	ug/L		95
49)	cyclohexane	9.921	84	63479	49.27	ug/L		93
50)	tert-amyl alcohol	10.078	55	9863	266.29	ug/L	#	83
53)	isopropyl acetate	10.125	87	8057	48.14	ug/L	#	95
54)	1,2-dichloroethane	10.224	62	64235	52.93	ug/L		98
55)	benzene	10.214	78	170470	47.23	ug/L		99
56)	2,2,4-trimethylpentane	10.334	57	154273	41.76	ug/L		94
57)	tert-amyl methyl ether	10.308	87	29199	47.40	ug/L	#	91
58)	heptane	10.502	57	31095	40.32	ug/L		99
59)	n-butyl alcohol	10.664	56	77243	2562.00	ug/L		94
60)	trichloroethene	10.951	95	47220	48.85	ug/L		98
61)	ethyl acrylate	10.930	55	46363	45.37	ug/L		97
62)	methylcyclohexane	11.260	83	72388	44.21	ug/L		97
63)	1,2-dichloropropane	11.223	63	39675	42.94	ug/L		86
64)	methyl methacrylate	11.192	100	10030	46.14	ug/L	#	92
65)	dibromomethane	11.333	93	26455	49.15	ug/L		91
66)	bromodichloromethane	11.485	83	63567	49.66	ug/L		99
67)	2-nitropropane	11.657	41	13154	59.36	ug/L		97
68)	2-chloroethyl vinyl ether	11.725	63	127903	236.61	ug/L		99
69)	epichlorohydrin	11.793	57	23299	258.06	ug/L		98
70)	cis-1,3-dichloropropene	11.945	75	68098	47.12	ug/L		96
71)	4-methyl-2-pentanone	12.034	58	57281	199.27	ug/L		99
72)	3-methyl-1-butanol	12.034	70	25298	1013.16	ug/L		91
75)	toluene	12.337	92	101883	46.46	ug/L		97
76)	trans-1,3-dichloropropene	12.505	75	63795	48.35	ug/L		97
77)	ethyl methacrylate	12.510	69	43749	43.99	ug/L		98
78)	1,1,2-trichloroethane	12.724	83	28738	44.67	ug/L		96
79)	1,3-dichloropropane	12.902	76	54529	46.57	ug/L		99
80)	tetrachloroethene	12.897	166	53672	48.75	ug/L		99
81)	2-hexanone	12.887	58	53697	186.79	ug/L		97
82)	butyl acetate	12.975	56	21678	43.34	ug/L		94
83)	n-butyl ether	13.770	57	132567	36.61	ug/L		93
84)	dibromochloromethane	13.153	129	48719	48.46	ug/L		99
85)	1,2-dibromoethane	13.310	107	50182	57.34	ug/L		98
86)	chlorobenzene	13.797	112	111540	47.74	ug/L		98
87)	1,1,1,2-tetrachloroethane	13.859	131	44551	48.03	ug/L		93
88)	ethylbenzene	13.859	91	189839	46.47	ug/L		99
89)	m,p-xylene	13.985	106	148933	92.71	ug/L		99
90)	o-xylene	14.382	106	69885	43.69	ug/L		95
91)	styrene	14.393	104	122069	45.45	ug/L		97
92)	butyl acrylate	14.210	55	67659	44.16	ug/L		99
93)	cis-1,4-dichloro-2-butene	14.749	88	22086	56.10	ug/L		90
94)	bromoform	14.613	173	35626	50.46	ug/L		98
95)	isopropylbenzene	14.733	105	186692	46.37	ug/L		99
98)	1,1,2,2-tetrachloroethane	14.989	83	44883	45.69	ug/L		97
99)	trans-1,4-dichloro-2-b...	15.026	53	13320	52.03	ug/L		90
100)	1,2,3-trichloropropane	15.078	110	12777	50.49	ug/L		99
101)	bromobenzene	15.109	156	55120	47.00	ug/L		96
102)	n-propylbenzene	15.151	91	221633	45.52	ug/L		98
103)	2-chlorotoluene	15.277	126	47369	46.32	ug/L		99
104)	4-chlorotoluene	15.387	91	137777	47.33	ug/L		98
105)	1,3,5-trimethylbenzene	15.308	105	166225	45.37	ug/L		98
106)	tert-butylbenzene	15.648	134	29727	43.79	ug/L	#	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225701.d
Acq On : 25 Apr 2019 7:44 am
Operator : juntaep
Sample : cc8986-50 Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:23:53 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

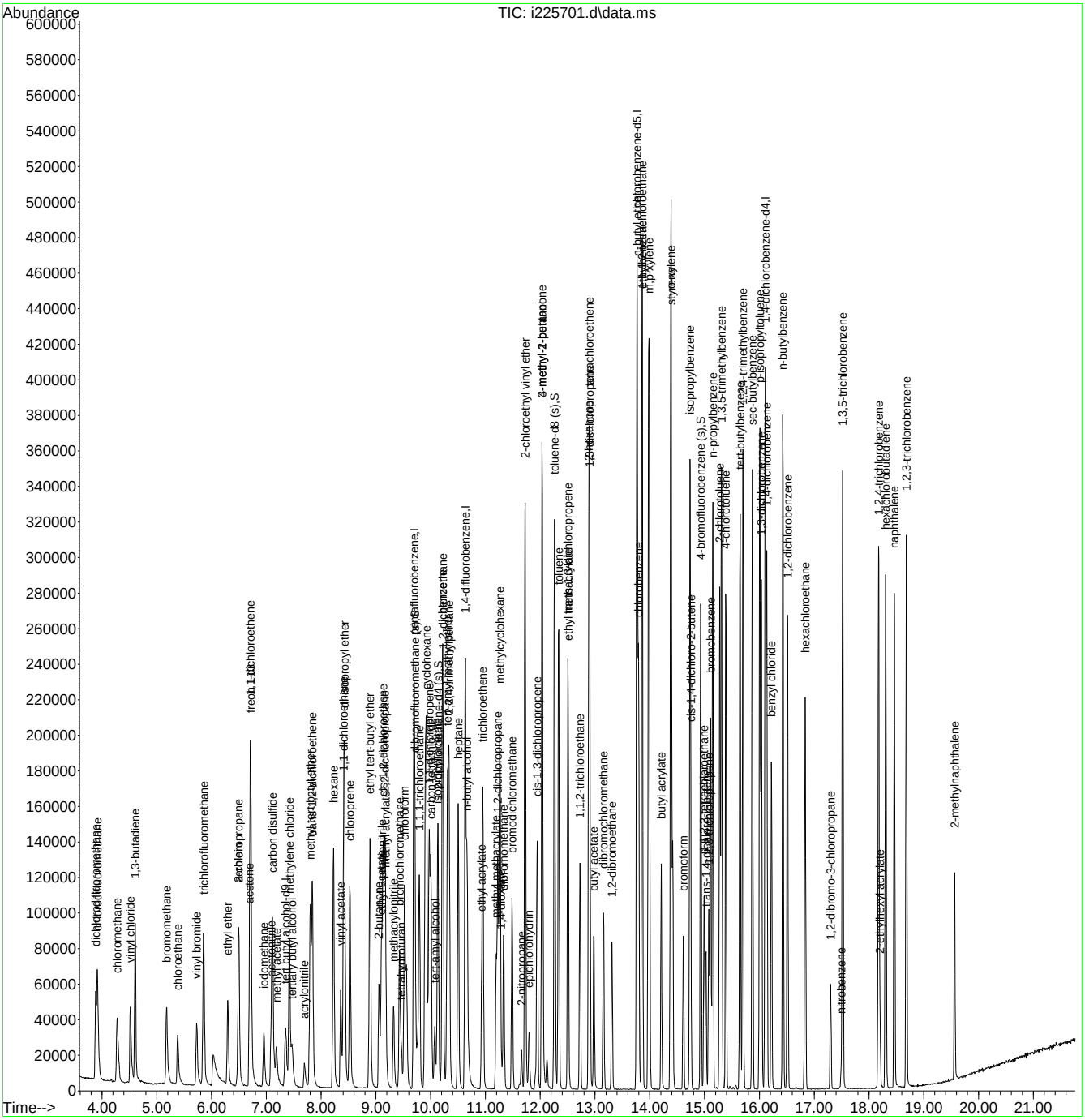
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	170851	45.52	ug/L	100
108) sec-butylbenzene	15.873	105	210056	44.48	ug/L	97
109) p-isopropyltoluene	16.009	119	188999	46.12	ug/l	98
110) benzyl chloride	16.218	91	114748	49.91	ug/L	98
111) 1,3-dichlorobenzene	16.035	146	107257	47.93	ug/L	99
112) 1,4-dichlorobenzene	16.135	146	108945	47.67	ug/L	99
113) 1,2-dichlorobenzene	16.516	146	103823	47.40	ug/L	99
114) n-butylbenzene	16.427	92	98808	46.35	ug/L	98
115) hexachloroethane	16.835	201	39913	48.84	ug/L	98
116) 1,2-dibromo-3-chloropr...	17.301	157	14844	48.72	ug/L	92
117) nitrobenzene	17.494	77	5559	53.10	ug/L	95
118) 1,3,5-trichlorobenzene	17.521	180	106821	48.01	ug/L	99
119) 1,2,4-trichlorobenzene	18.180	180	94854	47.39	ug/L	98
120) 2-ethylhexyl acrylate	18.200	55	13973	8.57	ug/L	97
121) hexachlorobutadiene	18.305	225	62194	47.21	ug/L	98
122) naphthalene	18.462	128	193500	50.01	ug/L	99
123) 1,2,3-trichlorobenzene	18.682	180	89027	45.21	ug/L	99
124) 2-methylnaphthalene	19.566	142	46637	33.80	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Apr-2019\4-26\vi9093\
Data File : i225701.d
Acq On : 25 Apr 2019 7:44 am
Operator : juntaep
Sample : cc8986-50 Inst : GCMSI
Misc : MS34087,VI9093,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: Apr 26 09:23:53 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.73	65	56213	500.00	ug/L		-0.01
5) pentafluorobenzene	9.98	168	179067	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	247615	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	222547	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	123910	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	81490	50.54	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.08%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	69798	51.78	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.56%				
75) toluene-d8 (s)	12.51	98	275462	47.24	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.48%				
98) 4-bromofluorobenzene (s)	15.14	95	103409	49.38	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.76%				
Target Compounds							Qvalue
9) vinyl chloride	4.99	62	1383	0.47	ug/L	#	49
19) 1,1-dichloroethene	7.07	61	1265	0.44	ug/L		87
22) iodomethane	7.34	142	1676	0.48	ug/L	#	43
23) carbon disulfide	7.47	76	3086	0.53	ug/L		85
26) methyl tert butyl ether	8.13	73	2848	0.53	ug/L		54
27) trans-1,2-dichloroethene	8.16	61	1494	0.56	ug/L		79
28) hexane	8.51	57	1119	0.46	ug/L		89
29) di-isopropyl ether	8.71	45	3496	0.50	ug/L		92
30) ethyl tert-butyl ether	9.18	59	2847	0.45	ug/L		87
32) 1,1-dichloroethane	8.73	63	1650	0.49	ug/L		73
33) chloroprene	8.83	53	1248	0.51	ug/L		73
37) 2,2-dichloropropane	9.49	77	1434	0.50	ug/L		82
38) cis-1,2-dichloroethene	9.45	96	1103	0.51	ug/L		88
39) propionitrile	9.46	54	996	5.33	ug/L		85
40) bromochloromethane	9.74	130	659	0.47	ug/L	#	76
47) 1,1,1-trichloroethane	10.09	97	1615	0.53	ug/L		87
48) cyclohexane	10.20	84	1504	0.49	ug/L		86
49) 1,1-dichloropropene	10.26	75	1178	0.53	ug/L	#	79
51) carbon tetrachloride	10.28	117	1335	0.51	ug/L	#	76
54) 2,2,4-trimethylpentane	10.59	57	2704	0.37	ug/L		86
55) tert-amyl methyl ether	10.58	73	2980	0.53	ug/L		92
57) benzene	10.50	78	3878	0.56	ug/L		82
61) trichloroethene	11.22	130	968	0.53	ug/L		95
64) 2-chloroethyl vinyl ether	11.98	63	2246	2.69	ug/L		95
66) 1,2-dichloropropane	11.50	63	956	0.52	ug/L	#	39
68) dibromomethane	11.61	93	550	0.53	ug/L		81
69) bromodichloromethane	11.76	83	1322	0.53	ug/L		94
71) cis-1,3-dichloropropene	12.21	75	1250	0.44	ug/L		93
72) 4-methyl-2-pentanone	12.30	58	1064	2.18	ug/L	#	77
76) toluene	12.58	92	2379	0.55	ug/L		99
77) trans-1,3-dichloropropene	12.76	75	1296	0.51	ug/L		89
78) ethyl methacrylate	12.74	69	891	0.50	ug/L		72
79) 1,1,2-trichloroethane	12.98	83	695	0.58	ug/L	#	69

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

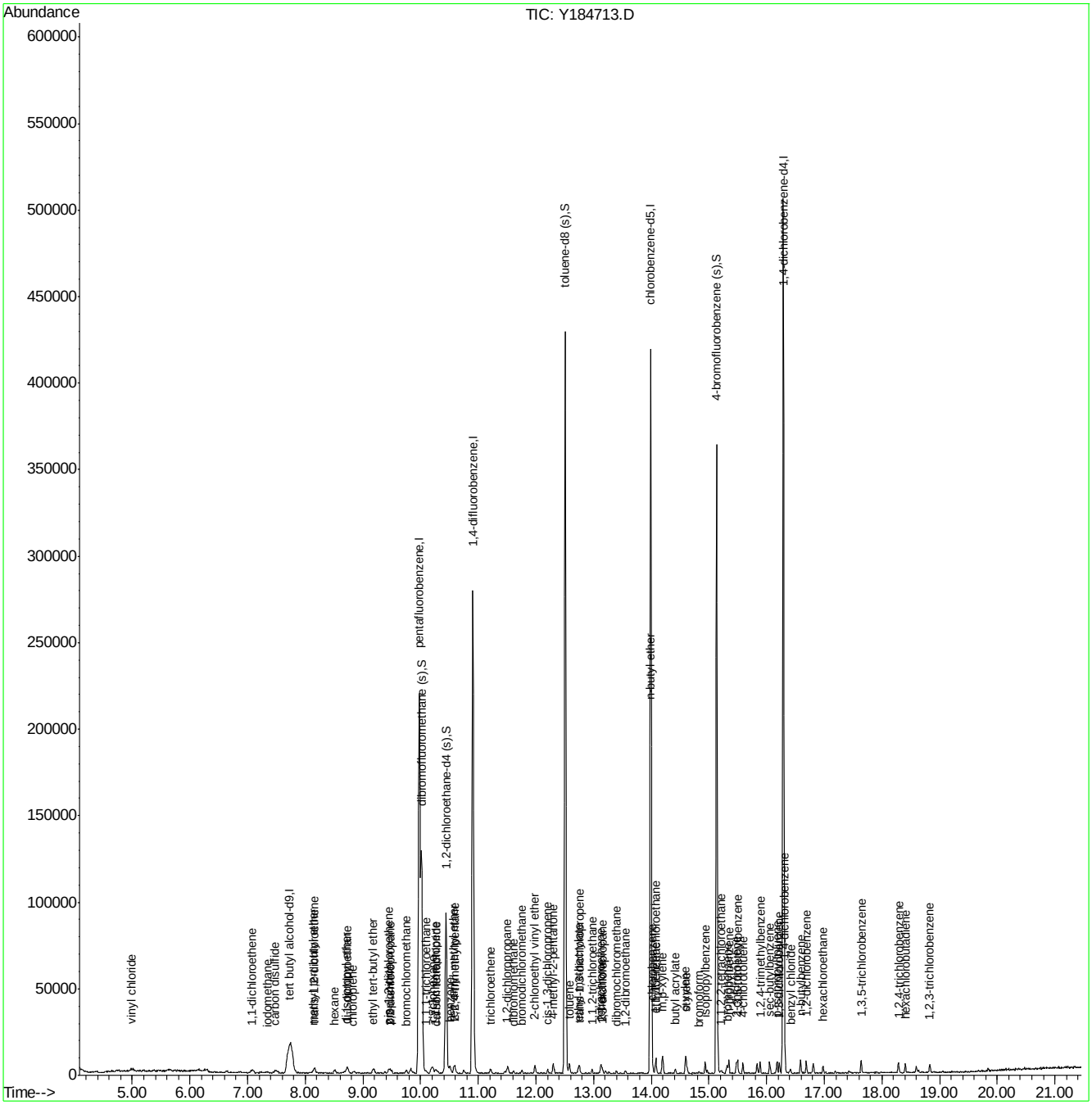
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) 2-hexanone	13.13	58	923	1.99 ug/L #	77
81) tetrachloroethene	13.12	166	1004	0.52 ug/L	92
82) 1,3-dichloropropane	13.15	76	1263	0.56 ug/L	91
84) dibromochloromethane	13.39	129	828	0.43 ug/L	89
85) 1,2-dibromoethane	13.55	107	1013	0.53 ug/L	87
86) n-butyl ether	13.97	57	3943	0.54 ug/L	76
87) chlorobenzene	14.02	112	3055	0.61 ug/L	83
88) 1,1,1,2-tetrachloroethane	14.09	131	1100	0.53 ug/L	83
89) ethylbenzene	14.08	91	4315	0.53 ug/L	95
90) m,p-xylene	14.20	106	3428	1.10 ug/L	96
91) o-xylene	14.59	91	3554	0.51 ug/L	88
92) styrene	14.60	104	2736	0.49 ug/L	93
93) bromoform	14.83	173	641	0.51 ug/L	90
94) butyl acrylate	14.41	55	1526	0.52 ug/L	94
95) isopropylbenzene	14.93	105	4385	0.53 ug/L	96
99) bromobenzene	15.31	156	1423	0.59 ug/L #	80
100) 1,1,2,2-tetrachloroethane	15.21	83	1059	0.58 ug/L	84
103) n-propylbenzene	15.35	91	5499	0.59 ug/L	94
104) 2-chlorotoluene	15.48	126	1301	0.61 ug/L #	54
105) 4-chlorotoluene	15.59	91	3513	0.59 ug/L	90
106) 1,3,5-trimethylbenzene	15.50	105	3857	0.55 ug/L	91
108) 1,2,4-trimethylbenzene	15.89	105	4080	0.56 ug/L	95
109) sec-butylbenzene	16.06	105	4557	0.51 ug/L	97
110) 1,3-dichlorobenzene	16.22	146	2581	0.58 ug/L	90
111) p-isopropyltoluene	16.18	119	4032	0.51 ug/L	94
112) 1,4-dichlorobenzene	16.32	146	2780	0.62 ug/L	100
113) 1,2-dichlorobenzene	16.68	146	2776	0.62 ug/L	98
114) n-butylbenzene	16.59	92	2136	0.52 ug/L	90
116) 1,3,5-trichlorobenzene	17.64	180	2554	0.57 ug/L	87
117) 1,2,4-trichlorobenzene	18.29	180	2123	0.56 ug/L	94
118) hexachlorobutadiene	18.41	225	1324	0.59 ug/L	92
120) 1,2,3-trichlorobenzene	18.83	180	1605	0.47 ug/L	81
121) hexachloroethane	16.98	201	798	0.55 ug/L	88
122) benzyl chloride	16.41	91	1972	0.59 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	50098	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	174738	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	241908	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	216141	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	120094	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	77304	49.13	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.26%				
53) 1,2-dichloroethane-d4 (s)	10.43	65	66660	50.62	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.24%				
75) toluene-d8 (s)	12.51	98	272570	48.13	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.26%				
98) 4-bromofluorobenzene (s)	15.13	95	98731	48.65	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.30%				
Target Compounds							Qvalue
6) chlorodifluoromethane	4.39	51	2580	0.97	ug/L		64
7) dichlorodifluoromethane	4.36	85	3338	0.98	ug/L	#	51
8) chloromethane	4.74	50	4283	1.30	ug/L		82
9) vinyl chloride	4.98	62	3306	1.16	ug/L		79
11) bromomethane	5.62	94	3107	1.34	ug/L		92
12) chloroethane	5.77	64	1613	1.03	ug/L		53
13) vinyl bromide	6.15	106	1230	0.87	ug/L	#	65
14) trichlorofluoromethane	6.27	101	3945	1.22	ug/L		88
15) ethyl ether	6.65	74	741	0.82	ug/L	#	7
16) 2-chloropropane	6.86	63	767	1.02	ug/L	#	34
18) freon 113	7.10	151	1379	0.82	ug/L	#	81
19) 1,1-dichloroethene	7.07	61	2477	0.87	ug/L		91
20) acetone	7.07	43	1853	4.63	ug/L		98
22) iodomethane	7.33	142	3089	0.90	ug/L		92
23) carbon disulfide	7.47	76	5832	1.03	ug/L		91
26) methyl tert butyl ether	8.13	73	5064	0.96	ug/L		96
27) trans-1,2-dichloroethene	8.16	61	2619	1.00	ug/L		91
28) hexane	8.52	57	2351	0.99	ug/L		89
29) di-isopropyl ether	8.72	45	5968	0.87	ug/L		98
30) ethyl tert-butyl ether	9.18	59	5761	0.92	ug/L		93
32) 1,1-dichloroethane	8.73	63	3373	1.02	ug/L		92
33) chloroprene	8.83	53	2304	0.96	ug/L		80
37) 2,2-dichloropropane	9.49	77	2986	1.07	ug/L		95
38) cis-1,2-dichloroethene	9.44	96	2304	1.09	ug/L	#	76
39) propionitrile	9.46	54	1739	9.53	ug/L		87
40) bromochloromethane	9.74	130	1379	1.01	ug/L		92
42) chloroform	9.82	83	4164	1.25	ug/L		94
47) 1,1,1-trichloroethane	10.10	97	3205	1.08	ug/L		98
48) cyclohexane	10.21	84	3046	1.02	ug/L	#	71
49) 1,1-dichloropropene	10.26	75	2001	0.93	ug/L		93
51) carbon tetrachloride	10.29	117	2769	1.07	ug/L		97
54) 2,2,4-trimethylpentane	10.59	57	6313	0.90	ug/L		94
55) tert-amyl methyl ether	10.58	73	4710	0.86	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
56) n-butyl alcohol	10.95	41	1344	44.79	ug/L	#	66
57) benzene	10.51	78	7094	1.05	ug/L		95
58) heptane	10.74	57	1196	1.00	ug/L		78
60) 1,2-dichloroethane	10.53	62	2368	1.09	ug/L		80
61) trichloroethene	11.22	130	1728	0.97	ug/L	#	83
64) 2-chloroethyl vinyl ether	11.98	63	3647	4.48	ug/L		96
66) 1,2-dichloropropane	11.50	63	1554	0.87	ug/L		89
67) methylcyclohexane	11.51	83	2849	0.98	ug/L		91
68) dibromomethane	11.61	93	948	0.93	ug/L		96
69) bromodichloromethane	11.75	83	2408	0.98	ug/L		80
71) cis-1,3-dichloropropene	12.20	75	2550	0.93	ug/L		91
72) 4-methyl-2-pentanone	12.31	58	1849	3.87	ug/L	#	75
76) toluene	12.58	92	4142	0.99	ug/L	#	81
77) trans-1,3-dichloropropene	12.76	75	2343	0.94	ug/L		92
78) ethyl methacrylate	12.74	69	1530	0.89	ug/L		90
79) 1,1,2-trichloroethane	12.98	83	1151	0.99	ug/L	#	83
80) 2-hexanone	13.13	58	1598	3.54	ug/L	#	81
81) tetrachloroethene	13.12	166	1916	1.01	ug/L		97
82) 1,3-dichloropropane	13.15	76	2044	0.93	ug/L		93
84) dibromochloromethane	13.39	129	1543	0.82	ug/L		86
85) 1,2-dibromoethane	13.55	107	1711	0.92	ug/L		91
86) n-butyl ether	13.97	57	6566	0.93	ug/L		88
87) chlorobenzene	14.02	112	4994	1.03	ug/L		87
88) 1,1,1,2-tetrachloroethane	14.09	131	1852	0.91	ug/L	#	78
89) ethylbenzene	14.07	91	7770	0.99	ug/L		97
90) m,p-xylene	14.20	106	6359	2.10	ug/L	#	76
91) o-xylene	14.59	91	6120	0.90	ug/L		94
92) styrene	14.60	104	5101	0.94	ug/L		88
93) bromoform	14.83	173	1187	0.97	ug/L		79
94) butyl acrylate	14.42	55	2692	0.94	ug/L		83
95) isopropylbenzene	14.93	105	7979	0.99	ug/L		96
99) bromobenzene	15.32	156	2460	1.06	ug/L	#	63
100) 1,1,2,2-tetrachloroethane	15.20	83	1791	1.02	ug/L		82
103) n-propylbenzene	15.35	91	9379	1.03	ug/L		94
104) 2-chlorotoluene	15.48	126	2056	0.99	ug/L		94
105) 4-chlorotoluene	15.59	91	6036	1.05	ug/L		94
106) 1,3,5-trimethylbenzene	15.50	105	6635	0.97	ug/L		98
107) tert-butylbenzene	15.84	134	1105	0.86	ug/L	#	87
108) 1,2,4-trimethylbenzene	15.88	105	6579	0.92	ug/L		94
109) sec-butylbenzene	16.06	105	8626	1.00	ug/L		95
110) 1,3-dichlorobenzene	16.22	146	4249	0.98	ug/L		91
111) p-isopropyltoluene	16.18	119	7541	0.99	ug/L		93
112) 1,4-dichlorobenzene	16.31	146	4569	1.05	ug/L		88
113) 1,2-dichlorobenzene	16.68	146	4828	1.11	ug/L		91
114) n-butylbenzene	16.59	92	3846	0.97	ug/L		82
116) 1,3,5-trichlorobenzene	17.64	180	3985	0.92	ug/L		86
117) 1,2,4-trichlorobenzene	18.29	180	3341	0.90	ug/L		94
118) hexachlorobutadiene	18.41	225	2223	1.03	ug/L		90
119) naphthalene	18.59	128	4830	0.80	ug/L		99
120) 1,2,3-trichlorobenzene	18.83	180	2733	0.83	ug/L		84

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

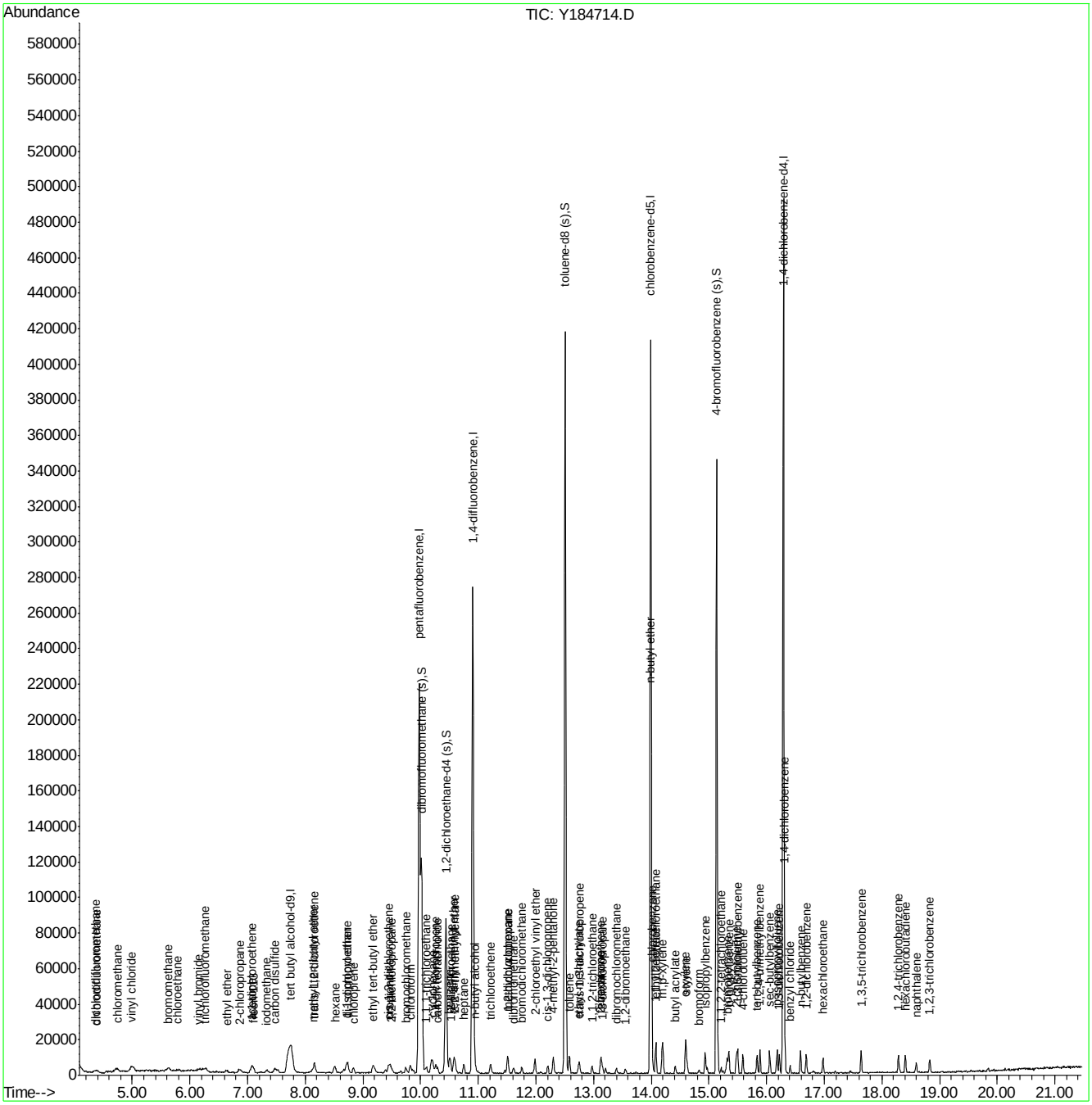
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
121) hexachloroethane	16.98	201	1165	0.83 ug/L	84
122) benzyl chloride	16.41	91	3065	0.94 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	52109	500.00	ug/L		0.00
5) pentafluorobenzene	9.98	168	185611	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	260206	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	231217	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	125353	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	84176	50.37	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.74%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	72011	50.83	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.66%				
75) toluene-d8 (s)	12.51	98	291827	48.17	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.34%				
98) 4-bromofluorobenzene (s)	15.14	95	103822	49.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.81	59	1309	7.79	ug/L		54
4) 1,4-dioxane	11.55	88	757	44.42	ug/L		94
6) chlorodifluoromethane	4.38	51	5797	2.05	ug/L		98
7) dichlorodifluoromethane	4.36	85	6680	1.84	ug/L		89
8) chloromethane	4.75	50	7398	2.11	ug/L		96
9) vinyl chloride	5.00	62	5686	1.88	ug/L		92
10) 1,3-butadiene	5.04	54	3841	2.03	ug/L		77
11) bromomethane	5.62	94	5231	2.13	ug/L		99
12) chloroethane	5.81	64	3337	2.00	ug/L		87
13) vinyl bromide	6.15	106	2599	1.72	ug/L		83
14) trichlorofluoromethane	6.26	101	6884	2.01	ug/L		67
15) ethyl ether	6.64	74	1572	1.63	ug/L	#	62
16) 2-chloropropane	6.87	63	1473	1.84	ug/L	#	32
18) freon 113	7.11	151	3436	1.93	ug/L		81
19) 1,1-dichloroethene	7.07	61	5857	1.95	ug/L		79
20) acetone	7.08	43	3749	8.82	ug/L		94
22) iodomethane	7.33	142	7247	1.99	ug/L		88
23) carbon disulfide	7.48	76	13489	2.24	ug/L		87
24) methylene chloride	7.78	84	5840	2.51	ug/L		86
26) methyl tert butyl ether	8.13	73	10739	1.91	ug/L		94
27) trans-1,2-dichloroethene	8.17	61	5755	2.07	ug/L		87
28) hexane	8.51	57	4834	1.92	ug/L		93
29) di-isopropyl ether	8.72	45	13682	1.89	ug/L		93
30) ethyl tert-butyl ether	9.18	59	11708	1.77	ug/L		99
31) 2-butanone	9.38	72	985	6.83	ug/L	#	54
32) 1,1-dichloroethane	8.73	63	7390	2.10	ug/L		94
33) chloroprene	8.84	53	4935	1.93	ug/L		94
37) 2,2-dichloropropane	9.49	77	6075	2.04	ug/L		89
38) cis-1,2-dichloroethene	9.46	96	4704	2.10	ug/L	#	73
39) propionitrile	9.47	54	3601	18.59	ug/L		59
40) bromochloromethane	9.74	130	2939	2.03	ug/L		89
42) chloroform	9.82	83	7529	2.12	ug/L		91
43) tert-butyl formate	9.87	59	2374	1.69	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	10.09	97	6415	2.04	ug/L		97
48) cyclohexane	10.21	84	5838	1.85	ug/L		91
49) 1,1-dichloropropene	10.26	75	4717	2.06	ug/L		94
51) carbon tetrachloride	10.29	117	5787	2.11	ug/L		94
54) 2,2,4-trimethylpentane	10.60	57	13158	1.74	ug/L		95
55) tert-amyl methyl ether	10.58	73	10818	1.84	ug/L		100
56) n-butyl alcohol	10.95	41	2806	86.93	ug/L		85
57) benzene	10.51	78	15222	2.10	ug/L		93
58) heptane	10.75	57	2588	2.01	ug/L		97
60) 1,2-dichloroethane	10.53	62	4793	2.06	ug/L		97
61) trichloroethene	11.21	130	3831	2.00	ug/L		90
62) ethyl acrylate	11.20	55	3008	1.93	ug/L		80
64) 2-chloroethyl vinyl ether	11.98	63	8535	9.74	ug/L		97
66) 1,2-dichloropropane	11.51	63	3717	1.94	ug/L		96
67) methylcyclohexane	11.51	83	6137	1.97	ug/L		94
68) dibromomethane	11.62	93	2137	1.95	ug/L		80
69) bromodichloromethane	11.75	83	5260	1.99	ug/L		88
71) cis-1,3-dichloropropene	12.20	75	5655	1.91	ug/L		96
72) 4-methyl-2-pentanone	12.30	58	3711	7.22	ug/L		88
73) 3-methyl-1-butanol	12.30	70	1246	31.82	ug/L	#	60
76) toluene	12.58	92	8912	2.00	ug/L		91
77) trans-1,3-dichloropropene	12.76	75	4728	1.78	ug/L		93
78) ethyl methacrylate	12.74	69	3369	1.83	ug/L		90
79) 1,1,2-trichloroethane	12.97	83	2489	1.99	ug/L	#	85
80) 2-hexanone	13.13	58	3422	7.09	ug/L	#	84
81) tetrachloroethene	13.12	166	4256	2.11	ug/L		95
82) 1,3-dichloropropane	13.15	76	4524	1.92	ug/L		97
83) butyl acetate	13.21	56	1693	1.82	ug/L		86
84) dibromochloromethane	13.39	129	3682	1.83	ug/L		94
85) 1,2-dibromoethane	13.55	107	3851	1.94	ug/L		92
86) n-butyl ether	13.97	57	14055	1.86	ug/L		86
87) chlorobenzene	14.02	112	10704	2.06	ug/L		96
88) 1,1,1,2-tetrachloroethane	14.09	131	3778	1.74	ug/L		87
89) ethylbenzene	14.08	91	17031	2.03	ug/L		97
90) m,p-xylene	14.20	106	12583	3.88	ug/L		91
91) o-xylene	14.59	91	13660	1.89	ug/L		95
92) styrene	14.60	104	10110	1.75	ug/L		99
93) bromoform	14.83	173	2431	1.85	ug/L		96
94) butyl acrylate	14.42	55	5449	1.77	ug/L		95
95) isopropylbenzene	14.94	105	15778	1.83	ug/L		95
96) cis-1,4-dichloro-2-butene	14.97	88	1204	1.74	ug/L	#	83
99) bromobenzene	15.32	156	4759	1.96	ug/L	#	81
100) 1,1,2,2-tetrachloroethane	15.21	83	3617	1.97	ug/L		89
101) trans-1,4-dichloro-2-buten	15.24	53	714	1.66	ug/L		87
102) 1,2,3-trichloropropane	15.30	110	1044	2.18	ug/L		83
103) n-propylbenzene	15.35	91	19490	2.06	ug/L		98
104) 2-chlorotoluene	15.48	126	4267	1.96	ug/L		91
105) 4-chlorotoluene	15.59	91	11884	1.97	ug/L		92
106) 1,3,5-trimethylbenzene	15.50	105	13774	1.93	ug/L		93
107) tert-butylbenzene	15.84	134	2535	1.89	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.88	105	14219	1.91 ug/L	97
109) sec-butylbenzene	16.05	105	17611	1.96 ug/L	98
110) 1,3-dichlorobenzene	16.22	146	9450	2.09 ug/L	98
111) p-isopropyltoluene	16.18	119	15015	1.88 ug/L	98
112) 1,4-dichlorobenzene	16.32	146	9778	2.16 ug/L	94
113) 1,2-dichlorobenzene	16.68	146	9202	2.02 ug/L	92
114) n-butylbenzene	16.59	92	7912	1.91 ug/L	95
115) 1,2-dibromo-3-chloropropan	17.44	157	845	1.95 ug/L #	65
116) 1,3,5-trichlorobenzene	17.64	180	8536	1.89 ug/L	91
117) 1,2,4-trichlorobenzene	18.29	180	6765	1.75 ug/L	91
118) hexachlorobutadiene	18.41	225	4723	2.09 ug/L	93
119) naphthalene	18.59	128	9731	1.54 ug/L	95
120) 1,2,3-trichlorobenzene	18.83	180	5960	1.73 ug/L	92
121) hexachloroethane	16.98	201	2807	1.92 ug/L	85
122) benzyl chloride	16.41	91	6581	1.93 ug/L	98

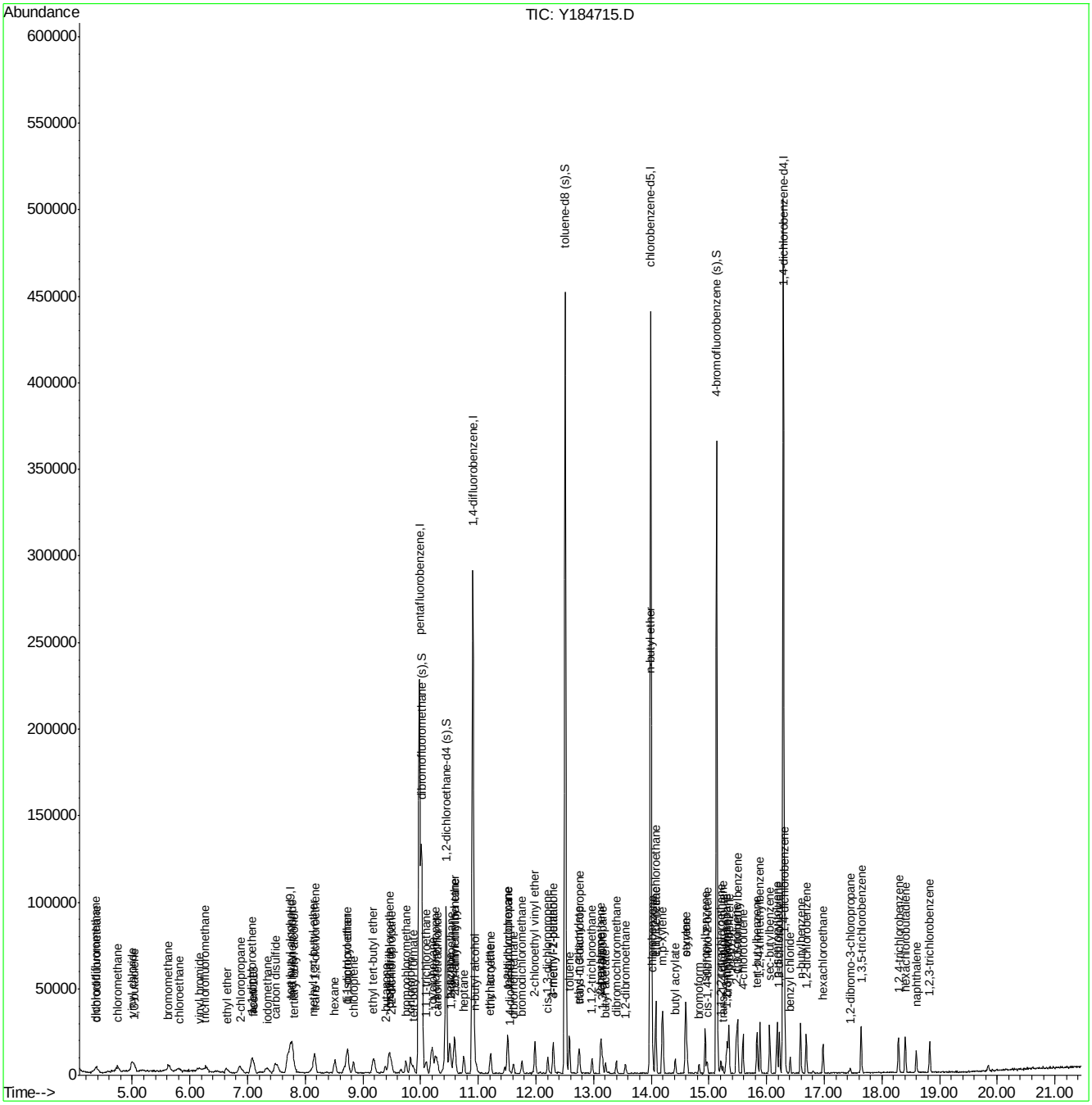
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.41
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	55416	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	180507	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	252656	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	223014	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	123863	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	83075	51.12	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.24%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	73232	53.24	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.48%				
75) toluene-d8 (s)	12.51	98	280000	47.92	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.84%				
98) 4-bromofluorobenzene (s)	15.13	95	103094	49.25	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.86	59	3640	20.37	ug/L		91
4) 1,4-dioxane	11.54	88	1913	105.56	ug/L		79
6) chlorodifluoromethane	4.37	51	11984	4.36	ug/L		94
7) dichlorodifluoromethane	4.36	85	14056	3.98	ug/L		90
8) chloromethane	4.74	50	15246	4.47	ug/L		93
9) vinyl chloride	5.01	62	12322	4.18	ug/L		99
10) 1,3-butadiene	5.03	54	7855	4.27	ug/L		89
11) bromomethane	5.63	94	10729	4.48	ug/L		88
12) chloroethane	5.81	64	6617	4.09	ug/L		88
13) vinyl bromide	6.15	106	6198	4.22	ug/L		92
14) trichlorofluoromethane	6.28	101	14820	4.44	ug/L		97
15) ethyl ether	6.63	74	3430	3.66	ug/L	#	63
16) 2-chloropropane	6.87	63	3181	4.08	ug/L	#	56
18) freon 113	7.09	151	7012	4.06	ug/L		97
19) 1,1-dichloroethene	7.07	61	11002	3.76	ug/L		96
20) acetone	7.09	43	7915	19.15	ug/L		91
21) acetonitrile	7.52	41	8746	42.65	ug/L		80
22) iodomethane	7.33	142	14173	3.99	ug/L		91
23) carbon disulfide	7.48	76	23834	4.06	ug/L		96
24) methylene chloride	7.78	84	9578	4.23	ug/L		93
25) methyl acetate	7.52	43	4021	4.10	ug/L		93
26) methyl tert butyl ether	8.14	73	21562	3.94	ug/L		96
27) trans-1,2-dichloroethene	8.16	61	11122	4.11	ug/L		93
28) hexane	8.51	57	10195	4.16	ug/L		98
29) di-isopropyl ether	8.72	45	27246	3.86	ug/L		95
30) ethyl tert-butyl ether	9.18	59	24632	3.82	ug/L		100
31) 2-butanone	9.38	72	2541	18.12	ug/L	#	46
32) 1,1-dichloroethane	8.73	63	13928	4.08	ug/L		97
33) chloroprene	8.84	53	10155	4.08	ug/L		94
34) acrylonitrile	8.07	53	2018	3.73	ug/L		85
35) vinyl acetate	8.67	86	999	3.69	ug/L	#	53
36) ethyl acetate	9.39	45	690	3.57	ug/L	#	65
37) 2,2-dichloropropane	9.49	77	12128	4.19	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) cis-1,2-dichloroethene	9.45	96	9052	4.15	ug/L		91
39) propionitrile	9.47	54	8191	43.47	ug/L		75
40) bromochloromethane	9.74	130	5621	3.99	ug/L		90
41) tetrahydrofuran	9.76	72	647	3.90	ug/L		82
42) chloroform	9.83	83	14843	4.31	ug/L		99
43) tert-butyl formate	9.87	59	5490	4.02	ug/L		89
46) methacrylonitrile	9.66	67	1974	3.85	ug/L		82
47) 1,1,1-trichloroethane	10.10	97	12489	4.08	ug/L		82
48) cyclohexane	10.21	84	13112	4.27	ug/L	#	83
49) 1,1-dichloropropene	10.26	75	8997	4.04	ug/L		93
50) tert-amyl alcohol	10.37	55	1179	19.18	ug/L	#	79
51) carbon tetrachloride	10.28	117	10889	4.09	ug/L		94
54) 2,2,4-trimethylpentane	10.60	57	27590	3.75	ug/L		97
55) tert-amyl methyl ether	10.58	73	22446	3.93	ug/L		89
56) n-butyl alcohol	10.96	41	6394	204.01	ug/L		93
57) benzene	10.51	78	29684	4.22	ug/L		100
58) heptane	10.75	57	4773	3.82	ug/L		94
59) isopropyl acetate	10.41	87	1119	3.76	ug/L	#	79
60) 1,2-dichloroethane	10.53	62	9871	4.37	ug/L		92
61) trichloroethene	11.21	130	7842	4.21	ug/L		96
62) ethyl acrylate	11.20	55	6205	4.11	ug/L		94
63) 2-nitropropane	11.96	41	2068	4.29	ug/L		94
64) 2-chloroethyl vinyl ether	11.98	63	16248	19.09	ug/L		96
65) methyl methacrylate	11.46	100	1261	3.81	ug/L	#	84
66) 1,2-dichloropropane	11.51	63	7892	4.24	ug/L		94
67) methylcyclohexane	11.52	83	11924	3.93	ug/L		89
68) dibromomethane	11.61	93	4484	4.22	ug/L		94
69) bromodichloromethane	11.76	83	10579	4.12	ug/L		96
70) epichlorohydrin	12.07	57	2639	21.22	ug/L		90
71) cis-1,3-dichloropropene	12.20	75	11562	4.02	ug/L		95
72) 4-methyl-2-pentanone	12.30	58	8011	16.05	ug/L		94
73) 3-methyl-1-butanol	12.30	70	2912	76.59	ug/L		85
76) toluene	12.58	92	17091	3.97	ug/L		94
77) trans-1,3-dichloropropene	12.76	75	9645	3.75	ug/L		95
78) ethyl methacrylate	12.74	69	6905	3.88	ug/L		93
79) 1,1,2-trichloroethane	12.97	83	4825	4.00	ug/L		94
80) 2-hexanone	13.13	58	7568	16.27	ug/L	#	85
81) tetrachloroethene	13.12	166	7664	3.93	ug/L		96
82) 1,3-dichloropropane	13.15	76	9332	4.10	ug/L		99
83) butyl acetate	13.20	56	3362	3.74	ug/L		99
84) dibromochloromethane	13.39	129	7277	3.74	ug/L		99
85) 1,2-dibromoethane	13.55	107	7622	3.98	ug/L		99
86) n-butyl ether	13.97	57	27016	3.70	ug/L		94
87) chlorobenzene	14.02	112	20618	4.12	ug/L		95
88) 1,1,1,2-tetrachloroethane	14.09	131	8223	3.92	ug/L		93
89) ethylbenzene	14.08	91	32383	4.00	ug/L		94
90) m,p-xylene	14.20	106	24495	7.84	ug/L		98
91) o-xylene	14.59	91	26116	3.74	ug/L		97
92) styrene	14.60	104	20903	3.75	ug/L		97
93) bromoform	14.83	173	4714	3.72	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

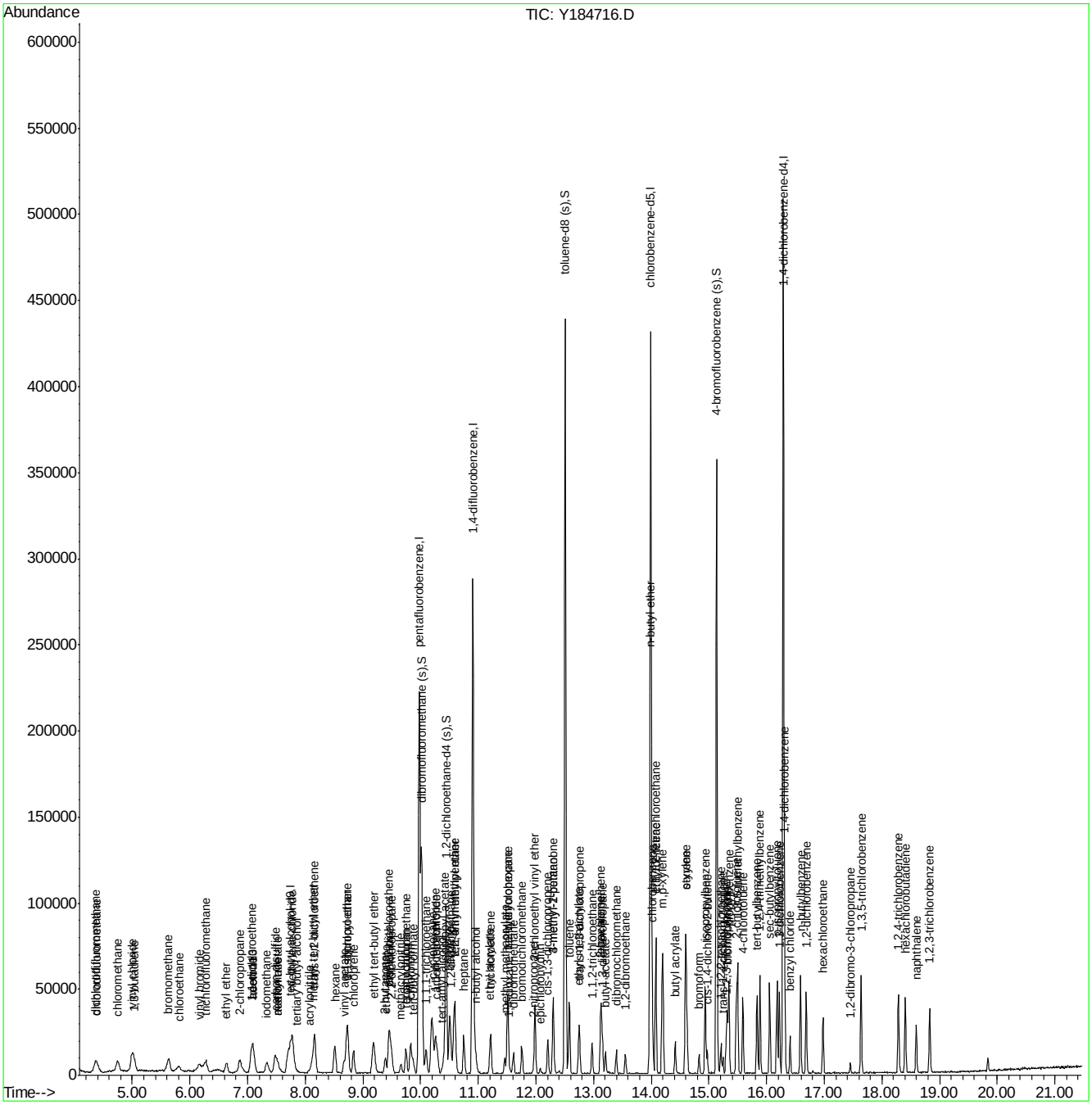
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	14.42	55	11124	3.75	ug/L		96
95) isopropylbenzene	14.93	105	31012	3.72	ug/L		96
96) cis-1,4-dichloro-2-butene	14.97	88	2412	3.61	ug/L		94
99) bromobenzene	15.32	156	10088	4.20	ug/L	#	79
100) 1,1,2,2-tetrachloroethane	15.21	83	7764	4.29	ug/L		95
101) trans-1,4-dichloro-2-buten	15.24	53	1683	3.96	ug/L		91
102) 1,2,3-trichloropropane	15.29	110	1895	4.00	ug/L		80
103) n-propylbenzene	15.35	91	37262	3.98	ug/L		98
104) 2-chlorotoluene	15.48	126	8421	3.92	ug/L		89
105) 4-chlorotoluene	15.59	91	23381	3.93	ug/L		100
106) 1,3,5-trimethylbenzene	15.50	105	27380	3.88	ug/L		99
107) tert-butylbenzene	15.84	134	4836	3.65	ug/L	#	91
108) 1,2,4-trimethylbenzene	15.88	105	28036	3.82	ug/L		99
109) sec-butylbenzene	16.05	105	33816	3.81	ug/L		97
110) 1,3-dichlorobenzene	16.22	146	18131	4.05	ug/L		94
111) p-isopropyltoluene	16.18	119	29864	3.79	ug/L		97
112) 1,4-dichlorobenzene	16.31	146	18877	4.22	ug/L		95
113) 1,2-dichlorobenzene	16.69	146	18239	4.05	ug/L		96
114) n-butylbenzene	16.59	92	15757	3.85	ug/L		93
115) 1,2-dibromo-3-chloropropan	17.45	157	1662	3.89	ug/L		97
116) 1,3,5-trichlorobenzene	17.64	180	17457	3.91	ug/L		99
117) 1,2,4-trichlorobenzene	18.29	180	14156	3.71	ug/L		93
118) hexachlorobutadiene	18.41	225	9185	4.12	ug/L		93
119) naphthalene	18.59	128	21485	3.44	ug/L		100
120) 1,2,3-trichlorobenzene	18.83	180	12201	3.59	ug/L		98
121) hexachloroethane	16.98	201	4815	3.33	ug/L		97
122) benzyl chloride	16.41	91	13287	3.94	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.75	65	55075	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	175770	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	247230	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	221702	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	122752	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	79760	50.40	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.80%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	71940	53.45	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.90%				
75) toluene-d8 (s)	12.51	98	277475	47.77	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.54%				
98) 4-bromofluorobenzene (s)	15.13	95	101186	48.78	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.56%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.85	59	7108	40.02	ug/L		92
4) 1,4-dioxane	11.54	88	3276	181.89	ug/L		80
6) chlorodifluoromethane	4.39	51	21904	8.19	ug/L		97
7) dichlorodifluoromethane	4.35	85	26990	7.85	ug/L		95
8) chloromethane	4.75	50	28590	8.61	ug/L		96
9) vinyl chloride	4.99	62	24244	8.45	ug/L		90
10) 1,3-butadiene	5.03	54	14563	8.14	ug/L		92
11) bromomethane	5.62	94	19685	8.45	ug/L		94
12) chloroethane	5.81	64	13229	8.39	ug/L		91
13) vinyl bromide	6.16	106	11204	7.84	ug/L		90
14) trichlorofluoromethane	6.27	101	26788	8.24	ug/L		98
15) ethyl ether	6.63	74	6791	7.44	ug/L		88
16) 2-chloropropane	6.86	63	5961	7.85	ug/L	#	74
17) acrolein	6.88	56	1674	7.06	ug/L	#	65
18) freon 113	7.10	151	12671	7.53	ug/L		97
19) 1,1-dichloroethene	7.07	61	21186	7.43	ug/L		95
20) acetone	7.08	43	13466	33.46	ug/L		83
21) acetonitrile	7.50	41	18103	90.67	ug/L		89
22) iodomethane	7.33	142	26511	7.67	ug/L		98
23) carbon disulfide	7.47	76	47059	8.24	ug/L		93
24) methylene chloride	7.78	84	18587	8.44	ug/L		95
25) methyl acetate	7.52	43	8426	8.81	ug/L		87
26) methyl tert butyl ether	8.13	73	44365	8.33	ug/L		98
27) trans-1,2-dichloroethene	8.15	61	20538	7.80	ug/L		88
28) hexane	8.52	57	18563	7.77	ug/L		97
29) di-isopropyl ether	8.72	45	53837	7.84	ug/L		98
30) ethyl tert-butyl ether	9.18	59	49186	7.83	ug/L		96
31) 2-butanone	9.38	72	4536	33.22	ug/L	#	77
32) 1,1-dichloroethane	8.73	63	26723	8.04	ug/L		98
33) chloroprene	8.84	53	18481	7.63	ug/L		95
34) acrylonitrile	8.07	53	4708	8.94	ug/L		98
35) vinyl acetate	8.66	86	2049	7.77	ug/L	#	85
36) ethyl acetate	9.39	45	1645	8.73	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	9.49	77	23113	8.21	ug/L		99
38) cis-1,2-dichloroethene	9.45	96	17967	8.46	ug/L		89
39) propionitrile	9.46	54	16443	89.62	ug/L		95
40) bromochloromethane	9.74	130	11176	8.15	ug/L		90
41) tetrahydrofuran	9.76	72	1269	7.86	ug/L	#	76
42) chloroform	9.82	83	27979	8.34	ug/L		100
43) tert-butyl formate	9.87	59	10470	7.87	ug/L		97
46) methacrylonitrile	9.66	67	4215	8.45	ug/L		95
47) 1,1,1-trichloroethane	10.09	97	23894	8.02	ug/L		98
48) cyclohexane	10.20	84	24050	8.04	ug/L		93
49) 1,1-dichloropropene	10.26	75	17055	7.87	ug/L		97
50) tert-amyl alcohol	10.38	55	2687	44.88	ug/L		98
51) carbon tetrachloride	10.29	117	20900	8.07	ug/L		96
54) 2,2,4-trimethylpentane	10.59	57	53957	7.49	ug/L		95
55) tert-amyl methyl ether	10.59	73	43793	7.83	ug/L		94
56) n-butyl alcohol	10.95	41	12726	414.96	ug/L		88
57) benzene	10.51	78	56988	8.28	ug/L		98
58) heptane	10.75	57	9638	7.89	ug/L		96
59) isopropyl acetate	10.40	87	2388	8.20	ug/L	#	79
60) 1,2-dichloroethane	10.53	62	18793	8.50	ug/L		98
61) trichloroethene	11.22	130	15093	8.27	ug/L		99
62) ethyl acrylate	11.20	55	12278	8.31	ug/L		95
63) 2-nitropropane	11.96	41	4144	8.78	ug/L	#	71
64) 2-chloroethyl vinyl ether	11.98	63	35321	42.41	ug/L		98
65) methyl methacrylate	11.45	100	2653	8.19	ug/L	#	78
66) 1,2-dichloropropane	11.50	63	14704	8.08	ug/L		92
67) methylcyclohexane	11.51	83	22470	7.57	ug/L		99
68) dibromomethane	11.61	93	8861	8.52	ug/L		89
69) bromodichloromethane	11.76	83	19934	7.93	ug/L		97
70) epichlorohydrin	12.07	57	5426	44.60	ug/L		97
71) cis-1,3-dichloropropene	12.20	75	22572	8.01	ug/L		99
72) 4-methyl-2-pentanone	12.31	58	16894	34.59	ug/L		99
73) 3-methyl-1-butanol	12.30	70	5899	158.56	ug/L		89
76) toluene	12.58	92	32768	7.65	ug/L		94
77) trans-1,3-dichloropropene	12.76	75	19766	7.74	ug/L		97
78) ethyl methacrylate	12.75	69	13799	7.80	ug/L		90
79) 1,1,2-trichloroethane	12.98	83	9824	8.20	ug/L		92
80) 2-hexanone	13.13	58	15734	34.02	ug/L		94
81) tetrachloroethene	13.12	166	15254	7.87	ug/L		95
82) 1,3-dichloropropane	13.15	76	18570	8.21	ug/L		92
83) butyl acetate	13.21	56	7362	8.24	ug/L		85
84) dibromochloromethane	13.40	129	14993	7.76	ug/L		97
85) 1,2-dibromoethane	13.55	107	15756	8.28	ug/L		95
86) n-butyl ether	13.97	57	53719	7.40	ug/L		96
87) chlorobenzene	14.02	112	39769	7.99	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.09	131	15733	7.55	ug/L		98
89) ethylbenzene	14.07	91	62625	7.79	ug/L		97
90) m,p-xylene	14.20	106	48089	15.48	ug/L		98
91) o-xylene	14.59	91	52434	7.56	ug/L		97
92) styrene	14.60	104	42347	7.65	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

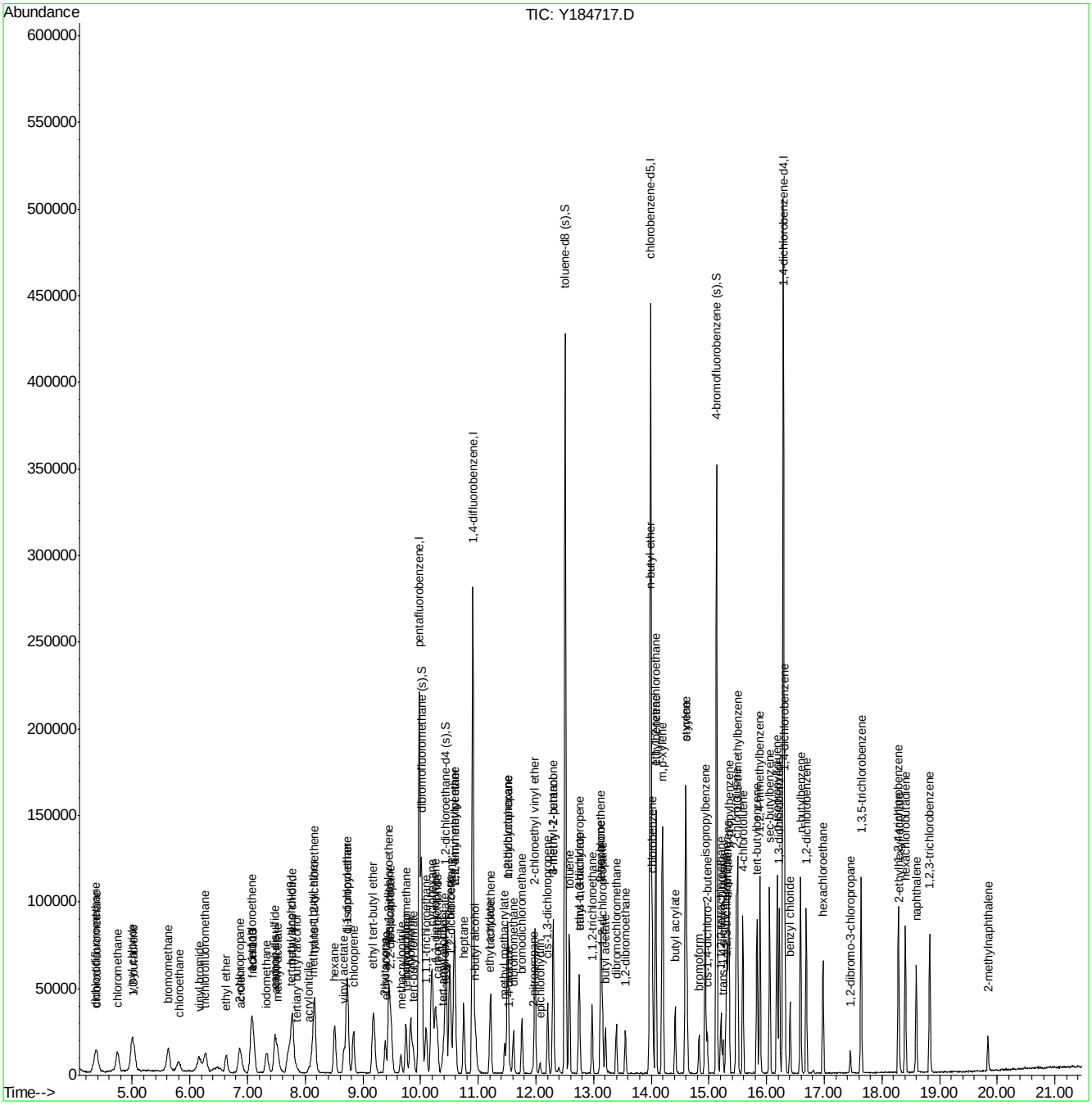
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	9955	7.91 ug/L	92
94) butyl acrylate	14.41	55	23679	8.03 ug/L	98
95) isopropylbenzene	14.93	105	61493	7.43 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	5454	8.21 ug/L	85
99) bromobenzene	15.31	156	19875	8.35 ug/L	92
100) 1,1,2,2-tetrachloroethane	15.21	83	15670	8.74 ug/L	98
101) trans-1,4-dichloro-2-buten	15.24	53	3586	8.52 ug/L	99
102) 1,2,3-trichloropropane	15.29	110	4109	8.76 ug/L	88
103) n-propylbenzene	15.35	91	74090	7.99 ug/L	98
104) 2-chlorotoluene	15.48	126	16959	7.96 ug/L	99
105) 4-chlorotoluene	15.59	91	46639	7.90 ug/L	97
106) 1,3,5-trimethylbenzene	15.50	105	55132	7.88 ug/L	99
107) tert-butylbenzene	15.84	134	9155	6.96 ug/L	98
108) 1,2,4-trimethylbenzene	15.88	105	56749	7.80 ug/L	98
109) sec-butylbenzene	16.05	105	66433	7.55 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	35547	8.02 ug/L	99
111) p-isopropyltoluene	16.18	119	59874	7.67 ug/L	99
112) 1,4-dichlorobenzene	16.31	146	36564	8.25 ug/L	98
113) 1,2-dichlorobenzene	16.69	146	35957	8.06 ug/L	95
114) n-butylbenzene	16.59	92	30301	7.48 ug/L	100
115) 1,2-dibromo-3-chloropropan	17.45	157	3410	8.05 ug/L	91
116) 1,3,5-trichlorobenzene	17.64	180	33649	7.61 ug/L	98
117) 1,2,4-trichlorobenzene	18.29	180	28928	7.66 ug/L	99
118) hexachlorobutadiene	18.41	225	17428	7.88 ug/L	98
119) naphthalene	18.59	128	44840	7.25 ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	25974	7.72 ug/L	99
121) hexachloroethane	16.98	201	10096	7.04 ug/L	93
122) benzyl chloride	16.41	91	27006	8.09 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	2395	1.19 ug/L	93
124) 2-methylnaphthalene	19.84	142	9555	3.43 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.73	65	52655	500.00	ug/L	-0.01
5) pentafluorobenzene	9.97	168	163262	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	230362	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	214598	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	117730	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	74031	50.36	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.72%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	65244	52.02	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.04%			
75) toluene-d8 (s)	12.51	98	262197	46.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.26%			
98) 4-bromofluorobenzene (s)	15.13	95	99459	49.99	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.98%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.84	59	16886	99.43	ug/L	98
4) 1,4-dioxane	11.55	88	8021	465.80	ug/L	85
6) chlorodifluoromethane	4.37	51	54989	22.13	ug/L	97
7) dichlorodifluoromethane	4.35	85	75413	23.61	ug/L	97
8) chloromethane	4.74	50	72376	23.46	ug/L	89
9) vinyl chloride	4.99	62	61409	23.05	ug/L	98
10) 1,3-butadiene	5.03	54	35592	21.41	ug/L	98
11) bromomethane	5.62	94	49745	22.99	ug/L	97
12) chloroethane	5.81	64	32584	22.25	ug/L	96
13) vinyl bromide	6.15	106	29160	21.96	ug/L	98
14) trichlorofluoromethane	6.27	101	68571	22.71	ug/L	98
15) ethyl ether	6.62	74	16630	19.63	ug/L	87
16) 2-chloropropane	6.87	63	13755	19.51	ug/L	98
17) acrolein	6.88	56	4498	20.42	ug/L	79
18) freon 113	7.10	151	31628	20.25	ug/L	94
19) 1,1-dichloroethene	7.07	61	51594	19.49	ug/L	97
20) acetone	7.07	43	30790	82.37	ug/L	97
21) acetonitrile	7.51	41	41289	222.63	ug/L	89
22) iodomethane	7.33	142	68601	21.38	ug/L	99
23) carbon disulfide	7.47	76	114277	21.54	ug/L	98
24) methylene chloride	7.78	84	44031	21.52	ug/L	96
25) methyl acetate	7.53	43	19753	22.24	ug/L	98
26) methyl tert butyl ether	8.14	73	105474	21.33	ug/L	97
27) trans-1,2-dichloroethene	8.16	61	51380	21.01	ug/L	94
28) hexane	8.51	57	45858	20.67	ug/L	92
29) di-isopropyl ether	8.72	45	132214	20.73	ug/L	98
30) ethyl tert-butyl ether	9.18	59	120134	20.60	ug/L	97
31) 2-butanone	9.38	72	11322	89.28	ug/L	95
32) 1,1-dichloroethane	8.74	63	64581	20.91	ug/L	99
33) chloroprene	8.83	53	46369	20.61	ug/L	95
34) acrylonitrile	8.07	53	10558	21.59	ug/L	91
35) vinyl acetate	8.66	86	5261	21.49	ug/L #	85
36) ethyl acetate	9.39	45	3831	21.89	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2-dichloropropane	9.49	77	55701	21.30 ug/L		98
38) cis-1,2-dichloroethene	9.45	96	42727	21.67 ug/L		99
39) propionitrile	9.46	54	37383	219.37 ug/L		80
40) bromochloromethane	9.74	130	27020	21.22 ug/L		97
41) tetrahydrofuran	9.77	72	3294	21.96 ug/L		88
42) chloroform	9.83	83	66160	21.22 ug/L		94
43) tert-butyl formate	9.87	59	26132	21.14 ug/L		94
46) methacrylonitrile	9.66	67	9808	21.18 ug/L		87
47) 1,1,1-trichloroethane	10.09	97	58284	21.07 ug/L		97
48) cyclohexane	10.20	84	64701	23.28 ug/L		96
49) 1,1-dichloropropene	10.26	75	41723	20.72 ug/L		99
50) tert-amyl alcohol	10.38	55	5867	105.51 ug/L		90
51) carbon tetrachloride	10.29	117	51664	21.47 ug/L		97
54) 2,2,4-trimethylpentane	10.60	57	135949	20.26 ug/L		100
55) tert-amyl methyl ether	10.58	73	107788	20.69 ug/L		97
56) n-butyl alcohol	10.95	41	30273	1059.41 ug/L		96
57) benzene	10.50	78	134219	20.94 ug/L		96
58) heptane	10.75	57	24592	21.61 ug/L		98
59) isopropyl acetate	10.40	87	5569	20.53 ug/L		89
60) 1,2-dichloroethane	10.53	62	44059	21.38 ug/L		96
61) trichloroethene	11.22	130	35865	21.10 ug/L		96
62) ethyl acrylate	11.19	55	31148	22.62 ug/L		97
63) 2-nitropropane	11.96	41	9580	21.77 ug/L	#	74
64) 2-chloroethyl vinyl ether	11.98	63	87395	112.62 ug/L		97
65) methyl methacrylate	11.46	100	6797	22.53 ug/L	#	81
66) 1,2-dichloropropane	11.50	63	35305	20.82 ug/L		98
67) methylcyclohexane	11.51	83	56827	20.55 ug/L		97
68) dibromomethane	11.61	93	20869	21.54 ug/L		94
69) bromodichloromethane	11.76	83	48442	20.68 ug/L		98
70) epichlorohydrin	12.08	57	12575	110.93 ug/L		96
71) cis-1,3-dichloropropene	12.20	75	54873	20.91 ug/L		98
72) 4-methyl-2-pentanone	12.30	58	40596	89.21 ug/L		96
73) 3-methyl-1-butanol	12.30	70	15333	442.31 ug/L		98
76) toluene	12.58	92	80250	19.36 ug/L		99
77) trans-1,3-dichloropropene	12.76	75	48157	19.48 ug/L		97
78) ethyl methacrylate	12.74	69	34272	20.01 ug/L		99
79) 1,1,2-trichloroethane	12.98	83	23290	20.09 ug/L		94
80) 2-hexanone	13.13	58	37213	83.11 ug/L		97
81) tetrachloroethene	13.12	166	36258	19.33 ug/L		96
82) 1,3-dichloropropane	13.15	76	44740	20.43 ug/L		98
83) butyl acetate	13.21	56	17889	20.68 ug/L		95
84) dibromochloromethane	13.39	129	36864	19.70 ug/L		100
85) 1,2-dibromoethane	13.55	107	38505	20.90 ug/L		97
86) n-butyl ether	13.97	57	135920	19.35 ug/L		99
87) chlorobenzene	14.02	112	98397	20.42 ug/L		98
88) 1,1,1,2-tetrachloroethane	14.08	131	39251	19.47 ug/L		97
89) ethylbenzene	14.07	91	153853	19.76 ug/L		99
90) m,p-xylene	14.20	106	120122	39.94 ug/L		97
91) o-xylene	14.59	91	131594	19.60 ug/L		96
92) styrene	14.60	104	106239	19.82 ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

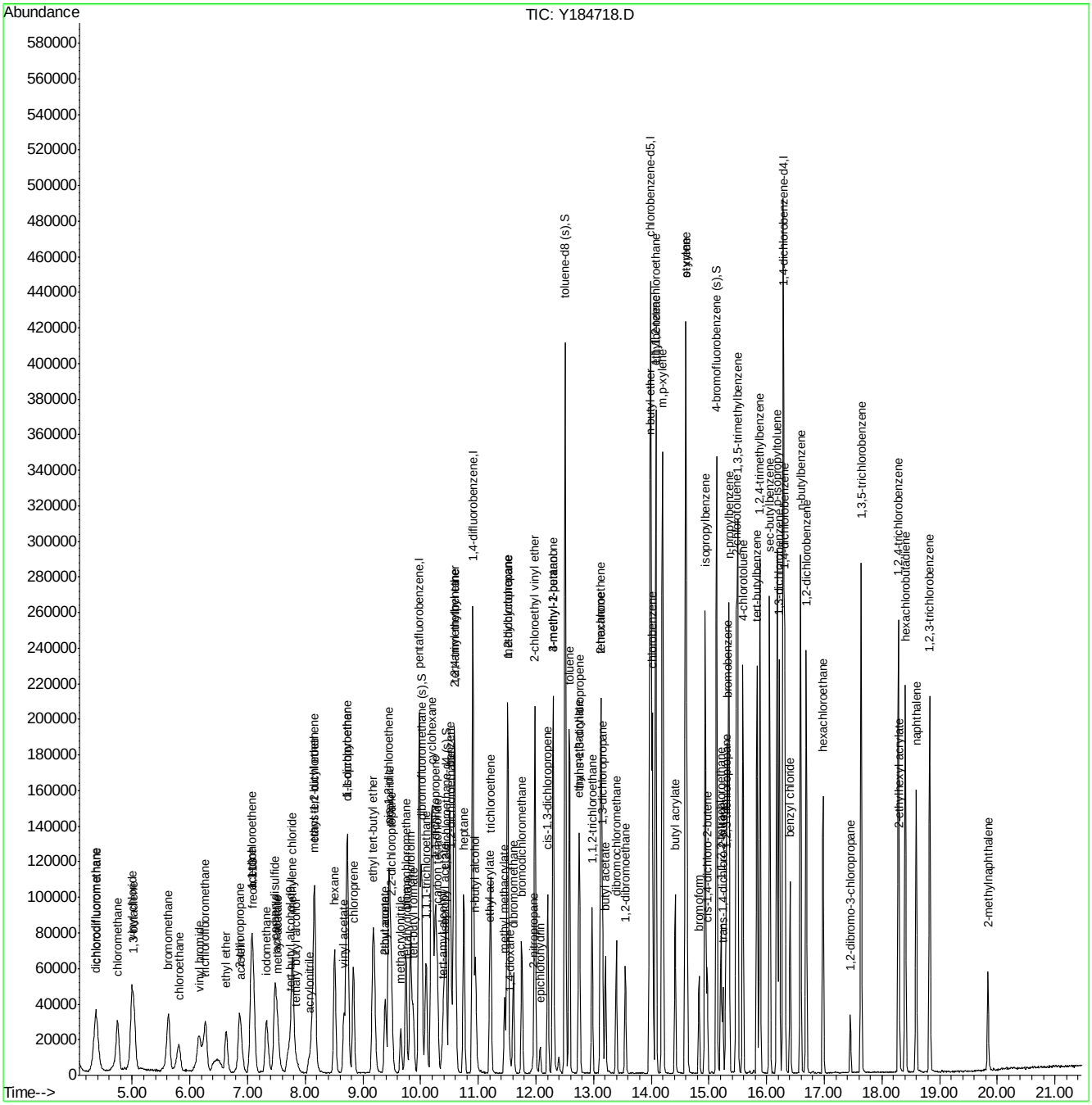
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	24254	19.90 ug/L	95
94) butyl acrylate	14.41	55	56638	19.84 ug/L	99
95) isopropylbenzene	14.93	105	153553	19.16 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	12383	19.25 ug/L	95
99) bromobenzene	15.31	156	48072	21.05 ug/L	99
100) 1,1,2,2-tetrachloroethane	15.21	83	38049	22.12 ug/L	97
101) trans-1,4-dichloro-2-buten	15.24	53	8525	21.12 ug/L	94
102) 1,2,3-trichloropropane	15.29	110	9216	20.48 ug/L	92
103) n-propylbenzene	15.35	91	185451	20.86 ug/L	99
104) 2-chlorotoluene	15.48	126	42540	20.82 ug/L	98
105) 4-chlorotoluene	15.59	91	118967	21.01 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	137494	20.48 ug/L	98
107) tert-butylbenzene	15.84	134	23661	18.76 ug/L	95
108) 1,2,4-trimethylbenzene	15.88	105	141063	20.23 ug/L	99
109) sec-butylbenzene	16.05	105	168761	19.99 ug/L	98
110) 1,3-dichlorobenzene	16.22	146	89108	20.96 ug/L	97
111) p-isopropyltoluene	16.18	119	151199	20.20 ug/L	100
112) 1,4-dichlorobenzene	16.31	146	88196	20.75 ug/L	98
113) 1,2-dichlorobenzene	16.68	146	88802	20.76 ug/L	98
114) n-butylbenzene	16.59	92	78106	20.10 ug/L	99
115) 1,2-dibromo-3-chloropropan	17.45	157	8784	21.62 ug/L	97
116) 1,3,5-trichlorobenzene	17.64	180	86931	20.49 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	75488	20.84 ug/L	97
118) hexachlorobutadiene	18.41	225	44795	21.12 ug/L	99
119) naphthalene	18.59	128	121504	20.48 ug/L	98
120) 1,2,3-trichlorobenzene	18.83	180	68644	21.27 ug/L	99
121) hexachloroethane	16.98	201	25114	18.26 ug/L	98
122) benzyl chloride	16.41	91	66231	20.68 ug/L	98
123) 2-ethylhexyl acrylate	18.31	70	6511	3.37 ug/L	96
124) 2-methylnaphthalene	19.84	142	25649	9.60 ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	52871	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	180942	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	258053	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	216710	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	125526	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	81458	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	70243	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.00%			
75) toluene-d8 (s)	12.51	98	283896	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
98) 4-bromofluorobenzene (s)	15.13	95	106065	50.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.84	59	42631	250.00	ug/L	100
4) 1,4-dioxane	11.54	88	21613	1250.00	ug/L	100
6) chlorodifluoromethane	4.38	51	137725	50.00	ug/L	100
7) dichlorodifluoromethane	4.35	85	177031	50.00	ug/L	100
8) chloromethane	4.75	50	171123	50.04	ug/L	100
9) vinyl chloride	4.99	62	147642	50.00	ug/L	100
10) 1,3-butadiene	5.03	54	92101	50.00	ug/L	100
11) bromomethane	5.63	94	119917	50.00	ug/L	100
12) chloroethane	5.81	64	81143	50.00	ug/L	100
13) vinyl bromide	6.16	106	73572	50.00	ug/L	100
14) trichlorofluoromethane	6.27	101	167315	50.00	ug/L	100
15) ethyl ether	6.63	74	46957	50.00	ug/L	100
16) 2-chloropropane	6.86	63	39071	50.00	ug/L	100
17) acrolein	6.88	56	12205	50.00	ug/L	100
18) freon 113	7.10	151	86567	50.00	ug/L	100
19) 1,1-dichloroethene	7.07	61	146727	50.00	ug/L	100
20) acetone	7.08	43	82853	200.00	ug/L	100
21) acetonitrile	7.50	41	102771	500.00	ug/L	100
22) iodomethane	7.33	142	177831	50.00	ug/L	100
23) carbon disulfide	7.47	76	294052	50.00	ug/L	100
24) methylene chloride	7.78	84	113393	50.00	ug/L	100
25) methyl acetate	7.52	43	49209	50.00	ug/L	100
26) methyl tert butyl ether	8.14	73	273979	50.00	ug/L	100
27) trans-1,2-dichloroethene	8.16	61	135489	50.00	ug/L	100
28) hexane	8.51	57	122969	50.00	ug/L	100
29) di-isopropyl ether	8.72	45	353434	50.00	ug/L	100
30) ethyl tert-butyl ether	9.18	59	323341	50.03	ug/L	100
31) 2-butanone	9.38	72	28110	200.00	ug/L	100
32) 1,1-dichloroethane	8.74	63	171613	50.13	ug/L	100
33) chloroprene	8.83	53	124696	50.00	ug/L	100
34) acrylonitrile	8.07	53	27097	50.00	ug/L	100
35) vinyl acetate	8.67	86	13567	50.00	ug/L	100
36) ethyl acetate	9.38	45	9700	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	144940	50.00	ug/L	100
38) cis-1,2-dichloroethene	9.45	96	109256	50.00	ug/L	100
39) propionitrile	9.46	54	94433	500.00	ug/L	100
40) bromochloromethane	9.74	130	70548	50.00	ug/L	100
41) tetrahydrofuran	9.77	72	8313	50.00	ug/L	100
42) chloroform	9.82	83	172755	50.00	ug/L	100
43) tert-butyl formate	9.87	59	68489	50.00	ug/L	100
46) methacrylonitrile	9.65	67	25666	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.09	97	153261	50.00	ug/L	100
48) cyclohexane	10.20	84	153990	50.00	ug/L	100
49) 1,1-dichloropropene	10.26	75	111586	50.00	ug/L	100
50) tert-amyl alcohol	10.38	55	15407	250.00	ug/L	100
51) carbon tetrachloride	10.29	117	133373	50.00	ug/L	100
54) 2,2,4-trimethylpentane	10.60	57	375756	50.00	ug/L	100
55) tert-amyl methyl ether	10.58	73	291851	50.00	ug/L	100
56) n-butyl alcohol	10.95	41	80026	2500.00	ug/L	100
57) benzene	10.50	78	359031	50.00	ug/L	100
58) heptane	10.75	57	63736	50.00	ug/L	100
59) isopropyl acetate	10.40	87	15195	50.00	ug/L	100
60) 1,2-dichloroethane	10.53	62	115405	50.00	ug/L	100
61) trichloroethene	11.22	130	95215	50.00	ug/L	100
62) ethyl acrylate	11.20	55	77142	50.00	ug/L	100
63) 2-nitropropane	11.96	41	24645	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	11.98	63	217323	250.00	ug/L	100
65) methyl methacrylate	11.45	100	16901	50.00	ug/L	100
66) 1,2-dichloropropane	11.50	63	94976	50.00	ug/L	100
67) methylcyclohexane	11.51	83	154848	50.00	ug/L	100
68) dibromomethane	11.61	93	54262	50.00	ug/L	100
69) bromodichloromethane	11.76	83	131203	50.00	ug/L	100
70) epichlorohydrin	12.07	57	31748	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.20	75	146996	50.00	ug/L	100
72) 4-methyl-2-pentanone	12.30	58	101952	200.00	ug/L	100
73) 3-methyl-1-butanol	12.29	70	38833	1000.00	ug/L	100
76) toluene	12.58	92	209244	50.00	ug/L	100
77) trans-1,3-dichloropropene	12.76	75	124814	50.00	ug/L	100
78) ethyl methacrylate	12.74	69	86460	50.00	ug/L	100
79) 1,1,2-trichloroethane	12.97	83	58541	50.00	ug/L	100
80) 2-hexanone	13.13	58	90428	200.00	ug/L	100
81) tetrachloroethene	13.12	166	94695	50.00	ug/L	100
82) 1,3-dichloropropane	13.15	76	110560	50.00	ug/L	100
83) butyl acetate	13.20	56	43683	50.00	ug/L	100
84) dibromochloromethane	13.40	129	94469	50.00	ug/L	100
85) 1,2-dibromoethane	13.55	107	93027	50.00	ug/L	100
86) n-butyl ether	13.97	57	354758	50.00	ug/L	100
87) chlorobenzene	14.02	112	243333	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	14.08	131	101802	50.00	ug/L	100
89) ethylbenzene	14.07	91	393125	50.00	ug/L	100
90) m,p-xylene	14.20	106	303745	100.00	ug/L	100
91) o-xylene	14.59	91	339042	50.00	ug/L	100
92) styrene	14.60	104	270704	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

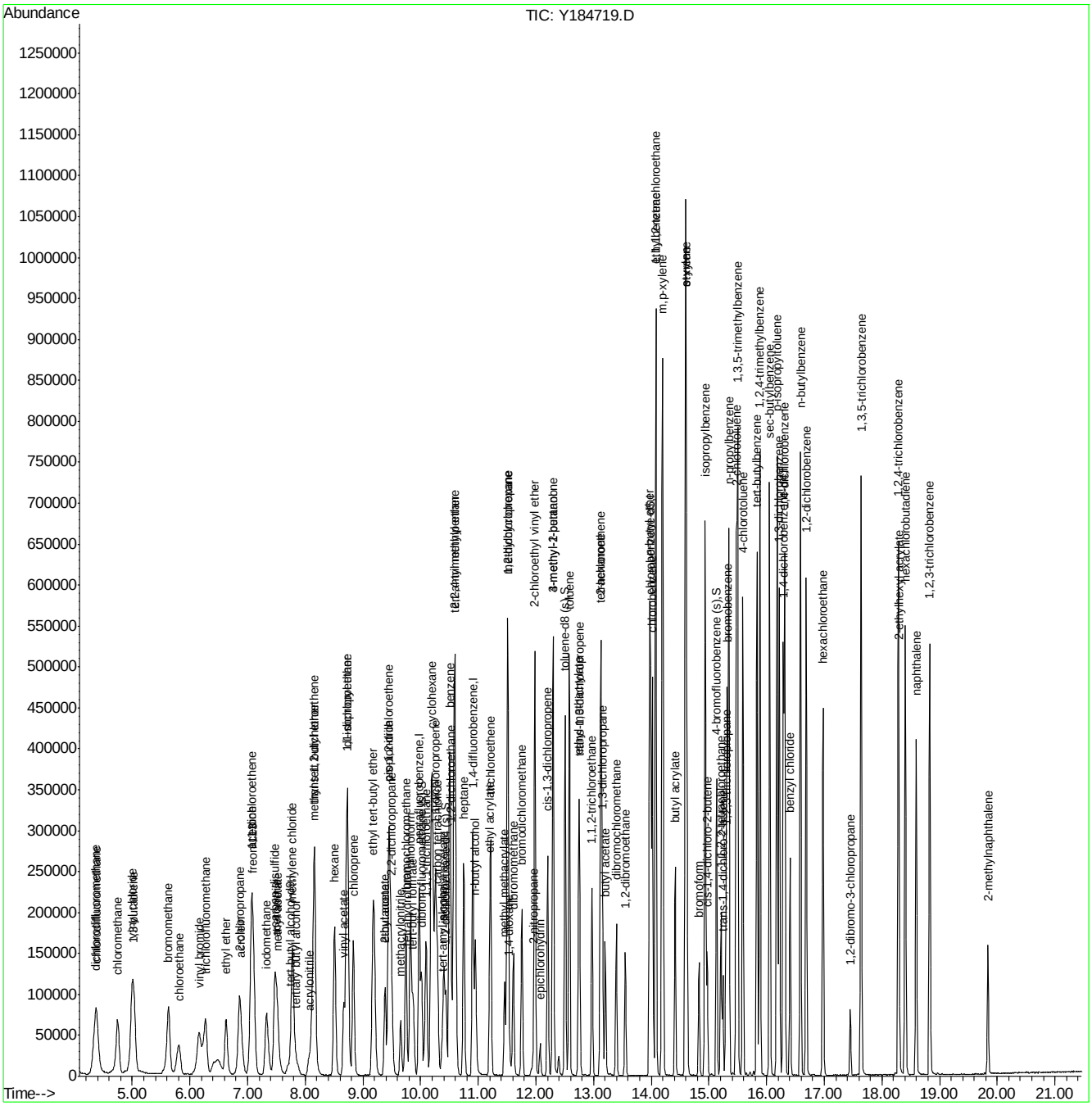
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.83	173	61535	50.00	ug/L	100
94) butyl acrylate	14.41	55	144117	50.00	ug/L	100
95) isopropylbenzene	14.93	105	404616	50.00	ug/L	100
96) cis-1,4-dichloro-2-butene	14.97	88	32479	50.00	ug/L	100
99) bromobenzene	15.31	156	121763	50.00	ug/L	100
100) 1,1,2,2-tetrachloroethane	15.21	83	91718	50.00	ug/L	100
101) trans-1,4-dichloro-2-buten	15.24	53	21514	50.00	ug/L	100
102) 1,2,3-trichloropropane	15.29	110	23992	50.00	ug/L	100
103) n-propylbenzene	15.35	91	474029	50.00	ug/L	100
104) 2-chlorotoluene	15.48	126	108920	50.00	ug/L	100
105) 4-chlorotoluene	15.59	91	301808	50.00	ug/L	100
106) 1,3,5-trimethylbenzene	15.50	105	357951	50.00	ug/L	100
107) tert-butylbenzene	15.84	134	67226	50.00	ug/L	100
108) 1,2,4-trimethylbenzene	15.88	105	371775	50.00	ug/L	100
109) sec-butylbenzene	16.05	105	450005	50.00	ug/L	100
110) 1,3-dichlorobenzene	16.22	146	226641	50.00	ug/L	100
111) p-isopropyltoluene	16.18	119	398990	50.00	ug/L	100
112) 1,4-dichlorobenzene	16.31	146	226626	50.00	ug/L	100
113) 1,2-dichlorobenzene	16.68	146	228091	50.00	ug/L	100
114) n-butylbenzene	16.59	92	207209	50.00	ug/L	100
115) 1,2-dibromo-3-chloropropan	17.45	157	21661	50.00	ug/L	100
116) 1,3,5-trichlorobenzene	17.64	180	226206	50.00	ug/L	100
117) 1,2,4-trichlorobenzene	18.29	180	193151	50.00	ug/L	100
118) hexachlorobutadiene	18.41	225	113051	50.00	ug/L	100
119) naphthalene	18.59	128	316303	50.00	ug/L	100
120) 1,2,3-trichlorobenzene	18.83	180	172023	50.00	ug/L	100
121) hexachloroethane	16.98	201	73304	50.00	ug/L	100
122) benzyl chloride	16.41	91	170703	50.00	ug/L	100
123) 2-ethylhexyl acrylate	18.30	70	20601	10.00	ug/L	100
124) 2-methylnaphthalene	19.84	142	71241	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	57202	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	181641	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	263054	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	222949	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	131498	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	82403	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.78%			
53) 1,2-dichloroethane-d4 (s)	10.43	65	72162	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.78%			
75) toluene-d8 (s)	12.51	98	288044	49.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%			
98) 4-bromofluorobenzene (s)	15.13	95	106409	47.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.85	59	89280	483.92	ug/L	98
4) 1,4-dioxane	11.54	88	41969	2243.52	ug/L	99
6) chlorodifluoromethane	4.38	51	289471	104.69	ug/L	99
7) dichlorodifluoromethane	4.35	85	365956	102.96	ug/L	96
8) chloromethane	4.74	50	361821	105.39	ug/L	97
9) vinyl chloride	5.00	62	320921	108.26	ug/L	98
10) 1,3-butadiene	5.03	54	195564	105.76	ug/L	99
11) bromomethane	5.63	94	247249	102.69	ug/L	100
12) chloroethane	5.81	64	167650	102.91	ug/L	96
13) vinyl bromide	6.15	106	149839	101.44	ug/L	96
14) trichlorofluoromethane	6.27	101	344430	102.53	ug/L	97
15) ethyl ether	6.63	74	90599	96.10	ug/L	94
16) 2-chloropropane	6.86	63	80413	102.51	ug/L	96
17) acrolein	6.87	56	24994	102.00	ug/L	96
18) freon 113	7.09	151	176339	101.46	ug/L	98
19) 1,1-dichloroethene	7.08	61	294030	99.81	ug/L	98
20) acetone	7.08	43	170312	409.54	ug/L	96
21) acetonitrile	7.50	41	209482	1015.25	ug/L	98
22) iodomethane	7.33	142	361129	101.15	ug/L	99
23) carbon disulfide	7.47	76	594550	100.71	ug/L	100
24) methylene chloride	7.78	84	231728	101.79	ug/L	95
25) methyl acetate	7.53	43	98822	100.02	ug/L	96
26) methyl tert butyl ether	8.15	73	570878	103.78	ug/L	99
27) trans-1,2-dichloroethene	8.16	61	268306	98.63	ug/L	96
28) hexane	8.51	57	246617	99.89	ug/L	99
29) di-isopropyl ether	8.72	45	725033	102.18	ug/L	97
30) ethyl tert-butyl ether	9.19	59	676922	104.33	ug/L	99
31) 2-butanone	9.38	72	57864	410.11	ug/L	100
32) 1,1-dichloroethane	8.73	63	342885	99.78	ug/L	98
33) chloroprene	8.83	53	252075	100.69	ug/L	98
34) acrylonitrile	8.07	53	53668	98.65	ug/L	97
35) vinyl acetate	8.67	86	28045	102.96	ug/L #	89
36) ethyl acetate	9.39	45	18675	95.89	ug/L	88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	297375	102.19 ug/L	95
38) cis-1,2-dichloroethene	9.45	96	219348	100.00 ug/L	98
39) propionitrile	9.46	54	187168	987.20 ug/L	79
40) bromochloromethane	9.74	130	142612	100.69 ug/L	98
41) tetrahydrofuran	9.76	72	17829	106.82 ug/L #	61
42) chloroform	9.83	83	349944	100.89 ug/L	98
43) tert-butyl formate	9.87	59	146467	106.52 ug/L	98
46) methacrylonitrile	9.66	67	51211	99.38 ug/L	93
47) 1,1,1-trichloroethane	10.09	97	315986	102.69 ug/L	96
48) cyclohexane	10.21	84	313374	101.36 ug/L	90
49) 1,1-dichloropropene	10.26	75	221938	99.06 ug/L	98
50) tert-amyl alcohol	10.38	55	31580	510.46 ug/L #	81
51) carbon tetrachloride	10.29	117	275908	103.04 ug/L	99
54) 2,2,4-trimethylpentane	10.60	57	784625	102.42 ug/L	98
55) tert-amyl methyl ether	10.58	73	602415	101.24 ug/L	99
56) n-butyl alcohol	10.95	41	165163	5061.57 ug/L	99
57) benzene	10.50	78	719818	98.34 ug/L	99
58) heptane	10.75	57	126473	97.33 ug/L	98
59) isopropyl acetate	10.40	87	30250	97.65 ug/L	87
60) 1,2-dichloroethane	10.53	62	227880	96.85 ug/L	99
61) trichloroethene	11.22	130	192834	99.34 ug/L	99
62) ethyl acrylate	11.19	55	156027	99.21 ug/L	97
63) 2-nitropropane	11.96	41	50116	99.74 ug/L	97
64) 2-chloroethyl vinyl ether	11.98	63	438332	494.65 ug/L	99
65) methyl methacrylate	11.45	100	34882	101.23 ug/L	96
66) 1,2-dichloropropane	11.50	63	190979	98.63 ug/L	100
67) methylcyclohexane	11.51	83	317138	100.46 ug/L	97
68) dibromomethane	11.61	93	109990	99.42 ug/L	92
69) bromodichloromethane	11.76	83	267159	99.88 ug/L	99
70) epichlorohydrin	12.07	57	62944	486.23 ug/L	99
71) cis-1,3-dichloropropene	12.20	75	297118	99.14 ug/L	99
72) 4-methyl-2-pentanone	12.30	58	204038	392.65 ug/L	99
73) 3-methyl-1-butanol	12.30	70	80052	2022.25 ug/L	95
76) toluene	12.58	92	423954	98.47 ug/L	98
77) trans-1,3-dichloropropene	12.76	75	249910	97.31 ug/L	99
78) ethyl methacrylate	12.74	69	177179	99.60 ug/L	97
79) 1,1,2-trichloroethane	12.98	83	118863	98.68 ug/L	98
80) 2-hexanone	13.13	58	181869	390.98 ug/L	98
81) tetrachloroethene	13.12	166	193155	99.13 ug/L	96
82) 1,3-dichloropropane	13.15	76	220365	96.87 ug/L	98
83) butyl acetate	13.21	56	89322	99.38 ug/L	98
84) dibromochloromethane	13.39	129	194539	100.08 ug/L	98
85) 1,2-dibromoethane	13.55	107	193721	101.21 ug/L	99
86) n-butyl ether	13.97	57	729331	99.92 ug/L	99
87) chlorobenzene	14.02	112	492313	98.33 ug/L	97
88) 1,1,1,2-tetrachloroethane	14.08	131	211149	100.80 ug/L	97
89) ethylbenzene	14.07	91	789449	97.60 ug/L	99
90) m,p-xylene	14.20	106	616385	197.25 ug/L	100
91) o-xylene	14.59	91	692632	99.29 ug/L	100
92) styrene	14.60	104	538779	96.73 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

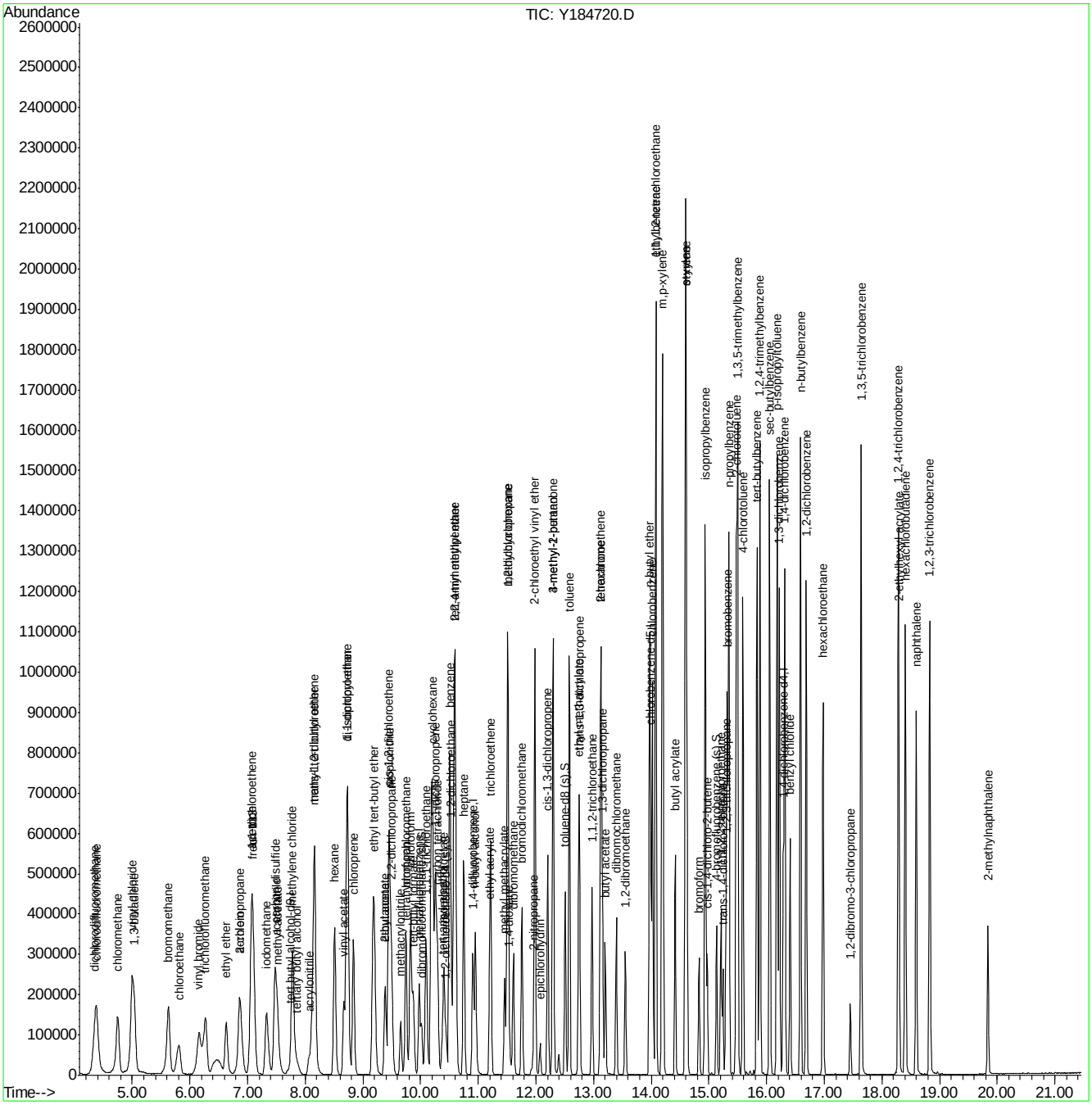
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.83	173	126305	99.76	ug/L	98
94) butyl acrylate	14.41	55	302770	102.10	ug/L	98
95) isopropylbenzene	14.93	105	827383	99.38	ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	66461	99.45	ug/L	97
99) bromobenzene	15.31	156	242017	94.87	ug/L	96
100) 1,1,2,2-tetrachloroethane	15.20	83	186405	97.00	ug/L	95
101) trans-1,4-dichloro-2-buten	15.24	53	44470	98.66	ug/L	98
102) 1,2,3-trichloropropane	15.29	110	47686	94.87	ug/L	98
103) n-propylbenzene	15.35	91	957728	96.43	ug/L	98
104) 2-chlorotoluene	15.48	126	219890	96.36	ug/L	96
105) 4-chlorotoluene	15.59	91	612422	96.85	ug/L	100
106) 1,3,5-trimethylbenzene	15.50	105	734684	97.96	ug/L	99
107) tert-butylbenzene	15.84	134	139577	99.10	ug/L	97
108) 1,2,4-trimethylbenzene	15.88	105	761659	97.78	ug/L	100
109) sec-butylbenzene	16.05	105	943850	100.11	ug/L	99
110) 1,3-dichlorobenzene	16.22	146	468849	98.74	ug/L	98
111) p-isopropyltoluene	16.18	119	822609	98.40	ug/L	99
112) 1,4-dichlorobenzene	16.32	146	468248	98.62	ug/L	99
113) 1,2-dichlorobenzene	16.68	146	468724	98.08	ug/L	99
114) n-butylbenzene	16.59	92	435833	100.39	ug/L	99
115) 1,2-dibromo-3-chloropropan	17.45	157	48277	106.38	ug/L	93
116) 1,3,5-trichlorobenzene	17.64	180	473910	99.99	ug/L	98
117) 1,2,4-trichlorobenzene	18.29	180	410358	101.40	ug/L	98
118) hexachlorobutadiene	18.41	225	232963	98.36	ug/L	96
119) naphthalene	18.59	128	683649	103.16	ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	368725	102.31	ug/L	99
121) hexachloroethane	16.98	201	155556	101.28	ug/L	99
122) benzyl chloride	16.41	91	367026	102.62	ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	50254	23.29	ug/L	81
124) 2-methylnaphthalene	19.84	142	171253	57.37	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.75	65	58443	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	180118	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	258308	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	225308	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	134869	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	82810	51.06	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.12%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	69494	49.42	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.84%			
75) toluene-d8 (s)	12.51	98	292060	49.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.94%			
98) 4-bromofluorobenzene (s)	15.14	95	110771	48.60	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.20%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.86	59	189366	1004.62	ug/L	82
4) 1,4-dioxane	11.54	88	89001	4656.66	ug/L	95
6) chlorodifluoromethane	4.38	51	561846	204.91	ug/L	99
7) dichlorodifluoromethane	4.35	85	714894	202.84	ug/L	98
8) chloromethane	4.74	50	715852	210.28	ug/L	96
9) vinyl chloride	4.99	62	631758	214.93	ug/L	98
10) 1,3-butadiene	5.03	54	392674	214.15	ug/L	98
11) bromomethane	5.62	94	479523	200.85	ug/L	100
12) chloroethane	5.81	64	332015	205.52	ug/L	99
13) vinyl bromide	6.15	106	303987	207.54	ug/L	94
14) trichlorofluoromethane	6.27	101	679655	204.04	ug/L	94
15) ethyl ether	6.63	74	194216	207.75	ug/L	98
16) 2-chloropropane	6.86	63	155049	199.33	ug/L	97
17) acrolein	6.87	56	52091	214.38	ug/L	97
18) freon 113	7.10	151	333673	193.61	ug/L	97
19) 1,1-dichloroethene	7.07	61	562341	192.50	ug/L	98
20) acetone	7.07	43	331032	802.74	ug/L	97
21) acetonitrile	7.50	41	418080	2043.34	ug/L	98
22) iodomethane	7.33	142	704290	198.93	ug/L	99
23) carbon disulfide	7.47	76	1138698	194.51	ug/L	99
24) methylene chloride	7.78	84	448269	198.57	ug/L	96
25) methyl acetate	7.52	43	198788	202.91	ug/L	94
26) methyl tert butyl ether	8.15	73	1161543	212.95	ug/L	99
27) trans-1,2-dichloroethene	8.16	61	516463	191.46	ug/L	98
28) hexane	8.51	57	482880	197.24	ug/L	98
29) di-isopropyl ether	8.72	45	1430710	203.33	ug/L	98
30) ethyl tert-butyl ether	9.19	59	1399174	217.47	ug/L	99
31) 2-butanone	9.38	72	122215	873.53	ug/L	99
32) 1,1-dichloroethane	8.74	63	658550	193.25	ug/L	98
33) chloroprene	8.83	53	491029	197.79	ug/L	98
34) acrylonitrile	8.07	53	109561	203.09	ug/L	97
35) vinyl acetate	8.67	86	58822	217.78	ug/L #	90
36) ethyl acetate	9.39	45	39440	204.23	ug/L	87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	586238	203.16 ug/L	97
38) cis-1,2-dichloroethene	9.45	96	441290	202.88 ug/L	98
39) propionitrile	9.46	54	404235	2150.12 ug/L	79
40) bromochloromethane	9.74	130	287712	204.85 ug/L	98
41) tetrahydrofuran	9.76	72	38563	233.01 ug/L	91
42) chloroform	9.82	83	691084	200.93 ug/L	99
43) tert-butyl formate	9.87	59	307597	225.59 ug/L	96
46) methacrylonitrile	9.66	67	109004	213.32 ug/L	97
47) 1,1,1-trichloroethane	10.09	97	624107	204.54 ug/L	98
48) cyclohexane	10.21	84	620482	202.39 ug/L	90
49) 1,1-dichloropropene	10.26	75	436827	196.63 ug/L	98
50) tert-amyl alcohol	10.38	55	67157	1094.70 ug/L #	72
51) carbon tetrachloride	10.29	117	541137	203.79 ug/L	98
54) 2,2,4-trimethylpentane	10.60	57	1578287	209.81 ug/L	98
55) tert-amyl methyl ether	10.59	73	1262886	216.14 ug/L	99
56) n-butyl alcohol	10.95	41	353695	11038.47 ug/L	97
57) benzene	10.50	78	1418549	197.36 ug/L	99
58) heptane	10.75	57	248877	195.05 ug/L	97
59) isopropyl acetate	10.40	87	62459	205.32 ug/L #	82
60) 1,2-dichloroethane	10.53	62	453105	196.12 ug/L	99
61) trichloroethene	11.21	130	379653	199.17 ug/L	98
62) ethyl acrylate	11.19	55	330333	213.90 ug/L	97
63) 2-nitropropane	11.96	41	104182	211.16 ug/L	98
64) 2-chloroethyl vinyl ether	11.98	63	923772	1061.62 ug/L	98
65) methyl methacrylate	11.45	100	75074	221.88 ug/L	88
66) 1,2-dichloropropane	11.50	63	380939	200.35 ug/L	99
67) methylcyclohexane	11.51	83	632258	203.95 ug/L	99
68) dibromomethane	11.61	93	222944	205.23 ug/L	97
69) bromodichloromethane	11.76	83	539527	205.40 ug/L	99
70) epichlorohydrin	12.07	57	136211	1071.54 ug/L	99
71) cis-1,3-dichloropropene	12.20	75	606954	206.25 ug/L	99
72) 4-methyl-2-pentanone	12.30	58	429598	841.91 ug/L	100
73) 3-methyl-1-butanol	12.30	70	180119	4633.72 ug/L	96
76) toluene	12.58	92	848436	195.00 ug/L	98
77) trans-1,3-dichloropropene	12.76	75	512996	197.66 ug/L	99
78) ethyl methacrylate	12.74	69	373267	207.62 ug/L	99
79) 1,1,2-trichloroethane	12.98	83	242915	199.56 ug/L	97
80) 2-hexanone	13.13	58	381540	811.65 ug/L	99
81) tetrachloroethene	13.12	166	382401	194.21 ug/L	97
82) 1,3-dichloropropane	13.15	76	455375	198.08 ug/L	99
83) butyl acetate	13.21	56	182707	201.15 ug/L	95
84) dibromochloromethane	13.39	129	405278	206.32 ug/L	100
85) 1,2-dibromoethane	13.55	107	401566	207.60 ug/L	97
86) n-butyl ether	13.97	57	1451939	196.83 ug/L	99
87) chlorobenzene	14.02	112	980411	193.77 ug/L	97
88) 1,1,1,2-tetrachloroethane	14.08	131	427673	202.04 ug/L	98
89) ethylbenzene	14.08	91	1575476	192.73 ug/L	99
90) m,p-xylene	14.20	106	1259445	398.82 ug/L	97
91) o-xylene	14.59	91	1405763	199.40 ug/L	100
92) styrene	14.60	104	1108566	196.94 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	270296	211.25 ug/L	99
94) butyl acrylate	14.41	55	639043	213.25 ug/L	99
95) isopropylbenzene	14.93	105	1706111	202.79 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	143648	212.70 ug/L	98
99) bromobenzene	15.32	156	497056	189.97 ug/L	93
100) 1,1,2,2-tetrachloroethane	15.21	83	397180	201.52 ug/L	96
101) trans-1,4-dichloro-2-buten	15.24	53	95181	205.88 ug/L	99
102) 1,2,3-trichloropropane	15.29	110	99244	192.50 ug/L	100
103) n-propylbenzene	15.35	91	1947374	191.18 ug/L	99
104) 2-chlorotoluene	15.48	126	447642	191.26 ug/L	95
105) 4-chlorotoluene	15.59	91	1259720	194.24 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	1513132	196.72 ug/L	98
107) tert-butylbenzene	15.84	134	284512	196.95 ug/L	95
108) 1,2,4-trimethylbenzene	15.88	105	1555480	194.70 ug/L	100
109) sec-butylbenzene	16.05	105	1917024	198.24 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	948365	194.73 ug/L	99
111) p-isopropyltoluene	16.18	119	1679969	195.94 ug/L	100
112) 1,4-dichlorobenzene	16.32	146	965193	198.20 ug/L	99
113) 1,2-dichlorobenzene	16.69	146	957714	195.40 ug/L	99
114) n-butylbenzene	16.59	92	884151	198.57 ug/L	97
115) 1,2-dibromo-3-chloropropan	17.45	157	103271	221.87 ug/L	93
116) 1,3,5-trichlorobenzene	17.64	180	934806	192.31 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	815734	196.54 ug/L	98
118) hexachlorobutadiene	18.41	225	454481	187.08 ug/L	97
119) naphthalene	18.59	128	1405580	206.80 ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	728448	197.06 ug/L	99
121) hexachloroethane	16.98	201	324253	205.85 ug/L	97
122) benzyl chloride	16.41	91	782289	213.26 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	113681	51.36 ug/L	89
124) 2-methylnaphthalene	19.84	142	369678	120.74 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

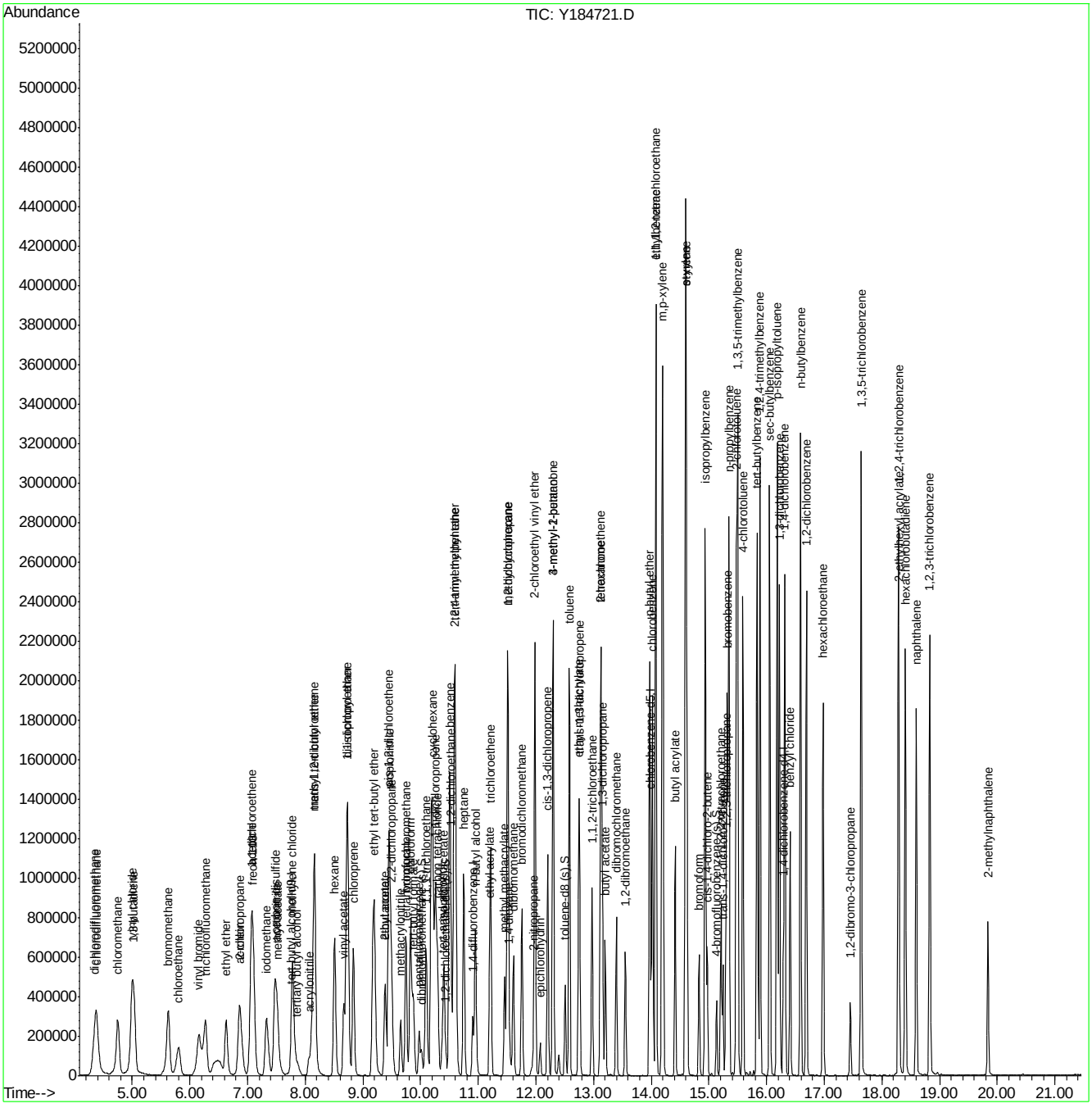
7.7.47

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	53382	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	165842	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	238721	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	217783	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	130925	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	76959	51.16	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.32%				
53) 1,2-dichloroethane-d4 (s)	10.43	65	66268	49.69	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.38%				
75) toluene-d8 (s)	12.51	98	269398	48.88	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.76%				
98) 4-bromofluorobenzene (s)	15.13	95	103054	47.47	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.94%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.85	59	45268	272.08	ug/L		94
4) 1,4-dioxane	11.54	88	21576	1308.08	ug/L		95
6) chlorodifluoromethane	4.38	51	147907	56.56	ug/L		96
7) dichlorodifluoromethane	4.36	85	162676	49.54	ug/L		96
8) chloromethane	4.74	50	186907	54.07	ug/L		94
9) vinyl chloride	4.99	62	144897	50.95	ug/L		95
10) 1,3-butadiene	5.04	54	111319	63.21	ug/L		97
11) bromomethane	5.63	94	114482	47.55	ug/L		95
12) chloroethane	5.81	64	72787	47.33	ug/L		96
13) vinyl bromide	6.15	106	76966	57.70	ug/L		93
14) trichlorofluoromethane	6.27	101	162971	49.75	ug/L		98
15) ethyl ether	6.63	74	45881	57.16	ug/L		95
16) 2-chloropropane	6.86	63	39887	56.15	ug/L		92
17) acrolein	6.86	56	12804	57.28	ug/L		93
18) freon 113	7.10	151	91954	59.86	ug/L		95
19) 1,1-dichloroethene	7.07	61	132001	51.83	ug/L		96
20) acetone	7.08	43	81830	201.41	ug/L		98
22) iodomethane	7.33	142	199508	62.05	ug/L		98
23) carbon disulfide	7.48	76	318742	57.18	ug/L		97
24) methylene chloride	7.78	84	114858	51.89	ug/L		92
25) methyl acetate	7.52	43	46859	49.85	ug/L		94
26) methyl tert butyl ether	8.15	73	553691	108.32	ug/L		97
27) trans-1,2-dichloroethene	8.16	61	130549	51.71	ug/L		99
28) hexane	8.51	57	128649	57.74	ug/L		99
29) di-isopropyl ether	8.72	45	324697	51.04	ug/L		97
30) ethyl tert-butyl ether	9.18	59	307154	53.08	ug/L		99
31) 2-butanone	9.38	72	28587	214.02	ug/L		96
32) 1,1-dichloroethane	8.73	63	167319	52.84	ug/L		97
33) chloroprene	8.83	53	122751	54.11	ug/L		99
35) vinyl acetate	8.67	86	12316	48.81	ug/L	#	81
36) ethyl acetate	9.39	45	8573	47.76	ug/L		89
37) 2,2-dichloropropane	9.49	77	138413	50.61	ug/L		99
38) cis-1,2-dichloroethene	9.45	96	105465	50.66	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
39) propionitrile	9.46	54	94889	529.63 ug/L	96
40) bromochloromethane	9.74	130	70335	53.90 ug/L	95
41) tetrahydrofuran	9.77	72	9177	57.46 ug/L	97
42) chloroform	9.83	83	168281	49.99 ug/L	98
43) tert-butyl formate	9.86	59	61596	48.49 ug/L	98
46) methacrylonitrile	9.66	67	25259	52.47 ug/L	97
47) 1,1,1-trichloroethane	10.10	97	148018	51.01 ug/L	96
48) cyclohexane	10.20	84	142012	49.23 ug/L	96
49) 1,1-dichloropropene	10.26	75	109625	53.42 ug/L	98
50) tert-amyl alcohol	10.38	55	15834	269.04 ug/L #	77
51) carbon tetrachloride	10.28	117	133462	52.84 ug/L	95
54) 2,2,4-trimethylpentane	10.60	57	360022	54.99 ug/L	97
55) tert-amyl methyl ether	10.59	73	277435	51.77 ug/L	99
56) n-butyl alcohol	10.95	41	82508	2786.91 ug/L	98
57) benzene	10.50	78	351881	51.05 ug/L	99
58) heptane	10.75	57	74332	63.20 ug/L	98
59) isopropyl acetate	10.40	87	14046	50.00 ug/L	92
60) 1,2-dichloroethane	10.53	62	108872	49.17 ug/L	98
61) trichloroethene	11.22	130	95813	53.47 ug/L	96
62) ethyl acrylate	11.19	55	78083	53.01 ug/L	96
63) 2-nitropropane	11.96	41	25999	54.22 ug/L	95
64) 2-chloroethyl vinyl ether	11.98	63	229658	281.28 ug/L	99
65) methyl methacrylate	11.45	100	17496	53.93 ug/L #	50
66) 1,2-dichloropropane	11.50	63	91988	52.40 ug/L	99
67) methylcyclohexane	11.51	83	152955	53.75 ug/L	99
68) dibromomethane	11.61	93	54156	52.87 ug/L	99
69) bromodichloromethane	11.75	83	126413	51.48 ug/L	97
70) epichlorohydrin	12.07	57	32483	262.11 ug/L	96
71) cis-1,3-dichloropropene	12.20	75	145988	54.65 ug/L	98
72) 4-methyl-2-pentanone	12.30	58	105247	218.55 ug/L	95
73) 3-methyl-1-butanol	12.30	70	41531	1152.92 ug/L	97
76) toluene	12.58	92	206183	49.17 ug/L	98
77) trans-1,3-dichloropropene	12.76	75	127059	52.51 ug/L	99
78) ethyl methacrylate	12.74	69	90327	53.26 ug/L	99
79) 1,1,2-trichloroethane	12.98	83	59771	49.95 ug/L	94
80) 2-hexanone	13.13	58	97173	216.82 ug/L	98
82) 1,3-dichloropropane	13.15	76	112733	50.56 ug/L	99
83) butyl acetate	13.20	56	46756	53.98 ug/L	98
84) dibromochloromethane	13.40	129	101147	56.35 ug/L	96
85) 1,2-dibromoethane	13.55	107	97031	51.45 ug/L	96
86) n-butyl ether	13.97	57	380512	54.96 ug/L	99
87) chlorobenzene	14.02	112	253369	50.23 ug/L	97
88) 1,1,1,2-tetrachloroethane	14.08	131	104680	52.62 ug/L	98
89) ethylbenzene	14.07	91	397849	50.49 ug/L	100
90) m,p-xylene	14.20	106	309195	100.76 ug/L	98
91) o-xylene	14.59	91	341933	51.79 ug/L	98
92) styrene	14.60	104	275422	52.73 ug/L	98
93) bromoform	14.83	173	67314	55.19 ug/L	98
94) butyl acrylate	14.41	55	152049	53.24 ug/L	99
95) isopropylbenzene	14.93	105	411749	51.88 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

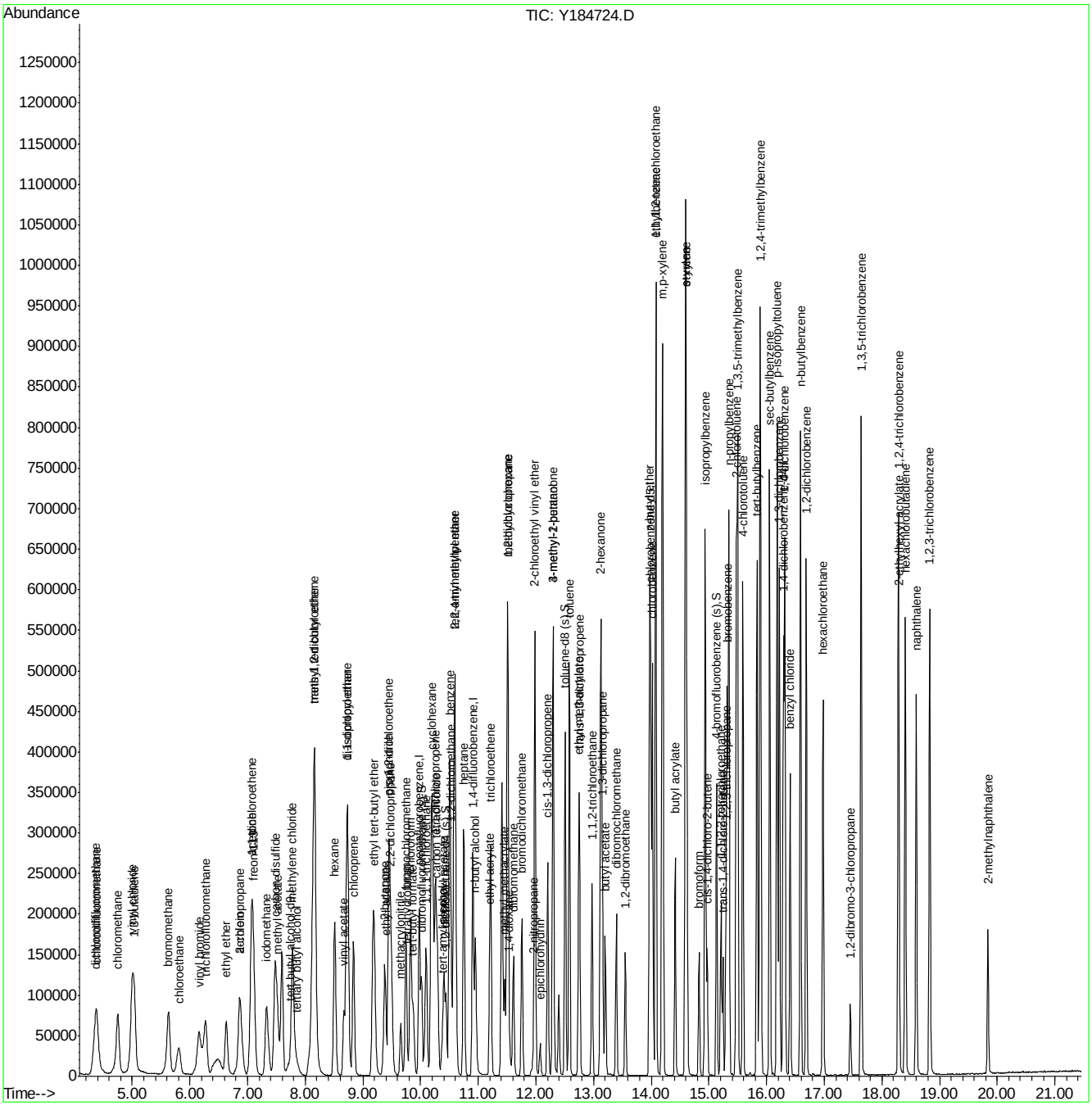
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
96) cis-1,4-dichloro-2-butene	14.97	88	33576	52.81 ug/L	98
99) bromobenzene	15.31	156	124133	47.49 ug/L	95
100) 1,1,2,2-tetrachloroethane	15.21	83	96698	48.26 ug/L	97
101) trans-1,4-dichloro-2-buten	15.24	53	25348	56.81 ug/L	100
102) 1,2,3-trichloropropane	15.29	110	25196	49.50 ug/L	91
103) n-propylbenzene	15.35	91	492050	48.70 ug/L	99
104) 2-chlorotoluene	15.48	126	109340	47.53 ug/L	94
105) 4-chlorotoluene	15.59	91	313806	48.92 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	361467	48.60 ug/L	98
107) tert-butylbenzene	15.84	134	67648	51.46 ug/L	96
108) 1,2,4-trimethylbenzene	15.88	105	390603	51.00 ug/L	97
109) sec-butylbenzene	16.05	105	467647	50.41 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	243166	50.30 ug/L	99
111) p-isopropyltoluene	16.18	119	419839	51.39 ug/L	99
112) 1,4-dichlorobenzene	16.31	146	244612	49.14 ug/L	97
113) 1,2-dichlorobenzene	16.68	146	242372	48.95 ug/L	100
114) n-butylbenzene	16.59	92	217087	50.96 ug/L	97
115) 1,2-dibromo-3-chloropropan	17.45	157	23966	51.50 ug/L	94
116) 1,3,5-trichlorobenzene	17.64	180	244964	52.36 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	208207	52.74 ug/L	99
118) hexachlorobutadiene	18.41	225	118076	48.72 ug/L	97
119) naphthalene	18.59	128	354866	57.95 ug/L	100
120) 1,2,3-trichlorobenzene	18.83	180	188977	55.25 ug/L	99
121) hexachloroethane	16.98	201	76220	52.41 ug/L	99
122) benzyl chloride	16.41	91	231436	63.60 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	24114	9.87 ug/L	82
124) 2-methylnaphthalene	19.84	142	84614	27.52 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184725.D
Acq On : 24 Apr 2019 8:55 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 12:24:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

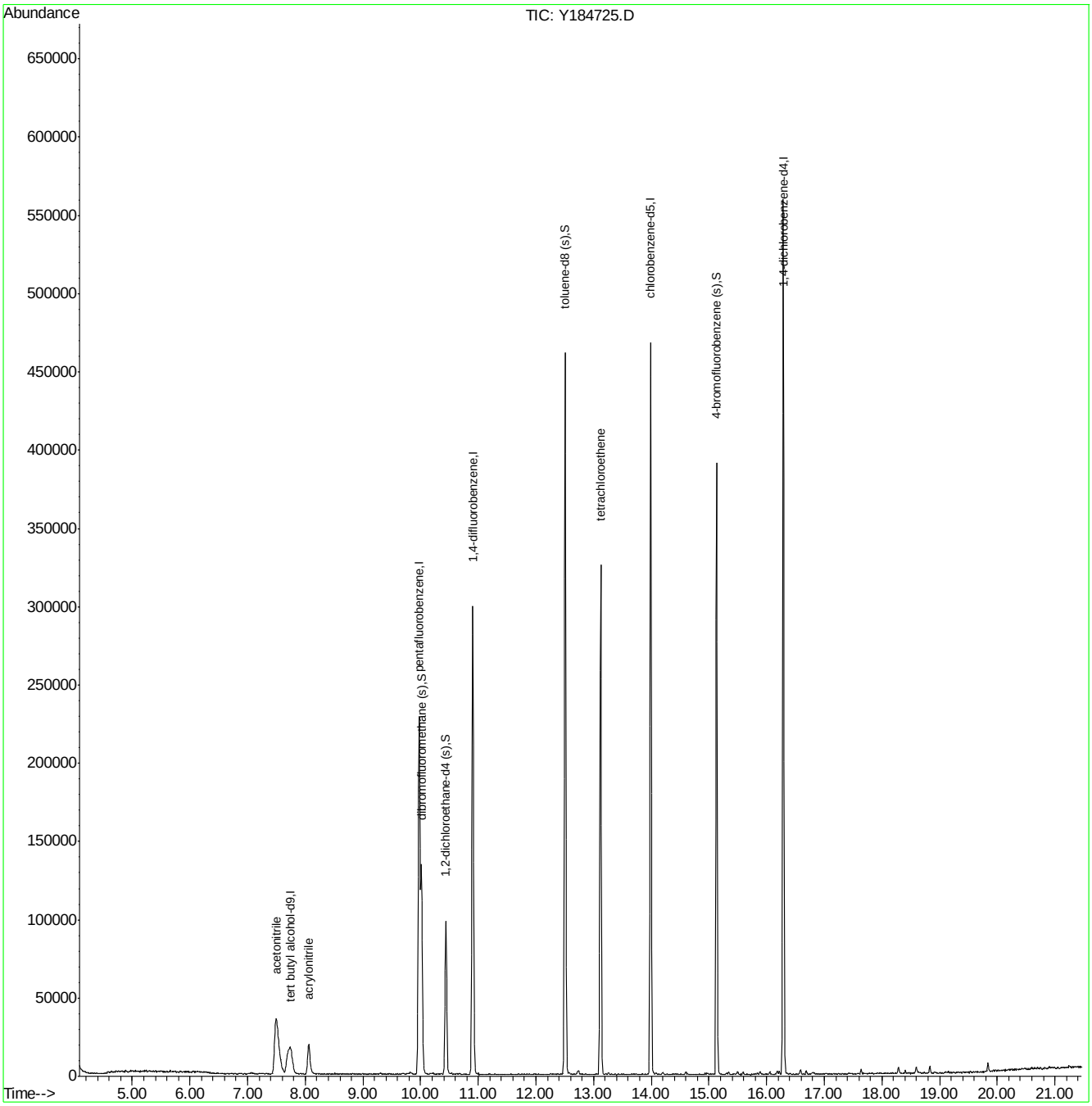
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	56845	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	184928	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	262362	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	242218	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	137507	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.01	113	84749	50.52	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.04%			
53) 1,2-dichloroethane-d4 (s)	10.43	65	74119	50.57	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.14%			
75) toluene-d8 (s)	12.51	98	300820	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.14%			
98) 4-bromofluorobenzene (s)	15.13	95	113522	49.79	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.58%			
Target Compounds						Qvalue
21) acetonitrile	7.50	41	100744	453.16	ug/L	96
34) acrylonitrile	8.07	53	23499	41.51	ug/L	94
81) tetrachloroethene	13.12	166	97372	46.02	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184725.D
Acq On : 24 Apr 2019 8:55 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 12:24:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184755.d
Acq On : 26 Apr 2019 8:08 am
Operator : EddieH
Sample : cc8014-50 Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:10:14 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.736	65	55486	500.00	ug/L	0.00
5) pentafluorobenzene	9.974	168	148326	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	222155	50.00	ug/L	0.00
74) chlorobenzene-d5	13.991	117	212416	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	133551	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	72986	54.24	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 108.48%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	59454	47.91	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.82%			
75) toluene-d8 (s)	12.506	98	249356	46.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.78%			
98) 4-bromofluorobenzene (s)	15.136	95	102412	46.25	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.50%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.840	59	37783	218.48	ug/L	87
4) 1,4-dioxane	11.549	88	18055	1053.11	ug/L	91
6) chlorodifluoromethane	4.367	51	127013	54.30	ug/L	98
7) dichlorodifluoromethane	4.341	85	151434	51.56	ug/L	98
8) chloromethane	4.744	50	141769	45.85	ug/L	96
9) vinyl chloride	4.979	62	138467	54.44	ug/L	96
10) 1,3-butadiene	5.032	54	88103	55.94	ug/L	94
11) bromomethane	5.623	94	104581	48.57	ug/L	99
12) chloroethane	5.800	64	71613	52.06	ug/L	96
13) vinyl bromide	6.146	106	65526	54.93	ug/L	95
14) trichlorofluoromethane	6.266	101	162893	55.60	ug/L	98
15) ethyl ether	6.627	74	37316	51.98	ug/L	96
16) 2-chloropropane	6.862	63	34907	54.95	ug/L	96
17) acrolein	6.867	56	11854	59.29	ug/L	86
18) freon 113	7.092	151	86201	62.75	ug/L	94
19) 1,1-dichloroethene	7.066	61	132414	58.14	ug/L	99
20) acetone	7.061	43	69949	192.50	ug/L	95
21) acetonitrile	7.506	41	87796	492.37	ug/L	95
22) iodomethane	7.328	142	151694	52.75	ug/L	98
23) carbon disulfide	7.469	76	266218	53.40	ug/L	99
24) methylene chloride	7.778	84	96027	48.50	ug/L	94
25) methyl acetate	7.521	43	40950	48.71	ug/L	98
26) methyl tert butyl ether	8.144	73	226747	49.60	ug/L	98
27) trans-1,2-dichloroethene	8.159	61	115655	51.22	ug/L	100
28) hexane	8.510	57	113412	56.91	ug/L	97
29) di-isopropyl ether	8.719	45	274085	48.17	ug/L	97
30) ethyl tert-butyl ether	9.179	59	257386	49.73	ug/L	96
31) 2-butanone	9.378	72	24910	208.52	ug/L #	77
32) 1,1-dichloroethane	8.735	63	142105	50.18	ug/L	99
33) chloroprene	8.834	53	108355	53.40	ug/L	99
34) acrylonitrile	8.060	53	22066	48.60	ug/L	92
35) vinyl acetate	8.667	86	11178	49.53	ug/L #	73
36) ethyl acetate	9.383	45	7521	46.85	ug/L	80
37) 2,2-dichloropropane	9.483	77	138812	56.75	ug/L	97
38) cis-1,2-dichloroethene	9.446	96	92289	49.57	ug/L	96
39) propionitrile	9.456	54	80557	502.74	ug/L	98
40) bromochloromethane	9.744	130	59394	50.89	ug/L	91
41) tetrahydrofuran	9.765	72	7874	55.12	ug/L	95
42) chloroform	9.823	83	145298	48.26	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184755.d
Acq On : 26 Apr 2019 8:08 am
Operator : EddieH
Sample : cc8014-50 Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:10:14 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	9.870	59	57070	50.23	ug/L		99
46)	methacrylonitrile	9.655	67	22213	51.59	ug/L		96
47)	1,1,1-trichloroethane	10.095	97	144412	55.65	ug/L		98
48)	cyclohexane	10.204	84	130557	50.61	ug/L		92
49)	1,1-dichloropropene	10.257	75	102794	56.01	ug/L		96
50)	tert-amyl alcohol	10.377	55	13438	255.29	ug/L		92
51)	carbon tetrachloride	10.288	117	131374	58.16	ug/L		99
54)	2,2,4-trimethylpentane	10.597	57	337310	55.37	ug/L		98
55)	tert-amyl methyl ether	10.581	73	239575	48.04	ug/L		98
56)	n-butyl alcohol	10.947	41	67891	2464.19	ug/L		96
57)	benzene	10.502	78	304677	47.50	ug/L		98
58)	heptane	10.748	57	57419	52.46	ug/L		94
59)	isopropyl acetate	10.403	87	12966	49.60	ug/L		98
60)	1,2-dichloroethane	10.529	62	93284	45.27	ug/L		99
61)	trichloroethene	11.214	130	87300	52.35	ug/L		99
62)	ethyl acrylate	11.193	55	62971	45.94	ug/L		97
63)	2-nitropropane	11.962	41	20372	45.65	ug/L	#	57
64)	2-chloroethyl vinyl ether	11.983	63	178150	234.46	ug/L		99
65)	methyl methacrylate	11.454	100	14294	47.35	ug/L	#	88
66)	1,2-dichloropropane	11.501	63	75786	46.39	ug/L		98
67)	methylcyclohexane	11.512	83	143236	54.09	ug/L		96
68)	dibromomethane	11.606	93	44576	46.76	ug/L		95
69)	bromodichloromethane	11.753	83	106560	46.64	ug/L		97
70)	epichlorohydrin	12.072	57	26621	230.83	ug/L		92
71)	cis-1,3-dichloropropene	12.202	75	117052	47.09	ug/L		97
72)	4-methyl-2-pentanone	12.302	58	85434	190.64	ug/L		95
73)	3-methyl-1-butanol	12.291	70	34266	1022.18	ug/L		86
76)	toluene	12.579	92	174860	42.75	ug/L		95
77)	trans-1,3-dichloropropene	12.757	75	100688	42.66	ug/L		99
78)	ethyl methacrylate	12.741	69	71198	43.04	ug/L		97
79)	1,1,2-trichloroethane	12.976	83	48825	41.83	ug/L		95
80)	2-hexanone	13.133	58	76987	176.12	ug/L		96
81)	tetrachloroethene	13.123	166	90405	48.72	ug/L		97
82)	1,3-dichloropropane	13.154	76	89516	41.16	ug/L		98
83)	butyl acetate	13.201	56	36564	43.28	ug/L		97
84)	dibromochloromethane	13.395	129	79880	45.63	ug/L		97
85)	1,2-dibromoethane	13.546	107	79380	43.16	ug/L		98
86)	n-butyl ether	13.970	57	298124	44.15	ug/L		96
87)	chlorobenzene	14.017	112	204826	41.63	ug/L		98
88)	1,1,1,2-tetrachloroethane	14.080	131	89616	46.18	ug/L		98
89)	ethylbenzene	14.075	91	345086	44.90	ug/L		98
90)	m,p-xylene	14.195	106	267064	89.23	ug/L		97
91)	o-xylene	14.593	91	287049	44.58	ug/L		99
92)	styrene	14.603	104	226053	44.37	ug/L		98
93)	bromoform	14.828	173	54051	45.44	ug/L		99
94)	butyl acrylate	14.415	55	122194	43.86	ug/L		98
95)	isopropylbenzene	14.932	105	364704	47.12	ug/L		99
96)	cis-1,4-dichloro-2-butene	14.969	88	29216	47.12	ug/L		96
99)	bromobenzene	15.320	156	101626	38.11	ug/L		85
100)	1,1,2,2-tetrachloroethane	15.210	83	79111	38.71	ug/L		98
101)	trans-1,4-dichloro-2-b...	15.241	53	19736	43.36	ug/L		99
102)	1,2,3-trichloropropane	15.293	110	20804	40.07	ug/L		97
103)	n-propylbenzene	15.346	91	429918	41.71	ug/L		99
104)	2-chlorotoluene	15.476	126	96166	40.98	ug/L		99
105)	4-chlorotoluene	15.586	91	259504	39.66	ug/L		99
106)	1,3,5-trimethylbenzene	15.497	105	319906	42.17	ug/L		98
107)	tert-butylbenzene	15.837	134	61446	45.83	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184755.d
Acq On : 26 Apr 2019 8:08 am
Operator : EddieH
Sample : cc8014-50 Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:10:14 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

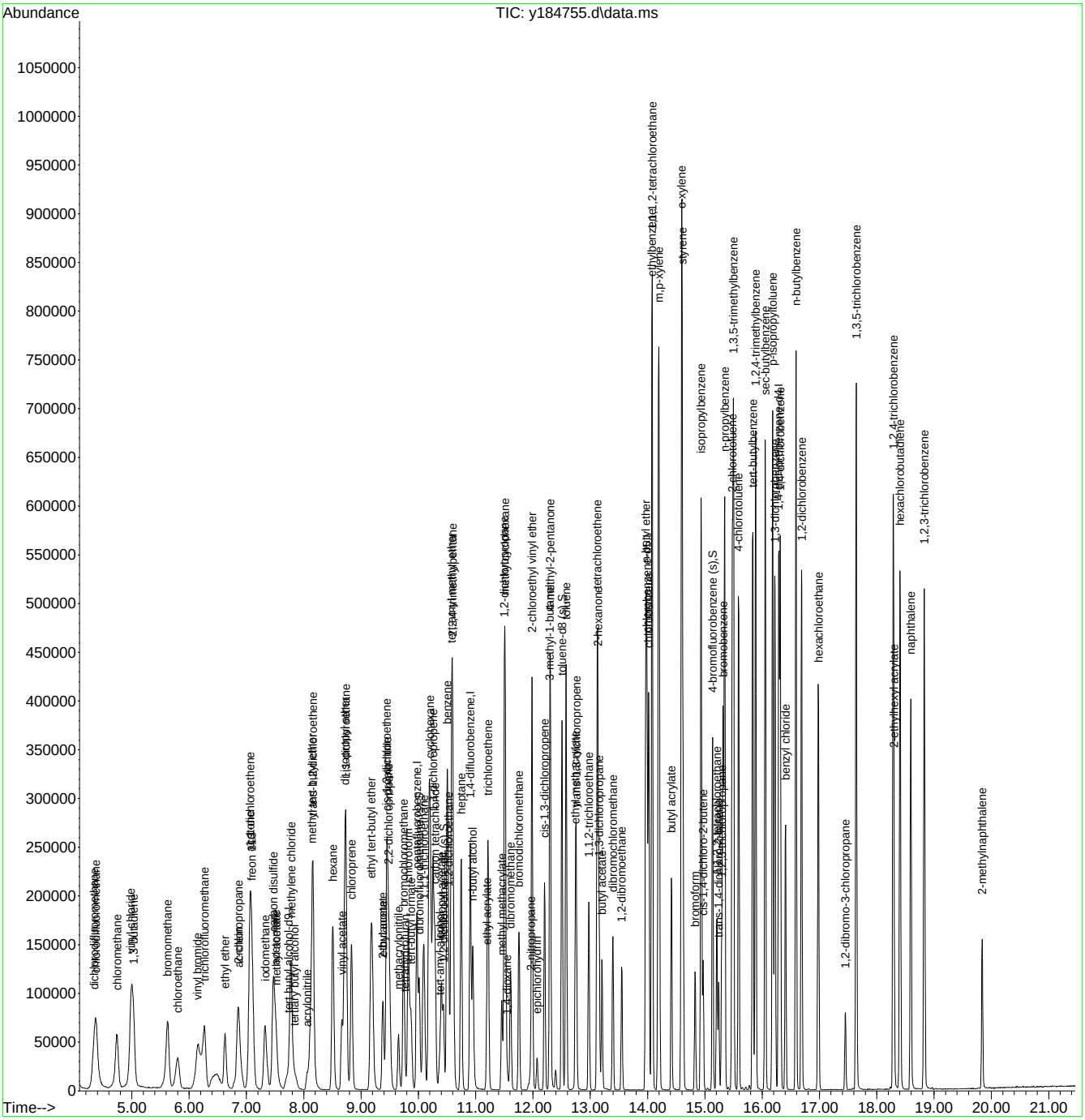
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.884	105	327584	41.93	ug/L	99
109) sec-butylbenzene	16.052	105	415917	43.95	ug/L	100
110) 1,3-dichlorobenzene	16.224	146	205577	41.69	ug/L	96
111) p-isopropyltoluene	16.183	119	367763	44.13	ug/L	99
112) 1,4-dichlorobenzene	16.313	146	206892	40.74	ug/L	98
113) 1,2-dichlorobenzene	16.690	146	206027	40.79	ug/L	97
114) n-butylbenzene	16.590	92	202385	46.58	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.453	157	21816	45.96	ug/L	89
116) 1,3,5-trichlorobenzene	17.642	180	220694	46.24	ug/L	99
117) 1,2,4-trichlorobenzene	18.290	180	188235	46.74	ug/L	99
118) hexachlorobutadiene	18.405	225	111130	44.95	ug/L	95
119) naphthalene	18.594	128	307909	49.30	ug/L	99
120) 1,2,3-trichlorobenzene	18.829	180	167074	47.89	ug/L	98
121) hexachloroethane	16.983	201	69119	46.59	ug/L	99
122) benzyl chloride	16.407	91	176633	47.58	ug/L	99
123) 2-ethylhexyl acrylate	18.301	70	19093	7.87	ug/L	92
124) 2-methylnaphthalene	19.838	142	72065	22.98	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\4_apr\4-29-19\vy8016\
Data File : y184755.d
Acq On : 26 Apr 2019 8:08 am
Operator : EddieH
Sample : cc8014-50 Inst : MSY
Misc : MS34201,VY8016,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: Apr 29 04:10:14 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2648-72.15	EC: V019-2648-74.6	Acrolein: V019-2648-54.48	
Standard Concentration	100-10000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-63			
Internal Surrogate Concentratio n	250/2500 PPM			
Standards	Ext ABK: V019-2648-52.6	Ext EC: V019-2648-76.6	Ext Acrolein: V019-2648-42.7	Ext PA V019-2648-79.2
Standard Concentration	100-10000 PPM	100 PPM	100 PPM	100/1000 PPM
Init Calib Quant Method	M3V1775			

Standard / Reagents			
GCMS3V	Instrument ID:	Sequence loaded by	Robert Szot
Analysis Date	4/22/2019	Data processed by	Robert Szot
Column	Rxi-624 (60mx0.25mmx1.4 um)	Batch ID	V3V1775
Method	V8260C	Matrix	SO
Init Calib Date	4/22/19	Approved By:	KANYAV
Init Calib Quant Method	M3V1775	Approved Date:	4/26/2019 4:13:09 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3V	44238	BFB		NA			5	5		1	ok	2:30 pm
3V	44239	IC1775-2		NA		8260 initial calibration	5	5		2	ok	2 uL ABK, EC, Acrolein / 100 mL DI H2O
3V	44240	IC1775-0.5		NA		8260 initial calibration	5	5		3	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
3V	44241	IC1775-1		NA		8260 initial calibration	5	5		4	ok	2 uL ABK, EC, Acrolein / 200 mL DI H2O
3V	44242	IC1775-4		NA		8260 initial calibration	5	5		5	ok	4 uL ABK, EC, Acrolein / 100 mL DI H2O
3V	44243	IC1775-8		NA		8260 initial calibration	5	5		6	ok	4 uL ABK, EC, Acrolein / 50 mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3V	44244	IC1775-20		NA		8260 initial calibration	5	5		7	ok	10 uL ABK, EC, Acrolein / 50 mL DI H2O
3V	44245	ICC1775-50		NA		8260 initial calibration	5	5		8	ok	25 uL ABK, EC, Acrolein / 50 mL DI H2O
3V	44246	IC1775-100		NA		8260 initial calibration	5	5		9	ok	50 uL ABK, EC, Acrolein / 50 mL DI H2O
3V	44247	IC1775-200		NA		8260 initial calibration	5	5		10	ok	100 uL ABK, EC, Acrolein / 50 mL DI H2O
3V	44248	IB		NA			5	5		11	ok	
3V	44249	IB		NA			5	5		12	ok	
3V	44250	ICV1775-50		NA		8260 initial calibration	5	5		13	ok	25 uL Ext ABK, Ext EC, Ext Acrolein / 50 mL DI H2O
3V	44251	ICV1775-50		NA		8260 initial calibration	5	5		14	ok	25 uL Ext PA / 50 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2648-72.15	EC: V019-2648-74.6	Acrolein: V019-2648-54.48	
Standard Concentration	100-10000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-63			
Internal Surrogate Concentratio n	250/2500 PPM			
Init Calib Quant Method	M3V1775			

Standard / Reagents			
GCMS3V	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	4/24/2019	Data processed by	janellec
Column	Rxi-624 (60mx0.25mmx1.4 um)	Batch ID	V3V1778
Method	V8260C	Matrix	SO
Init Calib Date	4/22/19	Approved By:	MOHUI
Init Calib Quant Method	M3V1775	Approved Date:	4/29/2019 3:52:33 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3V	44280	BFB/CC1775-50		NA			5.0	5		1	not used	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 8 & 11 low, 10:29 AM
3V	44281	CC1775-2		NA			5.0	5		2	not used	1uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, for # 8 & 11
3V	44282	BS		NA			5.0	5		3	NG	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
3V	44283	IB		NA			5.0	5		4	OK	
3V	44284	BFB/CC1775-50		NA			5.0	5		1	OK/O K	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 17,47,67 high, 12:21 PM
3V	44285	BS		NA			5.0	5		2	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3V	44286	IB		NA			5.0	5		3	OK	
3V	44287	MB		NA			5.0	5		4	OK	
3V	44288	JC86406-10	10	NA	MS34034	V8260TCL20	5.05	5		5	OK	
3V	44289	JC86406-1	4	NA	MS34034	V8260TCL20	3.78	5		6	RR	int/surr out+ hit compounds
3V	44290	JC86406-2	4	NA	MS34034	V8260TCL20	8.91	5		7	OK	
3V	44291	JC86406-4	4	NA	MS34034	V8260TCL20	4.07	5		8	RR	int/surr out+ hit compounds
3V	44292	JC86406-6	4	NA	MS34034	V8260TCL20	6.56	5		9	OK	
3V	44293	JC86406-9	4	NA	MS34034	V8260TCL20	3.68	5		10	RR	hit compounds
3V	44294	JC86406-14	4	NA	MS34034	V8260TCL20	2.89	5		11	RR	int/surr out
3V	44295	JC86406-11	4	NA	MS34034	V8260TCL20	5.24	5		12	OK	
3V	44296	JC86406-7	4	NA	MS34034	V8260TCL20	4.89	5		13	RR	hit compounds
3V	44297	JC86406-10MS	11	NA	MS34034	V8260TCL20	5.75	5		14	OK	2.5uL Std.A/B/K,EC,Acrolein in sample
3V	44298	JC86406-10MSD	12	NA	MS34034	V8260TCL20	4.66	5		15	OK	2.5uL Std.A/B/K,EC,Acrolein in sample
3V	44299	IB		NA			5.0	5		16	OK	
3V	44300	JC86553-24	5	NA	MS34094	V8260TCL20	4.4	5		17	OK	
3V	44301	JC86553-28	4	NA	MS34094	V8260TCL20	5.5	5		18	RR	hit compounds
3V	44302	IB		NA			5.0	5		19	OK	
3V	44303	JC86629-4	1	NA	MS34187	V8260TCL20	4.6	5		20	OK	8.41pm, 4/24/2019
3V	44304	IB		NA			5.0	5		21	OK	
3V	44305	IB		NA			5.0	5		22	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3V	44306	IB		NA			5.0	5		23	OK	
3V	44307	IB		NA			5.0	5		24	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V018-2645-148.50	EC: V019-2648-23.1	Acrolein: V019-2648-21.13	
Standard Concentration	100/10000 PPM	100 PPM	100 PPM	
Internal Surrogate	V018-2645-147			
Internal Surrogate Concentratio n	250/2500 PPM			
Ext. Standards	Ext. ABK: V019-2648-06.1	Ext EC: V019-2648-25.2	Ext Acrolein: V018-2645-142.7	Ext PA: V019-2648-22.3
Standard Concentration	100/10000 PPM	100 PPM	100 PPM	100/1000 PPM
	Acetone 3rd Source V019-2648-12.3			
	400 PPM			
Init Calib Quant Method	MD10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	Austin Park
Analysis Date	3/14/2019	Data processed by	Robert Szot
Column	Rxi-624 (60mx0.25mmx1.4 um)	Batch ID	VD10606
Method	V8260C	Matrix	SO
Init Calib Date	03/14/2019	Approved By:	MEI
Init Calib Quant Method	MD10606	Approved Date:	3/19/2019 11:41:21 AM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	263009	BFB		NA		Tune		5		1	OK	
D	263010	IC10606-0.2		NA		IC8260 Soil		5		2	not used	1uL Std.A/B/K,EC,Acrolein in 500mL DI H2O
D	263011	IC10606-0.5		NA		IC8260 Soil		5		3	OK	1uL Std.A/B/K,EC,Acrolein in 200mL DI H2O
D	263012	IC10606-1		NA		IC8260 Soil		5		4	OK	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263013	IC10606-2		NA		IC8260 Soil		5		5	OK	2uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263014	IC10606-4		NA		IC8260 Soil		5		6	OK	4uL Std.A/B/K,EC,Acrolein in 100mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	263015	IC10606-8		NA		IC8260 Soil		5		7	OK	8uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263016	IC10606-20		NA		IC8260 Soil		5		8	OK	20uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263017	ICC10606-50		NA		IC8260 Soil		5		9	OK	50uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263018	IC10606-100		NA		IC8260 Soil		5		10	OK	100uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263019	IC10606-200		NA		IC8260 Soil		5		11	OK	200uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
D	263020	IB		NA				5		12	OK	
D	263021	IB		NA				5		13	OK	
D	263022	ICV10606-50		NA		ICV8260 Soil		5		14	OK	50uL Ext.A/B/K,EC,Acrolein in 100mL DI H2O
D	263023	ICV10606-50		NA		ICV8260 Soil		5		15	OK	50uL Ext.PA,Aceton 3rd source in 100mL DI H2O
D	263024	IB		NA				5		16	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK:V019-2648-72.24	EC: V019-2648-80.3	Acrolein: V019-2648-54.69	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-63			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	THIENN
Analysis Date	4/25/2019	Data processed by	janellec
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10643
		Matrix	SO
		Approved By:	MOHUI
		Approved Date:	4/29/2019 5:02:10 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264039	IB		NA				5		1	OK	
D	264040	IB		NA				5		2	OK	
D	264041	BFB/CC10606-50		NA				5		3	OK/OK	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264042	CC10606-1		NA				5		4	OK	for # 61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264043	CC10606-4		NA				5		5	OK	for #7, ABK, EC, ACROLEIN, 2ul/50ml DI water
D	264044	BS		NA				5		6	OK	ABK, EC, ACROLEIN, 25ul/50ml DI water

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264045	IB		NA				5		7	OK	
D	264046	MB/JC80308D-25A		NA	MS31989	V8260SL	5	5	100	8	OK	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical
D	264047	JC80308D-25A		NA	MS31989	V8260SL	5	5	100	9	OK	Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264048	JC80306A-16		NA	MS31659	V8260SL	5	5	100	10	OK	R14-4/16/2019
D	264049	JC86424-3	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	5.7	5	10	11	OK	+D
D	264050	JC86424-5	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	6.4	5	5	12	OK/R R	RR 10X+100X, +D
D	264051	JC86505-2	5	NA	MS34072	V8260STD,CHEX,CS2 ,F113,HEX	5.6	5	100	13	OK/DL	RR 20X, +D
D	264052	IB		NA				5		14	OK	
D	264053	JC86424-5	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	6.4	5	1	15	OK	+D
D	264054	JC86424-5	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	6.4	5	10	16	OK	+D
D	264055	JC86424-5MS	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	6.4	5	10	17	OK	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264056	JC86424-5MSD	6	NA	MS34050	V8260STD,CHEX,CS2 ,F113,HEX	6.4	5	10	18	OK	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264057	IB		NA				5		19	OK	
D	264058	JC86505-2	5	NA	MS34072	V8260STD,CHEX,CS2 ,F113,HEX	5.6	5	5	20	OK	+D
D	264059	JC86406-13	3	NA	MS34034	V8260TCL20	4.14	10	100	21	RR	matrix c/o
D	264060	JC86406-8	3	NA	MS34034	V8260TCL20	4.19	10	100	22	OK	
D	264061	JC86552-9	5	NA	MS34093	V8260MDVO	5.69	10	100	23	RR	matrix c/o. 7:24PM
D	264062	JC86552-11	5	NA	MS34093	V8260MDVO	5.12	10	100	24	not ran	
D	264063	JC86406-3	3	NA	MS34034	V8260TCL20	3.84	10	100	25	not ran	
D	264064	JC86406-5	3	NA	MS34034	V8260TCL20	3.79	10	20	26	not ran	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264065	JC86406-12	3	NA	MS34034	V8260TCL20	3.18	10	10	27	not ran	
D	264066	IB		NA				5		28	OK	
D	264067	IB		NA				5		29	OK	
D	264068	IB		NA				5		30	OK	
D	264069	IB		NA				5		31	OK	
D	264070	IB		NA				5		32	OK	
D	264071	IB		NA				5		33	OK	
D	264072	IB		NA				5		34	OK	
D	264073	IB		NA				5		35	OK	
D	264074	IB		NA				5		36	OK	
D	264075	IB		NA				5		37	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK:V019-2648-72.24	EC: V019-2648-80.3	Acrolein: V019-2648-54.69	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-63			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	thienn
Analysis Date	4/26/2019	Data processed by	kenrickb
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10644
		Matrix	SO
		Approved By:	MOHUI
		Approved Date:	4/29/2019 5:25:06 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264062	IB		NA				5		1	ok	
D	264063	IB		NA				5		2	ok	
D	264064	BFB/CC10606-50		NA				5		3	ok/ok	7.54am, ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264065	CC10606-1		NA				5		4	ok	for # 61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264066	CC10606-4		NA				5		5	ok	for # 7, ABK, EC, ACROLEIN, 2ul/50ml DI water
D	264067	BS		NA				5		6	ok	ABK, EC, ACROLEIN, 25ul/50ml DI water

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264068	IB		NA				5		7	ok	
D	264069	MB/JC80308D-26A		NA	MS31989	V8260SL	5	5	100	8	ok	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical
D	264070	JC80308D-26B		NA	MS31989	V8260SL	5	5	100	9	ok	Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264071	JC86406-1	3	NA	MS34034	V8260TCL20	3.58	10	100	10	ok	+I
D	264072	JC86406-14	3	NA	MS34034	V8260TCL20	3.64	10	100	11	NG	I/S out
D	264073	JC86406-3	3	NA	MS34034	V8260TCL20	3.84	10	100	12	NG	I/S out
D	264074	JC86406-5	3	NA	MS34034	V8260TCL20	3.79	10	20	13	NG	I/S out
D	264075	JC86406-14	3	NA	MS34034	V8260TCL20	3.64	10	100	14	ok	+I
D	264076	JC86406-3	3	NA	MS34034	V8260TCL20	3.84	10	100	15	ok	Dilution due to non targets high.
D	264077	JC86406-5	3	NA	MS34034	V8260TCL20	3.79	10	20	16	ok	Dilution due to non targets high.
D	264078	JC86406-12	3	NA	MS34034	V8260TCL20	3.18	10	10	17	ok	Dilution due to non targets high.
D	264079	IB		NA				5		18	ok	
D	264080	IB		NA				5		19	ok	
D	264081	JC86914-1MS	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	20	rr	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264082	JC86914-1MSD	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	21	rr	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264083	IB		NA				5		22	ok	
D	264084	JC86914-1	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	23	ok	
D	264085	JC86914-2	2	NA	MS34269	V8260PADFTMBMTBE	6.65	10	100	24	ok	
D	264086	JC86914-3	2	NA	MS34269	V8260PADFTMBMTBE	5.71	10	100	25	ok	
D	264087	JC86913-1	2	NA	MS34269	V8260PADFTMBMTBE	5.21	10	100	26	ok	26 Apr 2019 7:21 pm

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264088	IB		NA				5		27	ok	
D	264089	IB		NA				5		28	ok	
D	264090	IB		NA				5		29	ok	
D	264091	IB		NA				5		30	ok	
D	264092	IB		NA				5		31	ok	
D	264093	IB		NA				5		32	ok	
D	264094	IB		NA				5		33	ok	
D	264095	IB		NA				5		34	ok	
D	264096	IB		NA				5		35	ok	
D	264097	IB		NA				5		36	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK:V019-2648-72.24	EC: V019-2648-82.1	Acrolein: V019-2648-88.7	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-63			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	thienn
Analysis Date	4/29/2019	Data processed by	lotusa
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10645
		Matrix	SO
		Approved By:	MEI
		Approved Date:	4/30/2019 4:41:11 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	OK	IB		NA				5		1	ok	
D	264099	IB		NA				5		2	ok	
D	264100	CC10606-50		NA				5		3	ng	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264101	CC10606-50		NA				5		4	OK	not use, 7.54am,ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264102	CC10606-1		NA				5		5	OK	not use, for #61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264103	BS/BS2		NA				5		6	NG	also for the batch #VD10644, ABK, EC, ACROLEIN, 25ul/50ml DI water

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264104	IB		NA				5		7	ok	
D	264105	IB		NA				5		8	ok	
D	264106	BFB/CC10606-50		NA				5		9	ok/ok	29 Apr 2019 10:24 am , ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264107	CC10606-1		NA				5		10	ok	for #61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264108	BS/BS2		NA				5		11	ok	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264109	IB		NA				5		12	ok	
D	264110	MB/MB2/JC80308D-29A		NA	MS31989	V8260SL	5	5	100	13	ok	also for the batch #VD10644, Daily blank disp #55 MeOH lot # 178026, Fisher Chemical
D	264111	JC86406-3MS	3	NA	MS34034	V8260TCL20	3.84	10	100	14	ok	for the batch #VD10644, ABK, EC, ACROLEIN, 25ul/50ml sample
D	264112	JC86406-3MSD	3	NA	MS34034	V8260TCL20	3.84	10	100	15	ok	for the batch #VD10644, ABK, EC, ACROLEIN, 25ul/50ml sample
D	264113	IB		NA				5		16	OK	
D	264114	IB		NA				5		17	OK	
D	264115	IB		NA				5		18	ok	
D	264116	IB		NA				5		19	ok	
D	264117	IB		NA				5		20	ok	
D	264118	IB		NA				5		21	ok	
D	264119	JC80308D-27A		NA	MS31989	V8260SL	5	5	100	22	ok	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical
D	264120	JC80308D-27B		NA	MS31989	V8260SL	5	5	100	23	ok	Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264121	JC86914-1MS	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	24	ok	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264122	JC86914-1MSD	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	25	ok	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264123	IB		NA				5		26	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264124	JC86914-2	2	NA	MS34269	V8260PADFTMBMTBE	6.65	10	100	27	ok	
D	264125	JC86914-3	2	NA	MS34269	V8260PADFTMBMTBE	5.71	10	100	28	ok	
D	264126	JC86914-1	2	NA	MS34269	V8260PADFTMBMTBE	5.39	10	100	29	ok	
D	264127	JC86716-12	3	NA	MS34179	V8260TCL20	1.98	10	100	30	ok	+LL
D	264128	JC86570-3	6	NA	MS34133	V8260STD,CHEXCS2, F113,HEX	6.4	5	100	31	ok/dl	+LL, rr 10x
D	264129	JC86894-3	5	NA	MS34277	V8260STD,CHEXCS2, F113,HEX	6.3	5	100	32	ok	+LL
D	264130	JC86884-7	4	NA	MS34267	V8260PCE,TCE	5.3	5	100	33	ok/dl	+LL, 29 Apr 2019 9:55 pm, rr 10x
D	264131	IB		NA				5		34	ok	
D	264132	IB		NA				5		35	ok	
D	264133	IB		NA				5		36	ok	
D	264134	IB		NA				5		37	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V018-2629-137.36	EC: V018-2645-01.8	Acrolein: V018-2629-145.9	
Concentration	100-10000 PPM	100 PPM	100 PPM	
Ext.Standard	Ext.ABK: V018-2645-05.3	Ext.EC: V018-2629-142.7	Ext.Acrolein: V018-2629-136.3	Ext.PA:V018-2629-120.2
Concentration	100-10000 PPM	100 PPM	100 PPM	100 PPM
Ext.Standard	3rd Source Acetone:V018-2629-128.2			
Concentration	400 PPM			
Internal/Surr	V018-2629-130			
Concentration	50/500 PPM			
Method	V8260C			
Init Calib Quant Method	MI8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	11/27/2018	Data processed by	Dongmei
Column	RXI624(60mx0.25mmx1.4um)	Batch ID	VI8986
Method	V8260C	Matrix	SO
Init Calib Date	11/27/2018	Approved By:	KANYAV
Init Calib Quant Method	MI8986	Approved Date:	12/3/2018 1:18:01 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	223174	BFB		NA		Tune	5.0	5		1	OK	5:41 PM
I	223175	IC8986-0.5		NA		IC8260	5.0	5		2	OK	1uL Std.A/B/K,EC,Acrolein in 200mL DI H2O
I	223176	IC8986-1		NA		IC8260	5.0	5		3	OK	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
I	223177	IC8986-2		NA		IC8260	5.0	5		4	OK	2uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
I	223178	IC8986-4		NA		IC8260	5.0	5		5	OK	2uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223179	IC8986-8		NA		IC8260	5.0	5		6	OK	4uL Std.A/B/K,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	223180	IC8986-20		NA		IC8260	5.0	5		7	OK	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223181	ICC8986-50		NA		IC8260	5.0	5		8	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223182	IC8986-100		NA		IC8260	5.0	5		9	OK	50uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223183	IC8986-200		NA		IC8260	5.0	5		10	OK	100uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223184	IB		NA			5.0	5		11	OK	
I	223185	IB		NA			5.0	5		12	OK	
I	223186	ICV8986-50		NA		ICV8260	5.0	5		13	OK	25uL Ext.A/B/K,EC,Acrolein in 50mL DI H2O
I	223187	ICV8986-50		NA		ICV8260	5.0	5		14	OK	25uL Ext.PA,Acetone 3rd source in 50mL DI H2O, 12:18 AM
I	223188	IB		NA			5.0	5		15	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2645-72.24	EC: V019-2648-80.3	Acrolein: V019-2648-54.69	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-64			
I/S Concentration	50/500ppm			
Method	v8260c			
Init Calib Quant Method	mi8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	thienn
Analysis Date	4/25/2019	Data processed by	Lotusa
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VI9093
		Matrix	SO
		Approved By:	MOHUI
		Approved Date:	4/29/2019 4:20:01 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225699	IB		NA				5		1	ok	
I	225700	IB		NA				5		2	ok	
I	225701	BFB/CC8986-50		NA				5		3	OK	7.44AM, 4/25/2019, ABK,EC,ACROLEIN, 25UL/50ML DI WATER
I	225702	BS		NA				5		4	OK	ABK,EC,ACROLEIN, 25UL/50ML DI WATER
I	225703	IB		NA				5		5	ok	
I	225704	MB		NA				5		6	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225705	JC86863-1	5	NA	MS34257	V8260TCL20+	5.23	5		7	OK	
I	225706	JC86863-2	5	NA	MS34257	V8260TCL20+	5.9	5		8	OK	
I	225707	JC86863-2MS	4	NA	MS34257	V8260TCL20+	5	5		9	ok/RR	not match with sample,ABK,EC,ACROLEIN, 2.5UL/SAMPLE
I	225708	IB		NA			5	5		10	ok	
I	225709	JC86863-1DUP	4	NA	MS34257	V8260TCL20+	6.1	5		11	OK	
I	225710	JC86863-3	5	NA	MS34257	V8260TCL20+	4.4	5		12	OK	
I	225711	JC86863-3MS	4	NA	MS34257	V8260TCL20+	3.1	5		13	OK	ABK,EC,ACROLEIN, 2.5UL/SAMPLE
I	225712	IB		NA			5	5		14	ok	
I	225713	JC80445B-5A		NA	MS33764	V8260SL	5	5		15	OK	0.2ppb,ABK,EC,ACROLEIN, 2UL/1000ML DI WATER
I	225714	JC80445B-5B		NA	MS33764	V8260SL	5	5		16	OK	0.5ppb,ABK,EC,ACROLEIN, 5UL/1000ML DI WATER
I	225715	JC80445B-5C		NA	MS33764	V8260SL	5	5		17	OK	1ppb,ABK,EC,ACROLEIN, 1UL/100ML DI WATER
I	225716	JC80445B-5D		NA	MS33764	V8260SL	5	5		18	OK	2ppb,ABK,EC,ACROLEIN, 2UL/100ML DI WATER
I	225717	JC80445B-5E		NA	MS33764	V8260SL	5	5		19	OK	5ppb,ABK,EC,ACROLEIN, 5UL/100ML DI WATER
I	225718	JC80445B-5E		NA	MS33764	V8260SL	5	5		20	OK	10ppb,ABK,EC,ACROLEIN, 10UL/100ML DI WATER
I	225719	JC80589B-3A		NA	MS33758	V8260SL	5	5		21	OK	1ppb,ABK,EC,ACROLEIN, 1UL/100ML DI WATER
I	225720	JC80589B-3B		NA	MS33758	V8260SL	5	5		22	OK	5ppb,ABK,EC,ACROLEIN, 5UL/100ML DI WATER
I	225721	JC86406-1	5	NA	MS34034	V8260TCL20	3.62	5		23	OK/rr	+3V AND RR SME
I	225722	JC86406-4	5	NA	MS34034	V8260TCL20	3.74	5		24	OK	
I	225723	JC86406-14	5	NA	MS34034	V8260TCL20	3.04	5		25	ok/rr	+3V AND RR SME, 7.37 PM
I	225724	IB		NA			5	5		26	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.23	EC: V019-2648-80.11	Acrolein: V019-2648-54.40	
Concentration	100-10,000 PPM	100 PPM	100 PPM	
Standard	Ext ABK: V019-2648-52.7	Ext EC: V019-2648-76.5	Ext Acrolein: V019-2648-42.5	Ext PA: V019-2648-79.1
Concentration	100-10,000 PPM	100 PPM	100 PPM	100 PPM
Internal Surrogate	V019-2648-63			
Concentration	250/2500 PPM			

Standard / Reagents			
GCMSY	Instrument ID:	Sequence loaded by	Robert Szot
Analysis Date	4/24/2019	Data processed by	Robert Szot
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VY8014
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	KANYAV
Init Calib Quant Method	MYS8014	Approved Date:	4/26/2019 12:59:40 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184712	BFB		NA			5	5		1	ok	2:32 pm
Y	184713	IC8014-0.5		NA		8260 initial calibration	5	5		2	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
Y	184714	IC8014-1		NA		8260 initial calibration	5	5		3	ok	2 uL ABK, EC, Acrolein / 200 mL DI H2O
Y	184715	IC8014-2		NA		8260 initial calibration	5	5		4	ok	4 uL ABK, EC, Acrolein / 200 mL DI H2O
Y	184716	IC8014-4		NA		8260 initial calibration	5	5		5	ok	2 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184717	IC8014-8		NA		8260 initial calibration	5	5		6	ok	4 uL ABK, EC, Acrolein / 50 mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184718	IC8014-20		NA		8260 initial calibration	5	5		7	ok	10 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184719	ICC8014-50		NA		8260 initial calibration	5	5		8	ok	25 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184720	IC8014-100		NA		8260 initial calibration	5	5		9	ok	50 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184721	IC8014-200		NA		8260 initial calibration	5	5		10	ok	100 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184722	IB		NA			5	5		11	ok	
Y	184723	IB		NA			5	5		12	ok	
Y	184724	ICV8014-50		NA		8260 initial calibration	5	5		13	ok	25 uL Ext ABK, Ext EC, Ext Acrolein / 50 mL DI H2O
Y	184725	ICV8014-50		NA		8260 initial calibration	5	5		14	ok	25 uL Ext PA / 50 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2648-72.19	EC: V019-2648-80.5	Acrolein: V019-2648-54.39	
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-63			
I/S Concentration	250/2,500ppm			
Rough reviewed by				

Standard / Reagents			
GCMSY	Instrument ID:	Sequence loaded by	thienn
Analysis Date	4/26/2019	Data processed by	nizele
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VY8016
Method	v8260c	Matrix	SO
Init Calib Date	4/24/19	Approved By:	MOHUI
Init Calib Quant Method	mys8014	Approved Date:	4/29/2019 10:29:29 AM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184753	IB		NA			5	5		1	ok	
Y	184754	IB		NA			5	5		2	ok	
Y	184755	BFB/CC8014-50		NA			5	5		3	ok/ok	8.08AM,ABK,EC, Acrolein 25ul/50ml DI water
Y	184756	CC8014-2		NA			5	5		4	ok	for # 99,100,105, ABK,EC, Acrolein 1ul/50ml DI water
Y	184757	BS		NA			5	5		5	ok	ABK,EC, Acrolein 25ul/50ml DI water
Y	184758	IB		NA			5	5		6	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184759	MB/JC80307D-26A		NA	MS31988	V8260SL	5	5		7	ok	daily blank
Y	184760	JC86717-12	12	NA	MS34202	V8260TCL20+	3.8	5		8	ok	
Y	184761	JC86470-2	3	NA	MS34058	V8260TCL20+	5.5	5		9	ok	+I Surr out
Y	184762	JC86406-9	5	NA	MS34034	V8260TCL20	3.21	5		10	ok	
Y	184763	JC86406-7	5	NA	MS34034	V8260TCL20	4.46	5		11	ok	
Y	184764	JC86553-28	5	NA	MS34094	V8260TCL20	5.2	5		12	ok	
Y	184765	JC86717-12MS	14	NA	MS34202	V8260TCL20+	3.8	5		13	ok	ABK,EC, Acrolein 2.5ul/50ml sample
Y	184766	JC86717-12MSD	15	NA	MS34202	V8260TCL20+	3.8	5		14	ok	ABK,EC, Acrolein 2.5ul/50ml sample
Y	184767	IB		NA			5	5		15	ok	
Y	184768	JC86406-15	5	NA	MS34034	V8260TCL20	3.84	5		16	ok	
Y	184769	JC86406-13	5	NA	MS34034	V8260TCL20	4.94	5		17	ok	
Y	184770	JC86552-9	7	NA	MS34093	V8260MDVO	5.44	5		18	ok	
Y	184771	JC86908-1	4	NA	MS34272	V8260TCL20+,TBA	4.9	5		19	ok	
Y	184772	JC86908-2	5	NA	MS34272	V8260TCL20+,TBA	6	5		20	ok	
Y	184773	JC86908-3	5	NA	MS34272	V8260TCL20+,TBA	5.2	5		21	ok	
Y	184774	JC86908-6	5	NA	MS34272	V8260TCL20+,TBA	5.4	5		22	ok	
Y	184775	JC86908-9	5	NA	MS34272	V8260TCL20+,TBA	5.4	5		23	ok	
Y	184776	JC86908-7	5	NA	MS34272	V8260TCL20+,TBA	5.2	5		24	ok	
Y	184777	JC86908-5	5	NA	MS34272	V8260TCL20+,TBA	4.9	5		25	ok	
Y	184778	JC86908-4	5	NA	MS34272	V8260TCL20+,TBA	5.7	5		26	ok	7:33 pm

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184779	IB		NA			5	5		27	ok	

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	2P86731.D	1	04/18/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	2P86731.D	1	04/18/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	2P86731.D	1	04/18/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	62%	23-115%
4165-62-2	Phenol-d5	72%	27-114%
118-79-6	2,4,6-Tribromophenol	58%	19-152%
4165-60-0	Nitrobenzene-d5	82%	26-134%
321-60-8	2-Fluorobiphenyl	82%	39-124%
1718-51-0	Terphenyl-d14	71%	36-134%

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	Z137258.D	1	04/25/19	AR	04/17/19	OP19810	EZ6762

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	Z137258.D	1	04/25/19	AR	04/17/19	OP19810	EZ6762

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MB1	Z137258.D	1	04/25/19	AR	04/17/19	OP19810	EZ6762

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	85%	23-115%
4165-62-2	Phenol-d5	81%	27-114%
118-79-6	2,4,6-Tribromophenol	71%	19-152%
4165-60-0	Nitrobenzene-d5	81%	26-134%
321-60-8	2-Fluorobiphenyl	82%	39-124%
1718-51-0	Terphenyl-d14	85%	36-134%

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MB1	M153633.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	9.2	67	4.6	ug/kg	J
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	5.6	67	4.8	ug/kg	J
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	7.2	67	7.1	ug/kg	J
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MB1	M153633.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	9.4	67	8.4	ug/kg	J
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MB1	M153633.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	56%	23-115%
4165-62-2	Phenol-d5	56%	27-114%
118-79-6	2,4,6-Tribromophenol	87%	19-152%
4165-60-0	Nitrobenzene-d5	67%	26-134%
321-60-8	2-Fluorobiphenyl	76%	39-124%
1718-51-0	Terphenyl-d14	70%	36-134%

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-BS1	2P86732.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1230	74	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1540	92	50-123
120-83-2	2,4-Dichlorophenol	1670	1340	80	48-122
105-67-9	2,4-Dimethylphenol	1670	1700	102	48-124
51-28-5	2,4-Dinitrophenol	3330	2700	81	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1420	85	49-140
95-48-7	2-Methylphenol	1670	1340	80	40-126
	3&4-Methylphenol	1670	1390	83	40-127
88-75-5	2-Nitrophenol	1670	1310	79	44-133
100-02-7	4-Nitrophenol	1670	1460	88	35-153
87-86-5	Pentachlorophenol	1670	1380	83	15-149
108-95-2	Phenol	1670	1240	74	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1270	76	44-132
95-95-4	2,4,5-Trichlorophenol	1670	1380	83	45-124
88-06-2	2,4,6-Trichlorophenol	1670	1420	85	57-122
83-32-9	Acenaphthene	1670	1400	84	53-119
208-96-8	Acenaphthylene	1670	1340	80	41-125
98-86-2	Acetophenone	1670	1240	74	52-112
120-12-7	Anthracene	1670	1370	82	51-120
1912-24-9	Atrazine	1670	1660	100	49-139
56-55-3	Benzo(a)anthracene	1670	1200	72	54-118
50-32-8	Benzo(a)pyrene	1670	1390	83	55-121
205-99-2	Benzo(b)fluoranthene	1670	1410	85	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1450	87	40-124
207-08-9	Benzo(k)fluoranthene	1670	1380	83	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1350	81	60-122
85-68-7	Butyl benzyl phthalate	1670	1240	74	51-134
92-52-4	1,1'-Biphenyl	1670	1300	78	46-122
100-52-7	Benzaldehyde	1670	1080	65	14-139
91-58-7	2-Chloronaphthalene	1670	1240	74	49-120
106-47-8	4-Chloroaniline	1670	1010	61	10-115
86-74-8	Carbazole	1670	1470	88	52-124
105-60-2	Caprolactam	1670	1450	87	16-139
218-01-9	Chrysene	1670	1100	66	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1410	85	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	1260	76	41-131

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-BS1	2P86732.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1400	84	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	1480	89	56-118
121-14-2	2,4-Dinitrotoluene	1670	1450	87	57-131
606-20-2	2,6-Dinitrotoluene	1670	1380	83	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	1760	53	10-129
123-91-1	1,4-Dioxane	1670	963	58	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1460	88	48-121
132-64-9	Dibenzofuran	1670	1550	93	51-119
84-74-2	Di-n-butyl phthalate	1670	1430	86	59-125
117-84-0	Di-n-octyl phthalate	1670	1550	93	47-147
84-66-2	Diethyl phthalate	1670	1480	89	57-116
131-11-3	Dimethyl phthalate	1670	1370	82	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1250	75	53-133
206-44-0	Fluoranthene	1670	1480	89	58-117
86-73-7	Fluorene	1670	1530	92	56-114
118-74-1	Hexachlorobenzene	1670	1320	79	50-128
87-68-3	Hexachlorobutadiene	1670	1200	72	43-129
77-47-4	Hexachlorocyclopentadiene	3330	2470	74	15-140
67-72-1	Hexachloroethane	1670	1050	63	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1510	91	49-124
78-59-1	Isophorone	1670	1410	85	38-128
91-57-6	2-Methylnaphthalene	1670	1380	83	37-124
88-74-4	2-Nitroaniline	1670	1570	94	45-144
99-09-2	3-Nitroaniline	1670	1240	74	10-134
100-01-6	4-Nitroaniline	1670	1570	94	41-130
91-20-3	Naphthalene	1670	1340	80	44-116
98-95-3	Nitrobenzene	1670	1300	78	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1390	83	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1340	80	51-122
85-01-8	Phenanthrene	1670	1380	83	53-119
129-00-0	Pyrene	1670	1140	68	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1260	76	45-128

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-BS1	2P86732.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	80%	23-115%
4165-62-2	Phenol-d5	77%	27-114%
118-79-6	2,4,6-Tribromophenol	71%	19-152%
4165-60-0	Nitrobenzene-d5	78%	26-134%
321-60-8	2-Fluorobiphenyl	73%	39-124%
1718-51-0	Terphenyl-d14	75%	36-134%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-BS1	M153634.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1210	73	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1200	72	50-123
120-83-2	2,4-Dichlorophenol	1670	1350	81	48-122
105-67-9	2,4-Dimethylphenol	1670	1500	90	48-124
51-28-5	2,4-Dinitrophenol	3330	2770	83	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1400	84	49-140
95-48-7	2-Methylphenol	1670	1180	71	40-126
	3&4-Methylphenol	1670	1220	73	40-127
88-75-5	2-Nitrophenol	1670	1470	88	44-133
100-02-7	4-Nitrophenol	1670	1140	68	35-153
87-86-5	Pentachlorophenol	1670	1690	101	15-149
108-95-2	Phenol	1670	1070	64	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1430	86	44-132
95-95-4	2,4,5-Trichlorophenol	1670	1430	86	45-124
88-06-2	2,4,6-Trichlorophenol	1670	1450	87	57-122
83-32-9	Acenaphthene	1670	1430	86	53-119
208-96-8	Acenaphthylene	1670	1380	83	41-125
98-86-2	Acetophenone	1670	1140	68	52-112
120-12-7	Anthracene	1670	1330	80	51-120
1912-24-9	Atrazine	1670	1730	104	49-139
56-55-3	Benzo(a)anthracene	1670	1150	69	54-118
50-32-8	Benzo(a)pyrene	1670	1320	79	55-121
205-99-2	Benzo(b)fluoranthene	1670	1310	79	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1360	82	40-124
207-08-9	Benzo(k)fluoranthene	1670	1190	71	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1350	81	60-122
85-68-7	Butyl benzyl phthalate	1670	1150	69	51-134
92-52-4	1,1'-Biphenyl	1670	1380	83	46-122
100-52-7	Benzaldehyde	1670	961	58	14-139
91-58-7	2-Chloronaphthalene	1670	1350	81	49-120
106-47-8	4-Chloroaniline	1670	716	43	10-115
86-74-8	Carbazole	1670	1390	83	52-124
105-60-2	Caprolactam	1670	1220	73	16-139
218-01-9	Chrysene	1670	1110	67	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1220	73	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	1070	64	41-131

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-BS1	M153634.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1260	76	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	1320	79	56-118
121-14-2	2,4-Dinitrotoluene	1670	1430	86	57-131
606-20-2	2,6-Dinitrotoluene	1670	1590	95	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	1870	56	10-129
123-91-1	1,4-Dioxane	1670	533	32	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1280	77	48-121
132-64-9	Dibenzofuran	1670	1430	86	51-119
84-74-2	Di-n-butyl phthalate	1670	1350	81	59-125
117-84-0	Di-n-octyl phthalate	1670	1150	69	47-147
84-66-2	Diethyl phthalate	1670	1300	78	57-116
131-11-3	Dimethyl phthalate	1670	1280	77	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1110	67	53-133
206-44-0	Fluoranthene	1670	1310	79	58-117
86-73-7	Fluorene	1670	1390	83	56-114
118-74-1	Hexachlorobenzene	1670	1400	84	50-128
87-68-3	Hexachlorobutadiene	1670	1360	82	43-129
77-47-4	Hexachlorocyclopentadiene	3330	3600	108	15-140
67-72-1	Hexachloroethane	1670	1140	68	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1230	74	49-124
78-59-1	Isophorone	1670	1260	76	38-128
91-57-6	2-Methylnaphthalene	1670	1400	84	37-124
88-74-4	2-Nitroaniline	1670	1440	86	45-144
99-09-2	3-Nitroaniline	1670	1050	63	10-134
100-01-6	4-Nitroaniline	1670	1490	89	41-130
91-20-3	Naphthalene	1670	1400	84	44-116
98-95-3	Nitrobenzene	1670	1210	73	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1180	71	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1310	79	51-122
85-01-8	Phenanthrene	1670	1400	84	53-119
129-00-0	Pyrene	1670	1160	70	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1470	88	45-128

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-BS1	M153634.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	64%	23-115%
4165-62-2	Phenol-d5	64%	27-114%
118-79-6	2,4,6-Tribromophenol	102%	19-152%
4165-60-0	Nitrobenzene-d5	71%	26-134%
321-60-8	2-Fluorobiphenyl	79%	39-124%
1718-51-0	Terphenyl-d14	75%	36-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MS	2P86744.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
OP19810-MSD	2P86745.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86743.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86767.D	5	04/22/19	YC	04/17/19	OP19810	E2P3832

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	JC86406-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		1910	1050	55	1910	913	48	14	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		1910	1300	68	1910	1220	64	6	11-147/35
120-83-2	2,4-Dichlorophenol	ND		1910	1250	65	1910	1160	61	7	15-140/34
105-67-9	2,4-Dimethylphenol	ND		1910	1490	78	1910	1330	70	11	10-151/34
51-28-5	2,4-Dinitrophenol	ND		3820	376	10	3820	357	9* [a]	5	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		1910	155	8* [a]	1910	110	6* [a]	34	10-150/48
95-48-7	2-Methylphenol	ND		1910	1150	60	1910	1040	54	10	10-138/33
	3&4-Methylphenol	102		1910	1330	64	1910	1180	56	12	10-143/33
88-75-5	2-Nitrophenol	ND		1910	1170	61	1910	1030	54	13	10-150/39
100-02-7	4-Nitrophenol	ND		1910	1230	64	1910	1110	58	10	10-163/38
87-86-5	Pentachlorophenol	ND		1910	916	48	1910	763	40	18	10-148/39
108-95-2	Phenol	92.2		1910	1150	55	1910	1040	50	10	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1910	1110	58	1910	977	51	13	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		1910	1370	72	1910	1300	68	5	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		1910	1430	75	1910	1330	70	7	16-148/36
83-32-9	Acenaphthene	129		1910	1540	74	1910	1360	64	12	21-136/34
208-96-8	Acenaphthylene	1730		1910	3300	82	1910	2840	58	15	10-143/36
98-86-2	Acetophenone	22.8	J	1910	1100	56	1910	937	48	16	24-127/31
120-12-7	Anthracene	1400		1910	3230	96	1910	2580	62	22	10-147/39
1912-24-9	Atrazine	ND		1910	1340	70	1910	1260	66	6	10-161/38
56-55-3	Benzo(a)anthracene	6470 [c]		1910	7140	80	1910	5450	-9* [b]	27	10-151/41
50-32-8	Benzo(a)pyrene	6750 [c]		1910	8530	95	1910	6740	1* [b]	23	10-149/40
205-99-2	Benzo(b)fluoranthene	9740 [c]		1910	12400	89	1910	9820	-46* [b]	23	10-147/42
191-24-2	Benzo(g,h,i)perylene	2490		1910	3270	41	1910	2880	20	13	10-150/41
207-08-9	Benzo(k)fluoranthene	3390 [c]		1910	3370	78	1910	2920	54	14	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		1910	1330	70	1910	1180	62	12	26-138/37
85-68-7	Butyl benzyl phthalate	ND		1910	990	52	1910	904	47	9	24-143/36
92-52-4	1,1'-Biphenyl	70.1	J	1910	1520	76	1910	1350	67	12	18-138/32
100-52-7	Benzaldehyde	ND		1910	996	52	1910	875	46	13	10-149/37
91-58-7	2-Chloronaphthalene	ND		1910	1340	70	1910	1170	61	14	24-130/31
106-47-8	4-Chloroaniline	ND		1910	587	31	1910	670	35	13	10-111/52
86-74-8	Carbazole	358		1910	1850	78	1910	1680	69	10	12-146/39
105-60-2	Caprolactam	ND		1910	1310	69	1910	1160	61	12	10-147/40
218-01-9	Chrysene	7770 [c]		1910	8420	86	1910	6670	-5* [b]	23	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		1910	1350	71	1910	1130	59	18	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		1910	1050	55	1910	905	47	15	12-142/35

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MS	2P86744.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
OP19810-MSD	2P86745.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86743.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86767.D	5	04/22/19	YC	04/17/19	OP19810	E2P3832

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Compound	JC86406-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		1910	1270	67	1910	1010	53	23	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		1910	1550	81	1910	1350	71	14	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		1910	1300	68	1910	1160	61	11	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		1910	1330	70	1910	1190	62	11	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		3820	781	20	3820	921	24	16	10-137/47
123-91-1	1,4-Dioxane	ND		1910	851	45	1910	768	40	10	10-110/40
53-70-3	Dibenzo(a,h)anthracene	1230		1910	2280	55	1910	2060	43	10	10-152/38
132-64-9	Dibenzofuran	267		1910	2090	95	1910	1850	83	12	17-141/36
84-74-2	Di-n-butyl phthalate	ND		1910	1210	63	1910	1130	59	7	26-137/35
117-84-0	Di-n-octyl phthalate	ND		1910	1100	58	1910	991	52	10	23-145/36
84-66-2	Diethyl phthalate	ND		1910	1440	75	1910	1290	68	11	25-133/35
131-11-3	Dimethyl phthalate	ND		1910	1360	71	1910	1230	64	10	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1910	1160	61	1910	1060	56	9	26-144/39
206-44-0	Fluoranthene	8090	c	1910	8750	110	1910	7230	30	19	10-151/44
86-73-7	Fluorene	243		1910	1900	87	1910	1620	72	16	19-133/36
118-74-1	Hexachlorobenzene	ND		1910	1280	67	1910	1160	61	10	18-142/37
87-68-3	Hexachlorobutadiene	ND		1910	1200	63	1910	949	50	23	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		3820	705	18	3820	532	14	28	10-150/50
67-72-1	Hexachloroethane	ND		1910	859	45	1910	735	38	16	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	2730		1910	3570	44	1910	3200	25	11	10-148/41
78-59-1	Isophorone	ND		1910	1290	68	1910	1080	57	18	11-142/33
91-57-6	2-Methylnaphthalene	236		1910	1740	79	1910	1490	66	15	10-141/35
88-74-4	2-Nitroaniline	ND		1910	1630	85	1910	1490	78	9	14-156/38
99-09-2	3-Nitroaniline	ND		1910	997	52	1910	984	52	1	10-144/45
100-01-6	4-Nitroaniline	ND		1910	1220	64	1910	1180	62	3	10-156/44
91-20-3	Naphthalene	968		1910	2470	79	1910	2130	61	15	10-136/36
98-95-3	Nitrobenzene	ND		1910	1090	57	1910	919	48	17	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		1910	1150	60	1910	949	50	19	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		1910	1520	80	1910	1370	72	10	10-156/37
85-01-8	Phenanthrene	3410		1910	5170	92	1910	4270	45	19	11-145/45
129-00-0	Pyrene	7990	c	1910	7670	82	1910	5870	-12*	b 27	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1910	1380	72	1910	1180	62	16	23-136/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19810-MS	2P86744.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
OP19810-MSD	2P86745.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86743.D	1	04/19/19	CB	04/17/19	OP19810	E2P3831
JC86406-1	2P86767.D	5	04/22/19	YC	04/17/19	OP19810	E2P3832

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

CAS No.	Surrogate Recoveries	MS	MSD	JC86406-1	JC86406-1	Limits
367-12-4	2-Fluorophenol	65%	55%	48%	58%	23-115%
4165-62-2	Phenol-d5	68%	61%	56%	75%	27-114%
118-79-6	2,4,6-Tribromophenol	74%	69%	65%	48%	19-152%
4165-60-0	Nitrobenzene-d5	65%	57%	59%	77%	26-134%
321-60-8	2-Fluorobiphenyl	81%	73%	79%	86%	39-124%
1718-51-0	Terphenyl-d14	68%	63%	60%	70%	36-134%

(a) Outside control limits due to matrix interference.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MS	M153650.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
OP19854-MSD	M153651.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
JC86406-10	M153649.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	JC86406-10 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		1960	1030	53	1910	1170	61	13	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		1960	1150	59	1910	1300	68	12	11-147/35
120-83-2	2,4-Dichlorophenol	ND		1960	1240	63	1910	1370	72	10	15-140/34
105-67-9	2,4-Dimethylphenol	ND		1960	1440	74	1910	1570	82	9	10-151/34
51-28-5	2,4-Dinitrophenol	ND		3910	1240	32	3820	1530	40	21	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		1960	850	43	1910	952	50	11	10-150/48
95-48-7	2-Methylphenol	ND		1960	1070	55	1910	1210	63	12	10-138/33
	3&4-Methylphenol	ND		1960	1090	56	1910	1250	65	14	10-143/33
88-75-5	2-Nitrophenol	ND		1960	1320	67	1910	1470	77	11	10-150/39
100-02-7	4-Nitrophenol	ND		1960	1170	60	1910	1250	65	7	10-163/38
87-86-5	Pentachlorophenol	ND		1960	1480	76	1910	1590	83	7	10-148/39
108-95-2	Phenol	ND		1960	968	49	1910	1070	56	10	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1960	1360	70	1910	1500	78	10	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		1960	1340	69	1910	1510	79	12	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		1960	1410	72	1910	1560	82	10	16-148/36
83-32-9	Acenaphthene	52.7		1960	1550	77	1910	1610	81	4	21-136/34
208-96-8	Acenaphthylene	46.6		1960	1500	74	1910	1530	78	2	10-143/36
98-86-2	Acetophenone	ND		1960	1090	56	1910	1190	62	9	24-127/31
120-12-7	Anthracene	205		1960	1580	70	1910	1630	75	3	10-147/39
1912-24-9	Atrazine	ND		1960	1710	87	1910	1910	100	11	10-161/38
56-55-3	Benzo(a)anthracene	549		1960	1770	62	1910	1690	60	5	10-151/41
50-32-8	Benzo(a)pyrene	565		1960	1960	71	1910	1920	71	2	10-149/40
205-99-2	Benzo(b)fluoranthene	664		1960	2000	68	1910	1970	68	2	10-147/42
191-24-2	Benzo(g,h,i)perylene	351		1960	1780	73	1910	1800	76	1	10-150/41
207-08-9	Benzo(k)fluoranthene	228		1960	1510	66	1910	1530	68	1	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		1960	1360	70	1910	1410	74	4	26-138/37
85-68-7	Butyl benzyl phthalate	ND		1960	1270	65	1910	1360	71	7	24-143/36
92-52-4	1,1'-Biphenyl	6.0	JB	1960	1360	69	1910	1480	77	8	18-138/32
100-52-7	Benzaldehyde	ND		1960	885	45	1910	996	52	12	10-149/37
91-58-7	2-Chloronaphthalene	ND		1960	1380	71	1910	1410	74	2	24-130/31
106-47-8	4-Chloroaniline	ND		1960	1100	56	1910	1050	55	5	10-111/52
86-74-8	Carbazole	45.4	JB	1960	1540	76	1910	1570	80	2	12-146/39
105-60-2	Caprolactam	ND		1960	1180	60	1910	1320	69	11	10-147/40
218-01-9	Chrysene	544		1960	1710	60	1910	1640	57	4	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		1960	1240	63	1910	1280	67	3	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		1960	1040	53	1910	1110	58	7	12-142/35

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MS	M153650.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
OP19854-MSD	M153651.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
JC86406-10	M153649.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Compound	JC86406-10 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		1960	1260	64	1910	1290	67	2	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		1960	1370	70	1910	1460	76	6	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		1960	1500	77	1910	1520	79	1	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		1960	1620	83	1910	1700	89	5	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		3910	2490	64	3820	2500	65	0	10-137/47
123-91-1	1,4-Dioxane	ND		1960	521	27	1910	551	29	6	10-110/40
53-70-3	Dibenzo(a,h)anthracene	78.6		1960	1430	69	1910	1520	75	6	10-152/38
132-64-9	Dibenzofuran	25.8	J	1960	1560	78	1910	1620	83	4	17-141/36
84-74-2	Di-n-butyl phthalate	ND		1960	1390	71	1910	1440	75	4	26-137/35
117-84-0	Di-n-octyl phthalate	ND		1960	1280	65	1910	1320	69	3	23-145/36
84-66-2	Diethyl phthalate	ND		1960	1400	72	1910	1470	77	5	25-133/35
131-11-3	Dimethyl phthalate	ND		1960	1370	70	1910	1410	74	3	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1960	1220	62	1910	1280	67	5	26-144/39
206-44-0	Fluoranthene	1190		1960	2500	67	1910	2370	62	5	10-151/44
86-73-7	Fluorene	58.0		1960	1540	76	1910	1560	79	1	19-133/36
118-74-1	Hexachlorobenzene	ND		1960	1370	70	1910	1440	75	5	18-142/37
87-68-3	Hexachlorobutadiene	ND		1960	1320	67	1910	1330	70	1	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		3910	2470	63	3820	2590	68	5	10-150/50
67-72-1	Hexachloroethane	ND		1960	1110	57	1910	1160	61	4	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	341		1960	1650	67	1910	1680	70	2	10-148/41
78-59-1	Isophorone	ND		1960	1270	65	1910	1280	67	1	11-142/33
91-57-6	2-Methylnaphthalene	10.9	J	1960	1440	73	1910	1500	78	4	10-141/35
88-74-4	2-Nitroaniline	ND		1960	1620	83	1910	1670	87	3	14-156/38
99-09-2	3-Nitroaniline	ND		1960	1390	71	1910	1420	74	2	10-144/45
100-01-6	4-Nitroaniline	ND		1960	1590	81	1910	1590	83	0	10-156/44
91-20-3	Naphthalene	19.7	J	1960	1440	73	1910	1450	75	1	10-136/36
98-95-3	Nitrobenzene	ND		1960	1220	62	1910	1270	66	4	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		1960	1220	62	1910	1260	66	3	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		1960	1430	73	1910	1470	77	3	10-156/37
85-01-8	Phenanthrene	827		1960	2420	81	1910	2360	80	3	11-145/45
129-00-0	Pyrene	1080		1960	2270	61	1910	2120	54	7	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1960	1440	74	1910	1510	79	5	23-136/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP19854-MS	M153650.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
OP19854-MSD	M153651.D	1	04/21/19	CB	04/19/19	OP19854	EM6566
JC86406-10	M153649.D	1	04/21/19	CB	04/19/19	OP19854	EM6566

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86406-10

CAS No.	Surrogate Recoveries	MS	MSD	JC86406-10	Limits
367-12-4	2-Fluorophenol	38%	43%	38%	23-115%
4165-62-2	Phenol-d5	37%	42%	37%	27-114%
118-79-6	2,4,6-Tribromophenol	63%	71%	65%	19-152%
4165-60-0	Nitrobenzene-d5	45%	51%	45%	26-134%
321-60-8	2-Fluorobiphenyl	51%	57%	51%	39-124%
1718-51-0	Terphenyl-d14	50%	56%	50%	36-134%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3783-DFTPP
Lab File ID: 2P85593.D
Instrument ID: GCMS2P
Injection Date: 03/08/19
Injection Time: 02:56

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	74894	38.0		Pass
68	Less than 2.0% of mass 69	2003	1.02	(1.71) [a]	Pass
69	Mass 69 relative abundance	117104	59.4		Pass
70	Less than 2.0% of mass 69	533	0.27	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	115552	58.6		Pass
197	Less than 1.0% of mass 198	606	0.31		Pass
198	Base peak, 100% relative abundance	197099	100.0		Pass
199	5.0 - 9.0% of mass 198	13778	6.99		Pass
275	10.0 - 30.0% of mass 198	50693	25.7		Pass
365	1.0 - 100.0% of mass 198	7602	3.86		Pass
441	Present, but less than mass 443	18867	9.57	(79.8) [b]	Pass
442	40.0 - 100.0% of mass 198	116992	59.4		Pass
443	17.0 - 23.0% of mass 442	23640	12.0	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3783-IC3783	2P85594.D	03/08/19	03:24	00:28	Initial cal 100
E2P3783-IC3783	2P85595.D	03/08/19	03:48	00:52	Initial cal 80
E2P3783-ICC3783	2P85596.D	03/08/19	04:11	01:15	Initial cal 50
E2P3783-IC3783	2P85597.D	03/08/19	04:34	01:38	Initial cal 25
E2P3783-IC3783	2P85598.D	03/08/19	04:58	02:02	Initial cal 10
E2P3783-IC3783	2P85599.D	03/08/19	05:21	02:25	Initial cal 5
E2P3783-IC3783	2P85600.D	03/08/19	05:45	02:49	Initial cal 2
E2P3783-IC3783	2P85601.D	03/08/19	06:08	03:12	Initial cal 1
E2P3783-ICV3783	2P85602.D	03/08/19	06:31	03:35	Initial cal verification 50
E2P3783-ICV3783	2P85603.D	03/08/19	06:54	03:58	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-DFTPP
Lab File ID: 2P86289.D
Instrument ID: GCMS2P
Injection Date: 04/05/19
Injection Time: 06:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	121770	32.2		Pass
68	Less than 2.0% of mass 69	662	0.18	(0.31) [a]	Pass
69	Mass 69 relative abundance	212325	56.1		Pass
70	Less than 2.0% of mass 69	1258	0.33	(0.59) [a]	Pass
127	40.0 - 60.0% of mass 198	216651	57.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	378176	100.0		Pass
199	5.0 - 9.0% of mass 198	26421	6.99		Pass
275	10.0 - 30.0% of mass 198	99683	26.4		Pass
365	1.0 - 100.0% of mass 198	14403	3.81		Pass
441	Present, but less than mass 443	50053	13.2	(84.1) [b]	Pass
442	40.0 - 100.0% of mass 198	304725	80.6		Pass
443	17.0 - 23.0% of mass 442	59507	15.7	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3816-IC3816	2P86290.D	04/05/19	06:54	00:44	Initial cal 100
E2P3816-IC3816	2P86291.D	04/05/19	07:17	01:07	Initial cal 80
E2P3816-ICC3816	2P86292.D	04/05/19	07:40	01:30	Initial cal 50
E2P3816-IC3816	2P86293.D	04/05/19	08:03	01:53	Initial cal 25
E2P3816-IC3816	2P86294.D	04/05/19	08:26	02:16	Initial cal 10
E2P3816-IC3816	2P86295.D	04/05/19	08:50	02:40	Initial cal 5
E2P3816-IC3816	2P86296.D	04/05/19	09:13	03:03	Initial cal 2
E2P3816-IC3816	2P86297.D	04/05/19	09:36	03:26	Initial cal 1
E2P3816-ICV3816	2P86298.D	04/05/19	09:59	03:49	Initial cal verification 50
E2P3816-ICV3816	2P86299.D	04/05/19	10:22	04:12	Initial cal verification 50
E2P3816-ICV3816	2P86301.D	04/05/19	11:09	04:59	Initial cal verification 50
E2P3816-ICV3816	2P86302.D	04/05/19	11:32	05:22	Initial cal verification 50
E2P3816-ICV3816	2P86303.D	04/05/19	11:55	05:45	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E2P3817-DFTPP	**Injection Date:**	04/05/19
Lab File ID:	2P86304.D	**Injection Time:**	15:23
Instrument ID:	GCMS2P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	117587	34.5		Pass
68	Less than 2.0% of mass 69	24	0.01	(0.01) [a]	Pass
69	Mass 69 relative abundance	191835	56.3		Pass
70	Less than 2.0% of mass 69	604	0.18	(0.31) [a]	Pass
127	40.0 - 60.0% of mass 198	196167	57.5		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	341035	100.0		Pass
199	5.0 - 9.0% of mass 198	21917	6.43		Pass
275	10.0 - 30.0% of mass 198	87024	25.5		Pass
365	1.0 - 100.0% of mass 198	12310	3.61		Pass
441	Present, but less than mass 443	41056	12.0	(82.6) [b]	Pass
442	40.0 - 100.0% of mass 198	259669	76.1		Pass
443	17.0 - 23.0% of mass 442	49717	14.6	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3817-ICV3816	2P86307.D	04/05/19	16:36	01:13	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3831-DFTPP
Lab File ID: 2P86727.D
Instrument ID: GCMS2P
Injection Date: 04/18/19
Injection Time: 22:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	130108	35.5		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	212085	57.8		Pass
70	Less than 2.0% of mass 69	573	0.16	(0.27) [a]	Pass
127	40.0 - 60.0% of mass 198	205405	56.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	366656	100.0		Pass
199	5.0 - 9.0% of mass 198	25165	6.86		Pass
275	10.0 - 30.0% of mass 198	92875	25.3		Pass
365	1.0 - 100.0% of mass 198	11305	3.08		Pass
441	Present, but less than mass 443	40717	11.1	(81.1) [b]	Pass
442	40.0 - 100.0% of mass 198	268771	73.3		Pass
443	17.0 - 23.0% of mass 442	50184	13.7	(18.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3831-CC3816	2P86728.D	04/18/19	22:23	00:11	Continuing cal 25
E2P3831-CC3783	2P86730.D	04/18/19	23:21	01:09	Continuing cal 25
OP19810-MB1	2P86731.D	04/18/19	23:43	01:31	Method Blank
OP19810-BS1	2P86732.D	04/19/19	00:05	01:53	Blank Spike
JC86406-6	2P86733.D	04/19/19	00:27	02:15	PCTP-17R(7-9)
JC86406-9	2P86734.D	04/19/19	00:48	02:36	PCTP-17R(24-25)
JC86406-13	2P86735.D	04/19/19	01:10	02:58	S-114(23-25)
ZZZZZZ	2P86736.D	04/19/19	01:32	03:20	(unrelated sample)
ZZZZZZ	2P86737.D	04/19/19	01:54	03:42	(unrelated sample)
ZZZZZZ	2P86738.D	04/19/19	02:16	04:04	(unrelated sample)
JC86406-2	2P86739.D	04/19/19	02:38	04:26	S-108(8-10)
JC86406-7	2P86740.D	04/19/19	03:00	04:48	PCTP-17R(9-11)
JC86406-8	2P86741.D	04/19/19	03:22	05:10	PCTP-17R(18-20)
JC86406-1	2P86743.D	04/19/19	04:05	05:53	S-108(2-4)
OP19810-MS	2P86744.D	04/19/19	04:27	06:15	Matrix Spike
OP19810-MSD	2P86745.D	04/19/19	04:49	06:37	Matrix Spike Duplicate
JC86406-3	2P86746.D	04/19/19	05:11	06:59	S-108(15-17)
JC86406-4	2P86747.D	04/19/19	05:33	07:21	SO-DUP-0415
JC86406-5	2P86748.D	04/19/19	05:54	07:42	PCTP-17R(5-6)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E2P3831-DFTPP	**Injection Date:**	04/18/19
Lab File ID:	2P86727.D	**Injection Time:**	22:12
Instrument ID:	GCMS2P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC86406-11	2P86749.D	04/19/19	06:16	08:04	S-114(8-10)
JC86406-14	2P86750.D	04/19/19	06:37	08:25	S-109(2-4)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E2P3832-DFTPP	**Injection Date:**	04/22/19
Lab File ID:	2P86755.D	**Injection Time:**	13:11
Instrument ID:	GCMS2P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	120650	36.1		Pass
68	Less than 2.0% of mass 69	1897	0.57	(1.02) [a]	Pass
69	Mass 69 relative abundance	186798	55.9		Pass
70	Less than 2.0% of mass 69	1154	0.35	(0.62) [a]	Pass
127	40.0 - 60.0% of mass 198	187121	56.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	334276	100.0		Pass
199	5.0 - 9.0% of mass 198	23973	7.17		Pass
275	10.0 - 30.0% of mass 198	87731	26.2		Pass
365	1.0 - 100.0% of mass 198	12102	3.62		Pass
441	Present, but less than mass 443	37488	11.2	(78.4) [b]	Pass
442	40.0 - 100.0% of mass 198	249707	74.7		Pass
443	17.0 - 23.0% of mass 442	47829	14.3	(19.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3832-CC3816	2P86756.D	04/22/19	13:22	00:11	Continuing cal 50
E2P3832-CC3783	2P86757.D	04/22/19	13:44	00:33	Continuing cal 50
JC86406-1	2P86767.D	04/22/19	18:07	04:56	S-108(2-4)
JC86406-4	2P86768.D	04/22/19	18:29	05:18	SO-DUP-0415
JC86406-15	2P86773.D	04/22/19	20:17	07:06	S-109(8-10)
JC86406-12	2P86776.D	04/22/19	21:22	08:11	S-114(14-15)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3839-DFTPP
Lab File ID: 2P86896.D
Instrument ID: GCMS2P
Injection Date: 04/27/19
Injection Time: 00:14

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	106719	33.5		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	171986	54.1		Pass
70	Less than 2.0% of mass 69	863	0.27	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	171567	53.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	318178	100.0		Pass
199	5.0 - 9.0% of mass 198	22162	6.97		Pass
275	10.0 - 30.0% of mass 198	85049	26.7		Pass
365	1.0 - 100.0% of mass 198	11636	3.66		Pass
441	Present, but less than mass 443	40496	12.7	(79.7) [b]	Pass
442	40.0 - 100.0% of mass 198	275243	86.5		Pass
443	17.0 - 23.0% of mass 442	50784	16.0	(18.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3839-CC3816	2P86897.D	04/27/19	00:29	00:15	Continuing cal 25
E2P3839-CC3783	2P86898.D	04/27/19	00:50	00:36	Continuing cal 25
OP19948-MB1	2P86900.D	04/27/19	01:33	01:19	Method Blank
OP19948-BS1	2P86901.D	04/27/19	01:55	01:41	Blank Spike
ZZZZZZ	2P86902.D	04/27/19	02:16	02:02	(unrelated sample)
ZZZZZZ	2P86903.D	04/27/19	02:37	02:23	(unrelated sample)
ZZZZZZ	2P86904.D	04/27/19	02:59	02:45	(unrelated sample)
ZZZZZZ	2P86905.D	04/27/19	03:20	03:06	(unrelated sample)
ZZZZZZ	2P86906.D	04/27/19	03:41	03:27	(unrelated sample)
JC86696-1	2P86907.D	04/27/19	04:02	03:48	(used for QC only; not part of job JC86406)
OP19948-MS	2P86908.D	04/27/19	04:23	04:09	Matrix Spike
OP19948-MSD	2P86909.D	04/27/19	04:45	04:31	Matrix Spike Duplicate
ZZZZZZ	2P86910.D	04/27/19	05:06	04:52	(unrelated sample)
ZZZZZZ	2P86911.D	04/27/19	05:27	05:13	(unrelated sample)
ZZZZZZ	2P86912.D	04/27/19	05:48	05:34	(unrelated sample)
JC86406-12	2P86913.D	04/27/19	06:09	05:55	S-114(14-15)
ZZZZZZ	2P86914.D	04/27/19	06:30	06:16	(unrelated sample)
ZZZZZZ	2P86915.D	04/27/19	06:52	06:38	(unrelated sample)
JC86716-4	2P86916.D	04/27/19	07:13	06:59	(used for QC only; not part of job JC86406)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E2P3839-DFTPP	**Injection Date:**	04/27/19
Lab File ID:	2P86896.D	**Injection Time:**	00:14
Instrument ID:	GCMS2P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2P86917.D	04/27/19	07:34	07:20	(unrelated sample)
ZZZZZZ	2P86918.D	04/27/19	07:55	07:41	(unrelated sample)
JC86406-12	2P86919.D	04/27/19	08:16	08:02	S-114(14-15)
ZZZZZZ	2P86920.D	04/27/19	08:37	08:23	(unrelated sample)
ZZZZZZ	2P86921.D	04/27/19	08:58	08:44	(unrelated sample)
JC86716-4	2P86922.D	04/27/19	09:19	09:05	(used for QC only; not part of job JC86406)
OP19948-MS2	2P86923.D	04/27/19	09:40	09:26	Matrix Spike
OP19948-MSD2	2P86924.D	04/27/19	10:01	09:47	Matrix Spike Duplicate
ZZZZZZ	2P86925.D	04/27/19	10:22	10:08	(unrelated sample)
ZZZZZZ	2P86926.D	04/27/19	10:43	10:29	(unrelated sample)
ZZZZZZ	2P86927.D	04/27/19	11:05	10:51	(unrelated sample)
ZZZZZZ	2P86928.D	04/27/19	11:26	11:12	(unrelated sample)
ZZZZZZ	2P86929.D	04/27/19	11:47	11:33	(unrelated sample)
ZZZZZZ	2P86930.D	04/27/19	12:08	11:54	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-DFTPP
Lab File ID: M153400.D
Instrument ID: GCMSM
Injection Date: 04/12/19
Injection Time: 16:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	83353	36.5		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	109417	47.9		Pass
70	Less than 2.0% of mass 69	587	0.26	(0.54) [a]	Pass
127	40.0 - 60.0% of mass 198	110333	48.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	228245	100.0		Pass
199	5.0 - 9.0% of mass 198	15342	6.72		Pass
275	10.0 - 30.0% of mass 198	60088	26.3		Pass
365	1.0 - 100.0% of mass 198	7944	3.48		Pass
441	Present, but less than mass 443	22441	9.83	(76.7) [b]	Pass
442	40.0 - 100.0% of mass 198	151640	66.4		Pass
443	17.0 - 23.0% of mass 442	29258	12.8	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6556-IC6556	M153401A.D	04/12/19	17:56	00:58	Initial cal 100
EM6556-IC6556	M153402.D	04/12/19	18:24	01:26	Initial cal 80
EM6556-ICC6556	M153403.D	04/12/19	18:53	01:55	Initial cal 50
EM6556-IC6556	M153404.D	04/12/19	19:21	02:23	Initial cal 25
EM6556-IC6556	M153405.D	04/12/19	19:49	02:51	Initial cal 10
EM6556-IC6556	M153406.D	04/12/19	20:18	03:20	Initial cal 5
EM6556-IC6556	M153407.D	04/12/19	20:46	03:48	Initial cal 2
EM6556-IC6556	M153408.D	04/12/19	21:15	04:17	Initial cal 1
EM6556-ICV6556	M153409.D	04/12/19	21:43	04:45	Initial cal verification 50
EM6556-ICV6556	M153410.D	04/12/19	22:12	05:14	Initial cal verification 50
EM6556-ICV6556	M153411.D	04/12/19	22:40	05:42	Initial cal verification 50
EM6556-ICV6556	M153413.D	04/12/19	23:37	06:39	Initial cal verification 50
EM6556-ICV6556	M153414.D	04/13/19	00:06	07:08	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-DFTPP
Lab File ID: M153419.D
Instrument ID: GCMSM
Injection Date: 04/13/19
Injection Time: 01:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	79824	32.2		Pass
68	Less than 2.0% of mass 69	1315	0.53	(1.36) [a]	Pass
69	Mass 69 relative abundance	96837	39.1		Pass
70	Less than 2.0% of mass 69	513	0.21	(0.53) [a]	Pass
127	40.0 - 60.0% of mass 198	111752	45.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	247893	100.0		Pass
199	5.0 - 9.0% of mass 198	17598	7.10		Pass
275	10.0 - 30.0% of mass 198	63149	25.5		Pass
365	1.0 - 100.0% of mass 198	8195	3.31		Pass
441	Present, but less than mass 443	21483	8.67	(80.5) [b]	Pass
442	40.0 - 100.0% of mass 198	138565	55.9		Pass
443	17.0 - 23.0% of mass 442	26703	10.8	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6557-IC6557	M153420.D	04/13/19	01:52	00:33	Initial cal 100
EM6557-IC6557	M153421.D	04/13/19	02:20	01:01	Initial cal 80
EM6557-ICC6557	M153422.D	04/13/19	02:49	01:30	Initial cal 50
EM6557-IC6557	M153423.D	04/13/19	03:17	01:58	Initial cal 25
EM6557-IC6557	M153424.D	04/13/19	03:46	02:27	Initial cal 10
EM6557-IC6557	M153425.D	04/13/19	04:14	02:55	Initial cal 5
EM6557-IC6557	M153426.D	04/13/19	04:42	03:23	Initial cal 2
EM6557-IC6557	M153427.D	04/13/19	05:11	03:52	Initial cal 1

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6558-DFTPP
Lab File ID: M153431.D
Instrument ID: GCMSM
Injection Date: 04/14/19
Injection Time: 14:31

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	99360	32.8		Pass
68	Less than 2.0% of mass 69	1999	0.66	(1.64) [a]	Pass
69	Mass 69 relative abundance	121985	40.2		Pass
70	Less than 2.0% of mass 69	727	0.24	(0.60) [a]	Pass
127	40.0 - 60.0% of mass 198	139984	46.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	303253	100.0		Pass
199	5.0 - 9.0% of mass 198	20557	6.78		Pass
275	10.0 - 30.0% of mass 198	74381	24.5		Pass
365	1.0 - 100.0% of mass 198	9225	3.04		Pass
441	Present, but less than mass 443	24993	8.24	(75.9) [b]	Pass
442	40.0 - 100.0% of mass 198	162856	53.7		Pass
443	17.0 - 23.0% of mass 442	32909	10.9	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6558-IC6558	M153432.D	04/14/19	14:42	00:11	Initial cal 100
EM6558-IC6558	M153433.D	04/14/19	15:11	00:40	Initial cal 80
EM6558-ICC6558	M153434.D	04/14/19	15:39	01:08	Initial cal 50
EM6558-IC6558	M153435.D	04/14/19	16:08	01:37	Initial cal 25
EM6558-IC6558	M153436.D	04/14/19	16:37	02:06	Initial cal 10
EM6558-IC6558	M153437.D	04/14/19	17:05	02:34	Initial cal 5
EM6558-IC6558	M153438.D	04/14/19	17:34	03:03	Initial cal 2
EM6558-IC6558	M153439.D	04/14/19	18:02	03:31	Initial cal 1
EM6558-ICV6558	M153440.D	04/14/19	18:31	04:00	Initial cal verification 50
EM6557-ICV6557	M153441.D	04/14/19	19:00	04:29	Initial cal verification 50
EM6557-ICV6557	M153442.D	04/14/19	19:28	04:57	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6559-DFTPP
Lab File ID: M153443.D
Instrument ID: GCMSM
Injection Date: 04/15/19
Injection Time: 13:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	75686	33.3		Pass
68	Less than 2.0% of mass 69	1135	0.50	(1.18) [a]	Pass
69	Mass 69 relative abundance	96290	42.4		Pass
70	Less than 2.0% of mass 69	481	0.21	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	109790	48.4		Pass
197	Less than 1.0% of mass 198	521	0.23		Pass
198	Base peak, 100% relative abundance	227010	100.0		Pass
199	5.0 - 9.0% of mass 198	15330	6.75		Pass
275	10.0 - 30.0% of mass 198	54288	23.9		Pass
365	1.0 - 100.0% of mass 198	6995	3.08		Pass
441	Present, but less than mass 443	17393	7.66	(73.0) [b]	Pass
442	40.0 - 100.0% of mass 198	120749	53.2		Pass
443	17.0 - 23.0% of mass 442	23826	10.5	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6559-ICV6556	M153444.D	04/15/19	14:05	00:11	Initial cal verification 50
EM6559-CC6556	M153445.D	04/15/19	14:34	00:40	Continuing cal 50
EM6559-CC6557	M153446.D	04/15/19	15:02	01:08	Continuing cal 50
EM6559-CC6558	M153447.D	04/15/19	15:30	01:36	Continuing cal 50
OP19732-MB1	M153453.D	04/15/19	18:20	04:26	Method Blank
OP19732-BS1	M153454.D	04/15/19	18:49	04:55	Blank Spike
OP19732-BSD	M153455.D	04/15/19	19:17	05:23	Blank Spike Duplicate
ZZZZZZ	M153456.D	04/15/19	19:45	05:51	(unrelated sample)
ZZZZZZ	M153457.D	04/15/19	20:13	06:19	(unrelated sample)
ZZZZZZ	M153458.D	04/15/19	20:41	06:47	(unrelated sample)
ZZZZZZ	M153459.D	04/15/19	21:09	07:15	(unrelated sample)
JC86204-7	M153460.D	04/15/19	21:38	07:44	(used for QC only; not part of job JC86406)
OP19732-MS	M153461.D	04/15/19	22:06	08:12	Matrix Spike
OP19732-MSD	M153462.D	04/15/19	22:34	08:40	Matrix Spike Duplicate
ZZZZZZ	M153463.D	04/15/19	23:02	09:08	(unrelated sample)
ZZZZZZ	M153464.D	04/15/19	23:30	09:36	(unrelated sample)
ZZZZZZ	M153465.D	04/15/19	23:58	10:04	(unrelated sample)
ZZZZZZ	M153466.D	04/16/19	00:26	10:32	(unrelated sample)
ZZZZZZ	M153467.D	04/16/19	00:54	11:00	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EM6559-DFTPP	**Injection Date:**	04/15/19
Lab File ID:	M153443.D	**Injection Time:**	13:54
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M153468.D	04/16/19	01:22	11:28	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6566-DFTPP
Lab File ID: M153629.D
Instrument ID: GCMSM
Injection Date: 04/20/19
Injection Time: 22:42

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	51008	38.7		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	62697	47.6		Pass
70	Less than 2.0% of mass 69	495	0.38	(0.79) [a]	Pass
127	40.0 - 60.0% of mass 198	64272	48.8		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	131685	100.0		Pass
199	5.0 - 9.0% of mass 198	9107	6.92		Pass
275	10.0 - 30.0% of mass 198	33136	25.2		Pass
365	1.0 - 100.0% of mass 198	3862	2.93		Pass
441	Present, but less than mass 443	12485	9.48	(78.6) [b]	Pass
442	40.0 - 100.0% of mass 198	82304	62.5		Pass
443	17.0 - 23.0% of mass 442	15894	12.1	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6566-CC6556	M153630.D	04/20/19	22:56	00:14	Continuing cal 50
EM6566-CC6557	M153631.D	04/20/19	23:24	00:42	Continuing cal 50
OP19854-MB1	M153633.D	04/21/19	00:21	01:39	Method Blank
OP19854-BS1	M153634.D	04/21/19	00:49	02:07	Blank Spike
ZZZZZZ	M153635.D	04/21/19	01:40	02:58	(unrelated sample)
ZZZZZZ	M153636.D	04/21/19	02:09	03:27	(unrelated sample)
ZZZZZZ	M153637.D	04/21/19	02:37	03:55	(unrelated sample)
ZZZZZZ	M153638.D	04/21/19	03:05	04:23	(unrelated sample)
ZZZZZZ	M153639.D	04/21/19	03:34	04:52	(unrelated sample)
ZZZZZZ	M153640.D	04/21/19	04:02	05:20	(unrelated sample)
ZZZZZZ	M153641.D	04/21/19	04:30	05:48	(unrelated sample)
ZZZZZZ	M153642.D	04/21/19	04:59	06:17	(unrelated sample)
ZZZZZZ	M153643.D	04/21/19	05:27	06:45	(unrelated sample)
ZZZZZZ	M153644.D	04/21/19	05:55	07:13	(unrelated sample)
ZZZZZZ	M153645.D	04/21/19	06:23	07:41	(unrelated sample)
ZZZZZZ	M153646.D	04/21/19	06:51	08:09	(unrelated sample)
ZZZZZZ	M153647.D	04/21/19	07:20	08:38	(unrelated sample)
ZZZZZZ	M153648.D	04/21/19	07:48	09:06	(unrelated sample)
JC86406-10	M153649.D	04/21/19	08:16	09:34	S-114(2-4)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EM6566-DFTPP	**Injection Date:**	04/20/19
Lab File ID:	M153629.D	**Injection Time:**	22:42
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP19854-MS	M153650.D	04/21/19	08:44	10:02	Matrix Spike
OP19854-MSD	M153651.D	04/21/19	09:12	10:30	Matrix Spike Duplicate
ZZZZZZ	M153652.D	04/21/19	09:41	10:59	(unrelated sample)
ZZZZZZ	M153653.D	04/21/19	10:09	11:27	(unrelated sample)
ZZZZZZ	M153654.D	04/21/19	10:37	11:55	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-DFTPP
Lab File ID: Z137238.D
Instrument ID: GCMSZ
Injection Date: 04/25/19
Injection Time: 03:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	24857	39.6		Pass
68	Less than 2.0% of mass 69	491	0.78	(1.67) [a]	Pass
69	Mass 69 relative abundance	29458	46.9		Pass
70	Less than 2.0% of mass 69	245	0.39	(0.83) [a]	Pass
127	40.0 - 60.0% of mass 198	34800	55.5		Pass
197	Less than 1.0% of mass 198	167	0.27		Pass
198	Base peak, 100% relative abundance	62744	100.0		Pass
199	5.0 - 9.0% of mass 198	4171	6.65		Pass
275	10.0 - 30.0% of mass 198	14642	23.3		Pass
365	1.0 - 100.0% of mass 198	1931	3.08		Pass
441	Present, but less than mass 443	4480	7.14	(83.8) [b]	Pass
442	40.0 - 100.0% of mass 198	29558	47.1		Pass
443	17.0 - 23.0% of mass 442	5348	8.52	(18.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6761-IC6761	Z137239A.D	04/25/19	05:54	01:55	Initial cal 100
EZ6761-IC6761	Z137240A.D	04/25/19	06:22	02:23	Initial cal 80
EZ6761-ICC6761	Z137241.D	04/25/19	06:50	02:51	Initial cal 50
EZ6761-IC6761	Z137242.D	04/25/19	07:17	03:18	Initial cal 25
EZ6761-IC6761	Z137243.D	04/25/19	07:45	03:46	Initial cal 10
EZ6761-IC6761	Z137244.D	04/25/19	08:13	04:14	Initial cal 5
EZ6761-IC6761	Z137245.D	04/25/19	08:41	04:42	Initial cal 2
EZ6761-IC6761	Z137246.D	04/25/19	09:09	05:10	Initial cal 1
EZ6761-ICV6761	Z137247.D	04/25/19	09:37	05:38	Initial cal verification 50
EZ6761-ICV6761	Z137248.D	04/25/19	10:05	06:06	Initial cal verification 50
EZ6761-ICV6761	Z137249.D	04/25/19	10:33	06:34	Initial cal verification 50
EZ6761-ICV6761	Z137250.D	04/25/19	11:01	07:02	Initial cal verification 50
EZ6761-ICV6761	Z137251.D	04/25/19	11:29	07:30	Initial cal verification 50
EZ6761-ICV6761	Z137252.D	04/25/19	11:57	07:58	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6762-DFTPP
Lab File ID: Z137253.D
Instrument ID: GCMSZ
Injection Date: 04/25/19
Injection Time: 14:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	18666	41.0		Pass
68	Less than 2.0% of mass 69	136	0.30	(0.63) [a]	Pass
69	Mass 69 relative abundance	21492	47.2		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	24736	54.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	45561	100.0		Pass
199	5.0 - 9.0% of mass 198	3087	6.78		Pass
275	10.0 - 30.0% of mass 198	11269	24.7		Pass
365	1.0 - 100.0% of mass 198	1351	2.97		Pass
441	Present, but less than mass 443	3666	8.05	(81.2) [b]	Pass
442	40.0 - 100.0% of mass 198	24291	53.3		Pass
443	17.0 - 23.0% of mass 442	4513	9.91	(18.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6762-CC6761	Z137254.D	04/25/19	15:00	00:15	Continuing cal 50
OP19957-MB1	Z137255.D	04/25/19	15:28	00:43	Method Blank
OP19957-LB1	Z137256.D	04/25/19	15:57	01:12	Leachate Blank
OP19957-BS1	Z137257.D	04/25/19	16:25	01:40	Blank Spike
OP19810-MB1	Z137258.D	04/25/19	16:53	02:08	Method Blank
JC86217-5R	Z137259.D	04/25/19	17:21	02:36	(used for QC only; not part of job JC86406)
ZZZZZZ	Z137260.D	04/25/19	17:50	03:05	(unrelated sample)
ZZZZZZ	Z137261.D	04/25/19	18:18	03:33	(unrelated sample)
OP19957-LS1	Z137262.D	04/25/19	18:46	04:01	Leachate Spike
OP19957-MS	Z137262.D	04/25/19	18:46	04:01	Matrix Spike
OP19957-MSD	Z137263.D	04/25/19	19:14	04:29	Matrix Spike Duplicate
ZZZZZZ	Z137264.D	04/25/19	19:42	04:57	(unrelated sample)
ZZZZZZ	Z137265.D	04/25/19	20:10	05:25	(unrelated sample)
ZZZZZZ	Z137266.D	04/25/19	20:39	05:54	(unrelated sample)
ZZZZZZ	Z137267.D	04/25/19	21:07	06:22	(unrelated sample)
ZZZZZZ	Z137268.D	04/25/19	21:35	06:50	(unrelated sample)
JC86406-3	Z137269.D	04/25/19	22:03	07:18	S-108(15-17)
JC86406-5	Z137270.D	04/25/19	22:31	07:46	PCTP-17R(5-6)
JC86406-14	Z137272.D	04/25/19	23:27	08:42	S-109(2-4)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6763-DFTPP
Lab File ID: Z137274.D
Instrument ID: GCMSZ
Injection Date: 04/26/19
Injection Time: 02:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	20272	36.8		Pass
68	Less than 2.0% of mass 69	220	0.40	(0.92) [a]	Pass
69	Mass 69 relative abundance	23951	43.4		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	28712	52.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	55133	100.0		Pass
199	5.0 - 9.0% of mass 198	3762	6.82		Pass
275	10.0 - 30.0% of mass 198	12261	22.2		Pass
365	1.0 - 100.0% of mass 198	1343	2.44		Pass
441	Present, but less than mass 443	4377	7.94	(82.0) [b]	Pass
442	40.0 - 100.0% of mass 198	28387	51.5		Pass
443	17.0 - 23.0% of mass 442	5338	9.68	(18.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6763-IC6763	Z137275.D	04/26/19	03:34	00:48	Initial cal 100
EZ6763-IC6763	Z137276.D	04/26/19	04:02	01:16	Initial cal 80
EZ6763-ICC6763	Z137277.D	04/26/19	04:30	01:44	Initial cal 50
EZ6763-IC6763	Z137278.D	04/26/19	04:58	02:12	Initial cal 25
EZ6763-IC6763	Z137279.D	04/26/19	05:26	02:40	Initial cal 10
EZ6763-IC6763	Z137280.D	04/26/19	05:54	03:08	Initial cal 5
EZ6763-IC6763	Z137281.D	04/26/19	06:22	03:36	Initial cal 2
EZ6763-IC6763	Z137282.D	04/26/19	06:51	04:05	Initial cal 1
EZ6763-ICV6763	Z137283.D	04/26/19	07:19	04:33	Initial cal verification 50
EZ6763-ICV6763	Z137284.D	04/26/19	07:47	05:01	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6764-DFTPP
Lab File ID: Z137285.D
Instrument ID: GCMSZ
Injection Date: 04/26/19
Injection Time: 09:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	19491	41.0		Pass
68	Less than 2.0% of mass 69	106	0.22	(0.48) [a]	Pass
69	Mass 69 relative abundance	22044	46.4		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	26061	54.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	47500	100.0		Pass
199	5.0 - 9.0% of mass 198	3350	7.05		Pass
275	10.0 - 30.0% of mass 198	10742	22.6		Pass
365	1.0 - 100.0% of mass 198	1169	2.46		Pass
441	Present, but less than mass 443	3474	7.31	(73.0) [b]	Pass
442	40.0 - 100.0% of mass 198	24808	52.2		Pass
443	17.0 - 23.0% of mass 442	4756	10.0	(19.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ6764-CC6761	Z137286.D	04/26/19	09:25	00:15	Continuing cal 25
EZ6764-CC6763	Z137287.D	04/26/19	09:53	00:43	Continuing cal 25
OP19684A-MB1	Z137288.D	04/26/19	10:47	01:37	Method Blank
OP19684A-BS1	Z137289.D	04/26/19	11:15	02:05	Blank Spike
OP19684A-BSD	Z137290.D	04/26/19	11:43	02:33	Blank Spike Duplicate
OP19712A-MB1	Z137291.D	04/26/19	12:11	03:01	Method Blank
OP19712A-BS1	Z137292.D	04/26/19	12:39	03:29	Blank Spike
OP19712A-BSD	Z137293.D	04/26/19	13:07	03:57	Blank Spike Duplicate
OP19875A-MB1	Z137294.D	04/26/19	13:36	04:26	Method Blank
OP19875A-BS1	Z137295.D	04/26/19	14:04	04:54	Blank Spike
OP19875A-BSD	Z137296.D	04/26/19	14:32	05:22	Blank Spike Duplicate
OP19711A-MB1	Z137297.D	04/26/19	15:00	05:50	Method Blank
OP19711A-BS1	Z137298.D	04/26/19	15:28	06:18	Blank Spike
OP19711A-BSD	Z137299.D	04/26/19	15:57	06:47	Blank Spike Duplicate
ZZZZZZ	Z137300.D	04/26/19	16:25	07:15	(unrelated sample)
JC86116-4R	Z137301.D	04/26/19	16:53	07:43	(used for QC only; not part of job JC86406)
JC86632-1R	Z137302.D	04/26/19	17:21	08:11	(used for QC only; not part of job JC86406)
OP19875A-DUP	Z137303.D	04/26/19	17:50	08:40	Duplicate
ZZZZZZ	Z137304.D	04/26/19	18:18	09:08	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EZ6764-DFTPP	**Injection Date:**	04/26/19
Lab File ID:	Z137285.D	**Injection Time:**	09:10
Instrument ID:	GCMSZ		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	Z137305.D	04/26/19	18:46	09:36	(unrelated sample)
OP19712A-MS	Z137306.D	04/26/19	19:14	10:04	Matrix Spike
OP19712A-MSD	Z137307.D	04/26/19	19:42	10:32	Matrix Spike Duplicate
JC86406-14	Z137308.D	04/26/19	20:10	11:00	S-109(2-4)
JC86406-11	Z137309.D	04/26/19	20:39	11:29	S-114(8-10)
JC86406-5	Z137310.D	04/26/19	21:07	11:57	PCTP-17R(5-6)

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E2P3831-CC3816	**Injection Date:**	04/18/19
Lab File ID:	2P86728.D	**Injection Time:**	22:23
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	486940	4.67	1597346	5.70	861284	7.14	1489012	8.40	1487218	11.62	1412185	13.60
Upper Limit [a]	973880	5.17	3194692	6.20	1722568	7.64	2978024	8.90	2974436	12.12	2824370	14.10
Lower Limit [b]	243470	4.17	798673	5.20	430642	6.64	744506	7.90	743609	11.12	706093	13.10

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP19810-MB1	820600	4.67	2721374	5.70	1333863	7.14	2441864	8.40	2306309	11.61	1960282	13.60
OP19810-BS1	528173	4.67	1683257	5.70	881729	7.14	1683487	8.40	1760194	11.62	1454694	13.60
JC86406-6	813148	4.67	2707531	5.70	1305203	7.14	2001671	8.40	1968401	11.61	1726155	13.60
JC86406-9	769847	4.67	2553634	5.70	1223068	7.14	2056795	8.40	1897062	11.61	1649710	13.60
JC86406-13	657637	4.67	2183072	5.70	1059976	7.14	1742249	8.40	1431312	11.61	1266707	13.60
ZZZZZZ	831355	4.67	2778729	5.70	1375940	7.14	2423625	8.40	2115373	11.61	1791775	13.60
ZZZZZZ	807588	4.67	2652660	5.70	1284793	7.14	2272017	8.40	1940240	11.61	1715819	13.60
ZZZZZZ	853577	4.67	2830245	5.70	1366627	7.14	2081353	8.40	1976640	11.61	1862898	13.60
JC86406-2	712267	4.67	2348435	5.70	1058891	7.14	1585031	8.40	1389191	11.62	1477220	13.61
JC86406-7	788604	4.67	2406624	5.70	1054952	7.14	1554342	8.40	1323114	11.63	1434757	13.62
JC86406-8	673878	4.67	1843360	5.70	787209	7.14	1313195	8.41	1324816	11.64	1517112	13.63
JC86406-1	869974	4.67	2729670	5.70	1090604	7.14	1806237	8.40	1531271	11.66	1505761	13.67
OP19810-MS	621245	4.68	1866246	5.71	893058	7.14	1528955	8.41	1464651	11.68	1386652	13.68
OP19810-MSD	632811	4.68	1911925	5.71	896988	7.14	1540683	8.41	1526948	11.67	1473938	13.67
JC86406-3	595788	4.68	852111	5.72	808405	7.16	989682	8.45	1563283	11.72	1584667	13.69
JC86406-4	784993	4.68	2438892	5.70	1019075	7.14	1671041	8.40	1442964	11.67	1399710	13.67
JC86406-5	669285	4.68	1069602	5.72	865431	7.15	821516	8.45	1064816	11.84	765062	13.78
JC86406-11	788904	4.68	2122680	5.71	843852	7.15	1409553	8.44	1455027	11.75	1293569	13.73
JC86406-14	765641	4.68	2329961	5.71	898820	7.15	1398714	8.44	1191505	11.82	861439	13.79

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E2P3832-CC3816	**Injection Date:**	04/22/19
Lab File ID:	2P86756.D	**Injection Time:**	13:22
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	403777	4.66	1477084	5.70	850510	7.13	1517598	8.39	1474798	11.61	1556723	13.59
Upper Limit [a]	807554	5.16	2954168	6.20	1701020	7.63	3035196	8.89	2949596	12.11	3113446	14.09
Lower Limit [b]	201889	4.16	738542	5.20	425255	6.63	758799	7.89	737399	11.11	778362	13.09
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
JC86406-1	787055	4.66	2507009	5.70	1139888	7.13	1967076	8.39	1476792	11.61	1543946	13.60
JC86406-4	849230[c]	4.66	2701584	5.70	1233848	7.13	2054798	8.39	1511940	11.61	1543890	13.60
JC86406-15	739570	4.66	2457671	5.69	1086336	7.12	1484121	8.39	1464456	11.62	1534112	13.61
JC86406-12 [d]	541856	4.66	636231*	5.71	806422	7.14	807535	8.43	1279334	11.78	971832	13.75

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits. Reported target compounds not associate with this internal standard.
(d) Dilution required due to viscosity of the extract matrix.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E2P3839-CC3816	**Injection Date:**	04/27/19
Lab File ID:	2P86897.D	**Injection Time:**	00:29
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	507419	4.56	1626191	5.60	881776	7.03	1583506	8.28	1555534	11.46	1501774	13.43
Upper Limit [a]	1014838	5.06	3252382	6.10	1763552	7.53	3167012	8.78	3111068	11.96	3003548	13.93
Lower Limit [b]	253710	4.06	813096	5.10	440888	6.53	791753	7.78	777767	10.96	750887	12.93

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP19948-MB1	756897	4.56	2591009	5.59	1265276	7.03	2372217	8.27	2190006	11.44	1973307	13.43
OP19948-BS1	587913	4.57	1815058	5.60	956145	7.03	1832191	8.28	2010463	11.46	1734105	13.43
ZZZZZZ	856007	4.56	2832631	5.59	1408027	7.03	2592599	8.27	2415440	11.44	2151448	13.43
ZZZZZZ	877213	4.56	2958379	5.59	1485830	7.03	2724030	8.27	2481238	11.44	2195487	13.43
ZZZZZZ	819100	4.56	2824857	5.59	1405691	7.03	2582456	8.27	2327873	11.44	2030300	13.43
ZZZZZZ	827059	4.56	2793531	5.59	1397133	7.03	2589498	8.27	2122001	11.44	1814115	13.43
ZZZZZZ	757870	4.56	2579582	5.59	1263329	7.03	2192886	8.27	1747511	11.44	1579708	13.43
JC86696-1	888683	4.56	2914792	5.59	1443128	7.03	2543701	8.27	2110949	11.44	1707210	13.43
OP19948-MS	620111	4.57	1890159	5.60	988793	7.03	1848808	8.28	1709902	11.46	1477928	13.43
OP19948-MSD	661287	4.56	2035146	5.60	1067159	7.03	1938588	8.28	1827715	11.45	1512475	13.43
ZZZZZZ	894870	4.56	2771240	5.59	1285421	7.03	2020863	8.28	1620095	11.45	1508032	13.43
ZZZZZZ	827905	4.56	2456469	5.59	1016554	7.03	1672751	8.28	1423376	11.46	1376531	13.43
ZZZZZZ	880835	4.56	2869544	5.59	1430575	7.03	2523751	8.27	1874434	11.44	1521573	13.43
JC86406-12	875972	4.56	2741203	5.59	1247262	7.03	2223679	8.28	1815181	11.45	1583431	13.43
ZZZZZZ	811831	4.56	2483476	5.60	1002026	7.03	1725079	8.28	1513776	11.46	1415035	13.43
ZZZZZZ	784155	4.56	2639474	5.59	1106919	7.03	1834479	8.28	1557565	11.45	1466439	13.43
JC86716-4	871696	4.56	2694089	5.59	1310427	7.03	2094030	8.27	1487166	11.45	1388348	13.43
ZZZZZZ	844981	4.56	2684691	5.60	1068894	7.03	1728592	8.28	1449754	11.46	1381814	13.43
ZZZZZZ	770970	4.56	2468219	5.59	1223981	7.03	1993371	8.27	1427695	11.45	1321234	13.43
JC86406-12	856367	4.56	2400864	5.61	934325	7.03	1716979	8.29	1452100	11.48	1358990	13.45
ZZZZZZ	832624	4.56	2742040	5.59	1213261	7.03	1789983	8.28	1327447	11.46	1384271	13.45
ZZZZZZ	766809	4.56	2435968	5.60	986421	7.03	1619669	8.30	1342276	11.49	1266837	13.47
JC86716-4	821025	4.56	2564320	5.59	1163016	7.03	1708587	8.28	1244755	11.48	1216309	13.47
OP19948-MS2	582691	4.57	1779489	5.60	924333	7.03	1588627	8.28	1402628	11.49	1306563	13.48
OP19948-MSD2	563044	4.57	1722251	5.60	881367	7.03	1512932	8.29	1303821	11.49	1215627	13.48
ZZZZZZ	766001	4.57	2493817	5.60	1127933	7.03	1828309	8.28	1391453	11.48	1319316	13.48
ZZZZZZ	816733	4.57	1105376	5.62	1048355	7.05	903393	8.33	1242367	11.69	1290260	13.64
ZZZZZZ	662367	4.57	1260831	5.62	935490	7.04	1224655	8.33	1460085	11.58	1324126	13.57
ZZZZZZ	639673	4.57	994936	5.62	882173	7.04	1075172	8.33	1287944	11.61	1200943	13.59
ZZZZZZ	834336	4.57	2725025	5.60	1217153	7.04	2107645	8.29	1622113	11.49	1534622	13.48
ZZZZZZ	908154	4.57	2996271	5.60	1457153	7.04	2291464	8.29	1558964	11.49	1456603	13.48

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E2P3839-CC3816	**Injection Date:**	04/27/19
Lab File ID:	2P86897.D	**Injection Time:**	00:29
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EM6566-CC6556	**Injection Date:**	04/20/19
Lab File ID:	M153630.D	**Injection Time:**	22:56
Instrument ID:	GCMSM	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	177530	4.54	592041	5.64	336150	7.91	651892	10.48	608216	15.60	657251	18.19
Upper Limit [a]	355060	5.04	1184082	6.14	672300	8.41	1303784	10.98	1216432	16.10	1314502	18.69
Lower Limit [b]	88765	4.04	296021	5.14	168075	7.41	325946	9.98	304108	15.10	328626	17.69

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP19854-MB1	236412	4.54	750957	5.63	404716	7.91	770012	10.48	766292	15.59	740028	18.19
OP19854-BS1	196961	4.54	602070	5.64	326332	7.91	664195	10.48	670172	15.60	657054	18.19
ZZZZZZ	243540	4.54	778326	5.63	412690	7.91	792421	10.48	761718	15.59	743525	18.19
ZZZZZZ	238400	4.54	771719	5.63	412122	7.91	806048	10.48	777707	15.59	756238	18.19
ZZZZZZ	220459	4.54	726943	5.63	380195	7.91	743185	10.48	713795	15.59	689134	18.19
ZZZZZZ	215727	4.54	697803	5.63	374162	7.91	727780	10.48	693276	15.59	681981	18.19
ZZZZZZ	226614	4.54	738221	5.63	397485	7.91	761297	10.48	730851	15.59	706171	18.19
ZZZZZZ	235517	4.54	766288	5.63	400642	7.90	768988	10.48	693608	15.59	666560	18.19
ZZZZZZ	212570	4.54	679753	5.63	359429	7.90	698092	10.48	665819	15.59	655002	18.19
ZZZZZZ	216867	4.54	682806	5.63	358431	7.90	682784	10.48	604101	15.60	603074	18.19
ZZZZZZ	218784	4.54	699608	5.63	347116	7.90	643594	10.48	566213	15.59	578956	18.19
ZZZZZZ	216968	4.54	662484	5.63	324605	7.91	505009	10.49	441636	15.60	486030	18.20
ZZZZZZ	186103	4.54	568010	5.63	280645	7.91	516714	10.49	466182	15.60	486311	18.20
ZZZZZZ	204746	4.54	621355	5.63	308342	7.91	573205	10.49	504426	15.60	517935	18.20
ZZZZZZ	171594	4.54	543188	5.63	275641	7.91	488786	10.49	428387	15.60	445491	18.20
ZZZZZZ	198990	4.54	621390	5.63	316911	7.91	602013	10.48	529578	15.61	549743	18.20
JC86406-10	187016	4.54	592472	5.63	316212	7.90	619802	10.48	574223	15.60	565439	18.20
OP19854-MS	182385	4.54	560694	5.63	302596	7.91	617370	10.48	581202	15.61	570075	18.20
OP19854-MSD	179046	4.54	556607	5.64	295193	7.91	604106	10.48	574151	15.61	564616	18.20
ZZZZZZ	201284	4.54	636975	5.63	339149	7.91	644608	10.48	564955	15.61	574063	18.21
ZZZZZZ	197295	4.54	608372	5.63	297684	7.92	556658	10.49	490303	15.69	429584	18.29
ZZZZZZ	186456	4.54	579170	5.66	266264	7.92	496200	10.52	479160	15.67	469993	18.26

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EZ6762-CC6761	**Injection Date:**	04/25/19
Lab File ID:	Z137254.D	**Injection Time:**	15:00
Instrument ID:	GCMSZ	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	52681	4.08	213962	5.00	126514	6.25	232188	7.64	226748	11.24	231962	13.27
Upper Limit [a]	105362	4.58	427924	5.50	253028	6.75	464376	8.14	453496	11.74	463924	13.77
Lower Limit [b]	26341	3.58	106981	4.50	63257	5.75	116094	7.14	113374	10.74	115981	12.77

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP19957-MB1	53352	4.08	215297	5.00	122623	6.25	246621	7.64	235466	11.23	242718	13.27
OP19957-LB1	52960	4.08	207606	5.00	120826	6.25	235418	7.64	239680	11.23	302698	13.27
OP19957-BS1	57205	4.08	222686	5.00	123974	6.25	250291	7.64	255648	11.24	253441	13.27
OP19810-MB1	70069	4.08	269362	5.00	149115	6.25	297742	7.64	281605	11.23	273327	13.27
JC86217-5R	63275	4.08	239170	5.00	133950	6.25	259288	7.64	239482	11.23	245752	13.27
ZZZZZZ	53130	4.08	215473	5.00	120172	6.25	244659	7.64	245299	11.23	253110	13.27
ZZZZZZ	54309	4.08	214261	5.00	118593	6.25	235259	7.64	231677	11.23	248214	13.27
OP19957-LS1	66791	4.08	250512	5.00	137277	6.25	249578	7.64	244714	11.24	241958	13.27
OP19957-MS	66791	4.08	250512	5.00	137277	6.25	249578	7.64	244714	11.24	241958	13.27
OP19957-MSD	66093	4.08	252157	5.00	135509	6.25	269830	7.64	262444	11.24	257694	13.27
ZZZZZZ	57898	4.08	232564	5.00	122417	6.25	241075	7.64	229738	11.23	232342	13.27
ZZZZZZ	48595	4.08	192206	5.00	110570	6.25	222808	7.64	251050	11.23	263227	13.27
ZZZZZZ	61507	4.08	235468	5.00	128309	6.25	250795	7.64	230520	11.23	235491	13.27
ZZZZZZ	60016	4.08	234496	5.00	126724	6.25	240295	7.64	220371	11.23	216255	13.27
ZZZZZZ	49014	4.08	192359	5.00	108496	6.25	221674	7.64	229769	11.23	251884	13.27
JC86406-3	60352	4.08	245128	5.00	131560	6.25	248130	7.64	256511	11.23	247184	13.27
JC86406-5	60732	4.08	243437	5.00	134767	6.25	259471	7.64	248563	11.23	237023	13.27
JC86406-14	67731	4.08	263345	5.00	142909	6.25	282015	7.64	264855	11.24	229231	13.28

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EZ6764-CC6761	**Injection Date:**	04/26/19
Lab File ID:	Z137286.D	**Injection Time:**	09:25
Instrument ID:	GCMSZ	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	68641	4.06	270792	4.99	152483	6.24	244966	7.61	198387	11.20	230667	13.23
Upper Limit [a]	137282	4.56	541584	5.49	304966	6.74	489932	8.11	396774	11.70	461334	13.73
Lower Limit [b]	34321	3.56	135396	4.49	76242	5.74	122483	7.11	99194	10.70	115334	12.73

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP19684A-MB1	80326	4.06	291726	4.98	146663	6.23	270700	7.61	228701	11.20	216200	13.23
OP19684A-BS1	79789	4.06	301575	4.98	149277	6.23	261966	7.61	221679	11.20	237724	13.23
OP19684A-BSD	78031	4.06	281750	4.98	141062	6.23	252696	7.61	218783	11.20	207313	13.23
OP19712A-MB1	80301	4.06	291269	4.98	145421	6.23	269928	7.61	222195	11.19	215657	13.23
OP19712A-BS1	78606	4.06	283166	4.98	139594	6.23	251325	7.61	218377	11.20	204226	13.23
OP19712A-BSD	82862	4.06	289537	4.98	146192	6.23	259988	7.61	225467	11.20	234080	13.23
OP19875A-MB1	80652	4.06	280582	4.98	139545	6.23	254346	7.61	207177	11.19	209681	13.23
OP19875A-BS1	70838	4.06	259545	4.98	126110	6.23	227553	7.61	188861	11.20	184906	13.23
OP19875A-BSD	68432	4.06	266866	4.98	123666	6.23	221764	7.61	187240	11.20	185143	13.23
OP19711A-MB1	78209	4.06	273022	4.98	136767	6.23	246654	7.61	208327	11.19	221653	13.23
OP19711A-BS1	74885	4.06	259911	4.98	127085	6.23	227018	7.61	193525	11.20	189723	13.23
OP19711A-BSD	79447	4.06	284959	4.98	139955	6.23	249356	7.61	212612	11.20	231016	13.23
ZZZZZZ	76232	4.06	292283	4.98	131895	6.24	236789	7.62	208384	11.20	211505	13.23
JC86116-4R	72321	4.06	271189	4.99	113330	6.24	236748	7.63	198051	11.20	205113	13.23
JC86632-1R	69532	4.06	272973	4.98	123567	6.23	224531	7.61	193523	11.19	195070	13.23
OP19875A-DUP	70198	4.06	261022	4.98	130182	6.23	234059	7.61	195531	11.19	195163	13.23
ZZZZZZ	67451	4.06	244278	4.98	118683	6.23	214188	7.61	179462	11.19	209913	13.23
ZZZZZZ	77559	4.06	273809	4.99	111881	6.25	232295	7.64	211343	11.20	221490	13.23
OP19712A-MS	77833	4.06	265367	4.99	120453	6.24	211717	7.63	191637	11.20	195755	13.23
OP19712A-MSD	76840	4.06	286191	4.99	128947	6.24	230646	7.63	206525	11.20	208441	13.23
JC86406-14	65103	4.06	250514	4.98	127116	6.23	226816	7.61	195928	11.20	191657	13.23
JC86406-11	66601	4.06	242678	4.98	124363	6.23	217285	7.61	186900	11.20	184626	13.23
JC86406-5	69120	4.06	254304	4.99	128449	6.23	221803	7.63	191665	11.24	196321	13.26

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC86406-1	2P86767.D	58	75	48	77	86	70
JC86406-1	2P86743.D	48	56	65	59	79	60
JC86406-2	2P86739.D	51	64	60	65	74	65
JC86406-3	Z137269.D	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]
JC86406-3	2P86746.D	50	48	85	104	69	59
JC86406-4	2P86768.D	54	66	45	72	76	63
JC86406-4	2P86747.D	43	50	55	56	72	51
JC86406-5	Z137270.D	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]
JC86406-5	Z137310.D	53	49	45	53	53	56
JC86406-5	2P86748.D	47	53	68	89	51	61
JC86406-6	2P86733.D	58	67	62	75	76	63
JC86406-7	2P86740.D	46	56	57	64	72	62
JC86406-8	2P86741.D	56	64	68	79	81	72
JC86406-9	2P86734.D	60	69	55	80	80	71
JC86406-10	M153649.D	38	37	65	45	51	50
JC86406-11	Z137309.D	44	53	0* [a]	58	71	79
JC86406-11	2P86749.D	49	51	72	62	71	56
JC86406-12	2P86913.D	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]	0* [a]
JC86406-12	2P86919.D	27	35	42	61	70	61
JC86406-12	2P86776.D	51	66	112	198* [b]	62	70
JC86406-13	2P86735.D	65	76	62	90	93	89
JC86406-14	Z137272.D	52	59	53	62	78	86
JC86406-14	Z137308.D	0* [a]	0* [a]	0* [a]	0* [a]	60	72
JC86406-14	2P86750.D	48	57	73	61	80	72
JC86406-15	2P86773.D	57	70	67	76	85	75
OP19810-BS1	2P86732.D	80	77	71	78	73	75
OP19810-MB1	2P86731.D	62	72	58	82	82	71
OP19810-MB1	Z137258.D	85	81	71	81	82	85
OP19810-MS	2P86744.D	65	68	74	65	81	68
OP19810-MSD	2P86745.D	55	61	69	57	73	63
OP19854-BS1	M153634.D	64	64	102	71	79	75
OP19854-MB1	M153633.D	56	56	87	67	76	70
OP19854-MS	M153650.D	38	37	63	45	51	50
OP19854-MSD	M153651.D	43	42	71	51	57	56

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	23-115%
S2 = Phenol-d5	27-114%

Surrogate Recovery Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Surrogate Compounds	Recovery Limits
S3 = 2,4,6-Tribromophenol	19-152%
S4 = Nitrobenzene-d5	26-134%
S5 = 2-Fluorobiphenyl	39-124%
S6 = Terphenyl-d14	36-134%

(a) Outside control limits due to dilution.
(b) Outside control limits due to matrix interference.

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3783-ICC3783
Lab FileID: 2P85596.D

Response Factor Report MS2P

Method : C:\MSDCHEM\1\METHODS\M2P3783.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 08 17:42:45 2019
Response via : Initial Calibration

Calibration Files
2 =2p85600.D 5 =2p85599.D 25 =2p85597.D 80 =2p85595.D
100 =2p85594.D 50 =2p85596.D 1 =2p85601.D 10 =2p85598.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
101) I 1,4-Dichlorobenzene-d	ISTD									
102) Benzaldehyde	1.449	1.489	1.521	1.331	1.302	1.445	1.494	1.538	1.446	5.99
103) I Naphthalene-d8a	ISTD									
104) Hydroquinone			0.300	0.338	0.331	0.314		0.226	0.302	14.90
105) I Acenaphthene-d10a	ISTD									
106) Atrazine		0.083	0.114	0.170	0.170	0.168	0.172		0.144	0.146	23.91
----- Quadratic regression ----- Coefficient = 0.9999										
Response Ratio = -0.00774 + 0.18529 *A + -0.00578 *A^2										
107) 1,2,4,5-Tetr	0.596	0.618	0.613	0.566	0.545	0.602	0.622	0.628	0.599	4.87
110) I Phenanthrene-d10a	ISTD									
111) 1-Chloroocta	0.262	0.313	0.361	0.299	0.276	0.330	0.207	0.359	0.301	17.29
112) o-terphenyl	0.496	0.529	0.568	0.558	0.530	0.575	0.488	0.557	0.538	6.09
113) Pentachloron			0.026	0.042	0.047	0.045	0.044		0.035	0.040#	20.16
----- Quadratic regression ----- Coefficient = 0.9991										
Response Ratio = -0.00349 + 0.04931 *A + -0.00083 *A^2										

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2P3781.M Fri Mar 08 17:47:27 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3783-ICV3783
Lab FileID: 2P85602.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3783\2p85602.D Vial: 10
Acq On : 8 Mar 2019 6:31 am Operator: chriss2
Sample : icv3783-50 Inst : MS2P
Misc : op13652,e2p3783,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3781.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 08 17:42:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
	----------	AvgRF	CCRF	% Dev	----------		
101 I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	117	0.00	5.06
102	Benzaldehyde	1.446	1.457	-0.8	118	0.00	4.70
105 I	Acenaphthene-d10a	1.000	1.000	0.0	104	0.00	7.54
	----------	True	Calc.	% Drift	----------		
106	Atrazine	50.000	57.561	-15.1	119	0.01	8.60
	----------	AvgRF	CCRF	% Dev	----------		
107	1,2,4,5-Tetrachlorobenzen	0.599	0.669	-11.7	115	0.00	6.82
	----------	True	Calc.	% Drift	----------		
113	Pentachloronitrobenzene	50.000	47.694	4.6	118	0.00	8.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p85596a.D M2P3781.M Fri Mar 08 17:47:43 2019 RPT1

8.7.2

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3783-ICV3783
Lab FileID: 2P85603.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3783\2p85603.D Vial: 11
Acq On : 8 Mar 2019 6:54 am Operator: chriss2
Sample : icv3783-50 Inst : MS2P
Misc : op13652,e2p3783,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3781.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 08 17:42:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103 I	Naphthalene-d8a	1.000	1.000	0.0	109	0.00	6.09
104	Hydroquinone	0.302	0.320	-6.0	111	0.00	6.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p85596a.D M2P3781.M Fri Mar 08 17:47:45 2019 RPT1

8.7.3

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICC3816
Lab FileID: 2P86292.D

Response Factor Report MS2P

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Initial Calibration

Calibration Files
2 =2p86296.D 5 =2p86295.D 25 =2p86293.D 80 =2p86291.D
100 =2p86290.D 50 =2p86292.D 1 =2p86297.D 10 =2p86294.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.959	0.996	1.290	1.569	2.040	1.510	0.877	1.057	1.287	30.94
----- Quadratic regression ----- Coefficient = 0.9925										
Response Ratio = 0.03945 + 0.76758 *A + 0.47508 *A^2										
3) Pyridine	1.990	2.212	2.918	3.030	3.423	3.090		2.585	2.750	18.61
4) N-Nitrosodim	1.303	1.368	1.771	1.892	2.258	1.902		1.559	1.722	19.53
5) 2-Fluorophen	1.496	1.718	2.057	2.189	2.477	2.269		1.884	2.013	16.79
6) Indene	2.026	2.148	2.201	2.196	2.157	2.232	2.140	2.106	2.151	2.99
7) Cumene	4.626	4.947	5.255	5.195	5.182	5.503	4.722	5.221	5.081	5.78
8) Phenol-d5	2.040	2.216	2.346	2.264	2.215	2.370	1.904	2.295	2.206	7.20
9) Phenol	2.227	2.401	2.398	2.205	2.170	2.357	2.224	2.436	2.302	4.60
10) Aniline	2.595	2.681	2.517	2.439	2.428	2.520	2.615	2.664	2.557	3.78
11) bis(2-Chloro	1.690	1.712	1.641	1.509	1.479	1.604	1.825	1.701	1.645	6.89
12) 2-Chlorophen	1.421	1.547	1.516	1.460	1.465	1.498	1.390	1.529	1.478	3.68
13) Decane	1.526	1.516	1.392	1.213	1.205	1.303	1.591	1.457	1.400	10.51
14) 1,3-Dichloro	1.619	1.670	1.619	1.626	1.602	1.636	1.663	1.615	1.631	1.46
15) 1,4-Dichloro	1.348	1.372	1.464	1.533	1.533	1.535	1.472	1.407	1.458	5.14
16) Benzyl alcoh	0.664	0.776	0.883	0.882	0.859	0.902	0.698	0.802	0.808	11.10
17) 1,2-Dichloro	1.295	1.320	1.402	1.506	1.504	1.474	1.380	1.332	1.402	6.01
18) Acetophenone	2.015	1.988	2.034	2.015	1.990	2.063	2.031	1.996	2.017	1.26
19) 2-Methylphen	1.147	1.206	1.209	1.146	1.124	1.177	1.176	1.211	1.174	2.82
20) 2,2'-oxybis(	0.346	0.334	0.339	0.335	0.336	0.341	0.362	0.325	0.340	3.18
21) 3&4-Methylph	1.155	1.189	1.234	1.210	1.184	1.239	1.102	1.208	1.190	3.77
22) n-Nitroso-di	1.160	1.120	1.065	0.955	0.933	1.026	1.143	1.107	1.064	8.01
23) Hexachloroet	0.475	0.473	0.488	0.535	0.520	0.520	0.466	0.471	0.493	5.49
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.568	0.561	0.526	0.491	0.483	0.519	0.591	0.563	0.538	7.21
26) Nitrobenzene	0.566	0.568	0.517	0.459	0.439	0.496	0.606	0.562	0.527	11.14
27) Quinoline	0.669	0.658	0.723	0.756	0.759	0.766	0.628	0.700	0.707	7.34
28) Isophorone	0.912	0.926	0.940	0.894	0.879	0.933	0.953	0.962	0.925	3.09
29) 2-Nitropheno	0.194	0.207	0.224	0.236	0.227	0.238	0.176	0.219	0.215	10.05
30) 2,4-Dimethyl	0.322	0.361	0.398	0.397	0.399	0.410	0.318	0.380	0.373	9.67
31) Benzoic acid			0.329	0.360	0.364	0.368		0.256	0.335	13.96
32) bis(2-Chloro	0.534	0.530	0.512	0.482	0.465	0.506	0.548	0.543	0.515	5.77
33) 2,4-Dichloro	0.269	0.293	0.307	0.332	0.332	0.325	0.246	0.301	0.301	10.25
34) 2,6-Dichloro	0.238	0.257	0.275	0.298	0.300	0.292	0.235	0.263	0.270	9.60
35) 1,3,5-Trichl	0.340	0.354	0.366	0.385	0.378	0.387	0.349	0.355	0.364	4.79
36) 1,2,4-Trichl	0.319	0.327	0.332	0.346	0.336	0.348	0.335	0.336	0.335	2.76
37) 1,2,3-Trichl	0.297	0.279	0.294	0.307	0.307	0.306	0.278	0.288	0.295	4.08
38) Naphthalene	0.913	0.933	0.962	0.973	0.980	0.999	0.949	0.946	0.957	2.87
39) 4-Chloroanil	0.364	0.381	0.407	0.410	0.405	0.413	0.356	0.406	0.393	5.75
40) 2,3-Dichloro	0.367	0.351	0.381	0.404	0.405	0.404	0.336	0.374	0.378	6.86
41) Caprolactam	0.108	0.111	0.127	0.147	0.149	0.133	0.096	0.116	0.123	15.49
42) Hexachlorobu	0.173	0.174	0.192	0.219	0.213	0.210	0.172	0.183	0.192	10.23

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICC3816
Lab FileID: 2P86292.D

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43) 4-Chloro-3-m 0.361 0.369 0.413 0.407 0.404 0.427 0.336 0.398 0.389   7.94
44) 2-Methylnaph 0.591 0.569 0.627 0.630 0.622 0.651 0.568 0.610 0.609   4.87
45) 1-Methylnaph 0.678 0.648 0.667 0.668 0.656 0.696 0.644 0.677 0.667   2.57
46) Dimethylnaph 0.625 0.593 0.601 0.633 0.612 0.642 0.611 0.603 0.615   2.77

47) I   Acenaphthene-d10      ----------------ISTD--------------------
48) Hexachlorocy 0.179 0.241 0.348 0.417 0.414 0.399 0.123 0.287 0.301  37.29
         ----- Quadratic regression -----                Coefficient =  0.9993
              Response Ratio = -0.03462 + 0.39306 *A + 0.00624 *A^2

49) 2,4,6-Trichl 0.335 0.359 0.389 0.406 0.404 0.404 0.319 0.379 0.374   8.95
50) 2,4,5-Trichl 0.343 0.371 0.395 0.425 0.432 0.416 0.340 0.396 0.390   9.03
51) 2-Fluorobiph 1.457 1.403 1.337 1.330 1.343 1.358 1.476 1.373 1.385   4.03
52) 2-Chloronaph 1.220 1.166 1.103 1.095 1.093 1.104 1.255 1.138 1.147   5.40
53) Biphenyl     1.627 1.586 1.564 1.632 1.572 1.635 1.624 1.585 1.603   1.82
54) 2-Nitroanili 0.498 0.513 0.503 0.459 0.457 0.485 0.495 0.530 0.492   5.08
55) Dimethylphth 1.387 1.347 1.402 1.464 1.450 1.481 1.436 1.389 1.420   3.20
56) Acenaphthyle 1.990 1.925 1.928 1.948 1.904 1.980 2.021 1.957 1.957   1.97
57) 2,6-Dinitrot 0.292 0.304 0.313 0.327 0.335 0.334 0.275 0.312 0.311   6.69
58) 3-Nitroanili 0.306 0.338 0.368 0.378 0.376 0.379 0.299 0.366 0.351   9.32
59) Acenaphthene 1.059 1.077 1.143 1.253 1.222 1.244 1.088 1.101 1.148   6.93
60) 2,4-Dinitrop 0.040 0.079 0.149 0.186 0.194 0.176       0.113 0.134  43.74
         ----- Quadratic regression -----                Coefficient =  0.9997
              Response Ratio = -0.02082 + 0.16333 *A + 0.00707 *A^2

61) 4-Nitropheno 0.166 0.216 0.277 0.295 0.298 0.301       0.258 0.259  19.62
62) Dibenzofuran 1.475 1.504 1.596 1.691 1.673 1.703 1.492 1.537 1.584   5.98
63) 2,4-Dinitrot 0.339 0.377 0.429 0.445 0.433 0.453 0.321 0.406 0.400  12.43
64) 2,3,4,6-Tetr       0.269 0.340 0.422 0.436 0.396       0.310 0.362  18.37
65) Diethylphtha 1.398 1.429 1.517 1.503 1.500 1.568 1.414 1.471 1.475   3.92
66) Fluorene     1.278 1.302 1.421 1.417 1.373 1.485 1.234 1.357 1.358   6.13
67) 4-Chlorophen 0.554 0.571 0.673 0.765 0.733 0.752 0.548 0.625 0.653  13.88
68) 4-Nitroanili 0.264 0.326 0.310 0.316 0.321 0.321 0.248 0.316 0.303   9.74

69) I   Phenanthrene-d10      ----------------ISTD--------------------
70) 4,6-Dinitro- 0.076 0.105 0.124 0.140 0.140 0.135       0.116 0.119  19.31
71) n-Nitrosodip 0.528 0.543 0.527 0.551 0.550 0.553 0.537 0.532 0.540   1.93
72) 1,2-Diphenyl 1.254 1.203 1.023 0.836 0.798 0.926 1.269 1.115 1.053  17.67
73) 2,4,6-Tribro             0.124 0.161 0.167 0.145       0.106 0.140  18.14
74) 4-Bromopheny 0.205 0.208 0.233 0.289 0.292 0.272 0.197 0.218 0.239  16.35
75) Hexachlorobe 0.227 0.232 0.264 0.315 0.316 0.296 0.226 0.241 0.265  14.78
76) Pentachlorop 0.096 0.120 0.171 0.222 0.226 0.205 0.082 0.142 0.158  35.70
         ----- Quadratic regression -----                Coefficient =  0.9994
              Response Ratio = -0.01534 + 0.18562 *A + 0.00907 *A^2

77) Phenanthrene 0.918 0.940 0.993 1.086 1.085 1.075 0.933 0.941 0.996   7.45
78) Anthracene   0.955 0.990 1.013 1.085 1.077 1.073 0.932 0.980 1.013   5.84
79) Carbazole    0.943 1.010 1.075 1.141 1.131 1.142 0.920 1.019 1.048   8.45
80) Di-n-butylph 1.424 1.456 1.714 1.746 1.694 1.681 1.359 1.643 1.590   9.53
81) Fluoranthene 1.207 1.216 1.539 1.639 1.632 1.514 1.181 1.400 1.416  13.62
82) Octadecane   0.380 0.378 0.326 0.262 0.249 0.292 0.393 0.356 0.329  17.06

83) I   Chrysene-d12          ----------------ISTD--------------------
84) Pyrene       1.448 1.405 1.570 1.638 1.645 1.671 1.542 1.532 1.556   6.11
85) Terphenyl-d1 0.893 0.822 0.995 1.134 1.154 1.116 0.916 0.935 0.995  12.56
86) Butylbenzylp 0.818 0.788 0.907 0.922 0.923 0.992 0.793 0.839 0.873   8.47
87) Benzo[a]anth 1.367 1.361 1.511 1.682 1.638 1.672 1.410 1.378 1.502   9.48
88) 3,3'-Dichlor 0.362 0.426 0.544 0.635 0.618 0.634       0.469 0.527  20.82
         ----- Quadratic regression -----                Coefficient =  0.9989
              Response Ratio = -0.03537 + 0.66249 *A + -0.00999 *A^2
```

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICC3816
Lab FileID: 2P86292.D

89)	Chrysene	0.980	0.990	1.064	1.156	1.141	1.150	1.016	1.030	1.066	6.90
90)	bis(2-Ethylh	0.809	0.888	0.955	0.961	0.925	0.997	0.726	0.924	0.898	9.95
91)	I Perylene-d12	----------ISTD----------									
92)	Di-n-octylph	1.364	1.713	2.071	1.968	2.163	2.177		1.926	1.912	15.12
93)	Benzo[b]fluo	1.083	1.171	1.424	1.423	1.523	1.506	1.060	1.296	1.311	14.22
94)	Benzo[k]fluo	1.132	1.154	1.056	0.982	0.995	1.083	1.048	1.124	1.072	5.89
95)	Benzo[a]pyre	0.940	1.033	1.121	1.257	1.277	1.219	0.894	1.071	1.102	13.01
96)	Indeno[1,2,3	0.985	1.129	1.339	1.488	1.501	1.471	0.919	1.212	1.255	18.37
97)	Dibenz(a,h)a		0.790	1.074	1.261	1.283	1.205		0.915	1.088	18.42
98)	Dibenz[a,h]a	0.805	0.913	1.029	1.140	1.178	1.127	0.684	0.948	0.978	17.83
99)	7,12-Dimethy		0.419	0.598	0.662	0.700	0.693		0.506	0.596	18.96
100)	Benzo[g,h,i]	0.829	0.900	1.063	1.150	1.146	1.147	0.755	0.960	0.994	15.68

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2P3816.M Mon Apr 08 13:16:10 2019 RPT1

8.7.4

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86298.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3816\2p86298.D Vial: 10
Acq On : 5 Apr 2019 9:59 am Operator: chriss2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	4.84
4	t	N-Nitrosodimethylamine	1.722	1.090	36.7#	63	0.05	2.54
11	t	bis(2-Chloroethyl)ether	1.645	1.960	-19.1	134	0.00	4.63
14	t	1,3-Dichlorobenzene	1.631	1.796	-10.1	121	0.00	4.79
15	t	1,4-Dichlorobenzene	1.458	1.491	-2.3	107	0.00	4.85
17	t	1,2-Dichlorobenzene	1.402	1.348	3.9	101	0.00	4.97
20	t	2,2'-oxybis(1-Chloropropa	0.340	0.394	-15.9	127	0.00	5.07
22	t	n-Nitroso-di-n-propylamin	1.064	1.121	-5.4	120	-0.01	5.17
23	t	Hexachloroethane	0.493	0.504	-2.2	107	0.00	5.25
24	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	5.87
26	t	Nitrobenzene	0.527	0.517	1.9	106	0.00	5.31
28	t	Isophorone	0.925	0.909	1.7	99	-0.01	5.50
32	t	bis(2-Chloroethoxy)methan	0.515	0.556	-8.0	112	0.00	5.68
36	t	1,2,4-Trichlorobenzene	0.335	0.363	-8.4	106	0.00	5.83
38	t	Naphthalene	0.957	1.007	-5.2	103	0.00	5.89
42	t	Hexachlorobutadiene	0.192	0.212	-10.4	103	0.00	6.00
47	I	Acenaphthene-d10	1.000	1.000	0.0	97	0.00	7.31
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	50.000	51.808	-3.6	88	0.00	6.60
			AvgRF	CCRF	% Dev			
52	t	2-Chloronaphthalene	1.147	1.382	-20.5	121	0.00	6.86
55	t	Dimethylphthalate	1.420	1.560	-9.9	102	0.00	7.10
56	t	Acenaphthylene	1.957	1.931	1.3	95	0.00	7.19
57	t	2,6-Dinitrotoluene	0.311	0.320	-2.9	93	0.00	7.15
59	t	Acenaphthene	1.148	1.175	-2.4	91	0.00	7.34
63	t	2,4-Dinitrotoluene	0.400	0.398	0.5	85	0.00	7.48
65	t	Diethylphthalate	1.475	1.587	-7.6	98	0.00	7.68
66	t	Fluorene	1.358	1.469	-8.2	96	0.00	7.77
67	t	4-Chlorophenyl-phenylethe	0.653	0.735	-12.6	95	0.00	7.77
69	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	8.61
71	t	n-Nitrosodiphenylamine	0.540	0.478	11.5	88	0.00	7.87
72	t	1,2-Diphenylhydrazine	1.053	0.890	15.5	98	0.00	7.90
74	t	4-Bromophenyl-phenylether	0.239	0.228	4.6	86	0.00	8.19
75	t	Hexachlorobenzene	0.265	0.239	9.8	83	0.00	8.25
77	t	Phenanthrene	0.996	1.007	-1.1	96	0.00	8.63
78	t	Anthracene	1.013	0.950	6.2	90	0.00	8.68
80	t	Di-n-butylphthalate	1.590	1.569	1.3	95	0.00	9.24

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86298.D

81	t	Fluoranthene	1.416	1.362	3.8	92	0.00	9.95
83	I	Chrysene-d12	1.000	1.000	0.0	88	0.00	11.90
84	t	Pyrene	1.556	1.580	-1.5	83	0.00	10.23
86	t	Butylbenzylphthalate	0.873	1.039	-19.0	92	0.00	11.16
87	t	Benzo[a]anthracene	1.502	1.649	-9.8	86	0.00	11.87
89	t	Chrysene	1.066	1.126	-5.6	86	0.00	11.93
90	t	bis(2-Ethylhexyl)phthalat	0.898	1.019	-13.5	90	0.00	12.03
91	I	Perylene-d12	1.000	1.000	0.0	83	0.00	13.89
92	t	Di-n-octylphthalate	1.912	2.191	-14.6	84	0.00	12.97
93	t	Benzo[b]fluoranthene	1.311	1.409	-7.5	78	-0.02	13.39
94	t	Benzo[k]fluoranthene	1.072	1.214	-13.2	93	-0.01	13.43
95	t	Benzo[a]pyrene	1.102	1.245	-13.0	85	0.00	13.82
96	t	Indeno[1,2,3-cd]pyrene	1.255	1.561	-24.4	88	0.00	15.29
98	t	Dibenz[a,h]anthracene	0.978	1.131	-15.6	83	-0.01	15.32
100	t	Benzo[g,h,i]perylene	0.994	1.176	-18.3	85	0.00	15.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:14:52 2019 RPT1

8.7.5

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86299.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3816\2p86299.D Vial: 11
Acq On : 5 Apr 2019 10:22 am Operator: chriss2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	125	0.00	4.84
		---------- True	Calc.	% Drift	----------			
2	t	1,4-Dioxane	50.000	38.007	24.0	79	0.05	2.20
		---------- AvgRF	CCRF	% Dev	----------			
6	t	Indene	2.151	2.353	-9.4	132	0.00	5.04
7	t	Cumene	5.081	4.585	9.8	104	0.01	4.19
13	t	Decane	1.400	1.277	8.8	123	0.00	4.72
18	t	Acetophenone	2.017	1.870	7.3	113	0.00	5.17
24	I	Naphthalene-d8	1.000	1.000	0.0	145	0.00	5.87
27	t	Quinoline	0.707	0.597	15.6	113	-0.02	6.16
40	t	2,3-Dichloroaniline	0.378	0.244	35.4#	88	0.00	6.69
41	t	Caprolactam	0.123	0.088	28.5	95	-0.05	6.23
45	t	1-Methylnaphthalene	0.667	0.509	23.7	106	0.00	6.54
46	t	Dimethylnaphthalene	0.615	0.469	23.7	106	0.00	6.97
47	I	Acenaphthene-d10	1.000	1.000	0.0	124	0.00	7.31
53	t	Biphenyl	1.603	1.384	13.7	105	0.00	6.84
69	I	Phenanthrene-d10	1.000	1.000	0.0	113	0.00	8.61
82	t	Octadecane	0.329	0.321	2.4	124	0.00	8.52
91	I	Perylene-d12	1.000	1.000	0.0	127	-0.01	13.89
99	t	7,12-Dimethylbenz(a)anthr	0.596	0.582	2.3	106	-0.02	13.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:14:54 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86301.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3816\2p86301.D Vial: 13
Acq On : 5 Apr 2019 11:09 am Operator: chriss2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	126	0.00	4.84
9	t	Phenol	2.302	2.561	-11.3	137	0.00	4.59
12	t	2-Chlorophenol	1.478	1.600	-8.3	135	0.00	4.68
19	t	2-Methylphenol	1.174	1.381	-17.6	148	0.00	5.07
21	t	3&4-Methylphenol	1.190	1.341	-12.7	136	0.00	5.19
24	I	Naphthalene-d8	1.000	1.000	0.0	109	0.00	5.87
29	t	2-Nitrophenol	0.215	0.252	-17.2	115	0.00	5.56
30	t	2,4-Dimethylphenol	0.381	0.495	-29.9	132	0.00	5.62
31	t	Benzoic acid	0.335	0.319	4.8	95	-0.01	5.76
33	t	2,4-Dichlorophenol	0.301	0.309	-2.7	104	0.00	5.77
34	t	2,6-Dichlorophenol	0.270	0.302	-11.9	113	0.00	5.95
43	t	4-Chloro-3-methylphenol	0.389	0.432	-11.1	111	-0.02	6.35
47	I	Acenaphthene-d10	1.000	1.000	0.0	134	0.00	7.31
49	t	2,4,6-Trichlorophenol	0.374	0.381	-1.9	126	-0.01	6.70
50	t	2,4,5-Trichlorophenol	0.390	0.350	10.3	113	-0.02	6.73
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	43.309	13.4	96	-0.01	7.37
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.259	0.241	6.9	107	-0.01	7.45
64		2,3,4,6-Tetrachlorophenol	0.362	0.297	18.0	100	0.00	7.59
69	I	Phenanthrene-d10	1.000	1.000	0.0	115	0.00	8.61
70	t	4,6-Dinitro-2-methylpheno	0.119	0.141	-18.5	121	-0.01	7.81
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	51.933	-3.9	107	-0.01	8.44

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:24:25 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86302.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3816\2p86302.D Vial: 14
Acq On : 5 Apr 2019 11:32 am Operator: chriss2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	152	0.00	4.84
5	S	2-Fluorophenol	2.013	1.549	23.1	104	0.01	3.80
8	S	Phenol-d5	2.206	1.957	11.3	125	0.00	4.58
24	I	Naphthalene-d8	1.000	1.000	0.0	160	0.00	5.87
25	S	Nitrobenzene-d5	0.538	0.503	6.5	155	0.00	5.28
47	I	Acenaphthene-d10	1.000	1.000	0.0	145	0.00	7.31
51	S	2-Fluorobiphenyl	1.385	1.408	-1.7	150	0.00	6.76
69	I	Phenanthrene-d10	1.000	1.000	0.0	135	0.00	8.60
73	S	2,4,6-Tribromophenol	0.140	0.115	17.9	107	0.00	7.97
83	I	Chrysene-d12	1.000	1.000	0.0	127	-0.01	11.89
85	S	Terphenyl-d14	0.995	1.010	-1.5	115	0.00	10.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:24:27 2019 RPT1

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3816-ICV3816
Lab FileID: 2P86303.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3816\2p86303.D Vial: 15
Acq On : 5 Apr 2019 11:55 am Operator: chriss2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	171	0.00	11.89
		True	Calc.	% Drift			
88 t	3,3'-Dichlorobenzidine	50.000	41.175	17.7	137	0.00	11.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:24:29 2019 RPT1

8.7.9

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3817-ICV3816
Lab FileID: 2P86307.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3817\2p86307.D Vial: 4
Acq On : 5 Apr 2019 4:36 pm Operator: christc2
Sample : icv3816-50 Inst : MS2P
Misc : op13652,e2p3817,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	137	0.00	4.83
10		Aniline	2.557	2.506	2.0	136	0.00	4.57
16	t	Benzyl alcohol	0.808	0.776	4.0	118	0.00	4.96
24	I	Naphthalene-d8	1.000	1.000	0.0	139	-0.01	5.86
39	t	4-Chloroaniline	0.393	0.365	7.1	123	-0.02	5.93
44	t	2-Methylnaphthalene	0.609	0.530	13.0	113	-0.01	6.45
47	I	Acenaphthene-d10	1.000	1.000	0.0	126	-0.01	7.30
54	t	2-Nitroaniline	0.492	0.480	2.4	125	-0.02	6.94
58	t	3-Nitroaniline	0.351	0.338	3.7	113	-0.02	7.27
62	t	Dibenzofuran	1.584	1.541	2.7	114	-0.02	7.47
68	t	4-Nitroaniline	0.303	0.324	-6.9	127	-0.03	7.78
69	I	Phenanthrene-d10	1.000	1.000	0.0	128	-0.02	8.59
79	t	Carbazole	1.048	0.977	6.8	110	-0.02	8.84

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Mon Apr 08 13:14:16 2019 RPT1

8.7.10

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3831-CC3816
Lab FileID: 2P86728.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3831\2p86728.D Vial: 2
Acq On : 18 Apr 2019 10:23 pm Operator: carolb
Sample : cc3816-25 Inst : MS2P
Misc : op19810,e2p3831,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	66	-0.17	4.67
			True	Calc.	% Drift			
2	t	1,4-Dioxane	25.000	29.980	-19.9	72	-0.20	1.95
			AvgRF	CCRF	% Dev			
3	t	Pyridine	2.750	3.122	-13.5	71	-0.16	2.31
4	t	N-Nitrosodimethylamine	1.722	1.846	-7.2	69	-0.18	2.31
5	S	2-Fluorophenol	2.013	2.083	-3.5	67	-0.15	3.63
6	t	Indene	2.151	2.309	-7.3	69	-0.17	4.88
7	t	Cumene	5.081	5.439	-7.0	68	-0.17	4.02
8	S	Phenol-d5	2.206	2.367	-7.3	67	-0.16	4.42
9	t	Phenol	2.302	2.723	-18.3	75	-0.16	4.43
10		Aniline	2.557	3.038	-18.8	80	-0.16	4.41
11	t	bis(2-Chloroethyl)ether	1.645	1.756	-6.7	71	-0.16	4.47
12	t	2-Chlorophenol	1.478	1.576	-6.6	69	-0.16	4.51
13	t	Decane	1.400	1.597	-14.1	76	-0.16	4.56
14	t	1,3-Dichlorobenzene	1.631	1.651	-1.2	67	-0.17	4.62
15	t	1,4-Dichlorobenzene	1.458	1.539	-5.6	69	-0.17	4.68
16	t	Benzyl alcohol	0.808	0.908	-12.4	68	-0.16	4.80
17	t	1,2-Dichlorobenzene	1.402	1.497	-6.8	70	-0.17	4.80
18	t	Acetophenone	2.017	2.146	-6.4	70	-0.17	5.01
19	t	2-Methylphenol	1.174	1.345	-14.6	73	-0.16	4.91
20	t	2,2'-oxybis(1-Chloropropa	0.340	0.352	-3.5	69	-0.16	4.91
21	t	3&4-Methylphenol	1.190	1.359	-14.2	73	-0.16	5.04
22	t	n-Nitroso-di-n-propylamin	1.064	1.211	-13.8	75	-0.17	5.01
23	t	Hexachloroethane	0.493	0.458	7.1	62	-0.17	5.08
24	I	Naphthalene-d8	1.000	1.000	0.0	66	-0.17	5.70
25	S	Nitrobenzene-d5	0.538	0.576	-7.1	73	-0.17	5.12
26	t	Nitrobenzene	0.527	0.575	-9.1	74	-0.17	5.14
27	t	Quinoline	0.707	0.730	-3.3	67	-0.18	6.00
28	t	Isophorone	0.925	0.973	-5.2	69	-0.17	5.34
29	t	2-Nitrophenol	0.215	0.220	-2.3	65	-0.17	5.40
30	t	2,4-Dimethylphenol	0.381	0.458	-20.2#	76	-0.16	5.46
31	t	Benzoic acid	0.335	0.352	-5.1	71	-0.18	5.60
32	t	bis(2-Chloroethoxy)methan	0.515	0.549	-6.6	71	-0.17	5.52
33	t	2,4-Dichlorophenol	0.301	0.302	-0.3	65	-0.17	5.61
34	t	2,6-Dichlorophenol	0.270	0.282	-4.4	68	-0.17	5.78
35		1,3,5-Trichlorobenzene	0.364	0.357	1.9	65	-0.17	5.41
36	t	1,2,4-Trichlorobenzene	0.335	0.323	3.6	64	-0.17	5.66
37		1,2,3-Trichlorobenzene	0.295	0.296	-0.3	67	-0.17	5.84

Continuing Calibration Summary

Job Number: JC86406 **Sample:** E2P3831-CC3816
Account: BBLNYS Arcadis **Lab FileID:** 2P86728.D
Project: National Grid, Philly Coke, Philadelphia, PA

38	t	Naphthalene	0.957	1.017	-6.3	70	-0.18	5.72
39	t	4-Chloroaniline	0.393	0.433	-10.2	71	-0.17	5.78
40	t	2,3-Dichloroaniline	0.378	0.378	0.0	66	-0.17	6.52
41	t	Caprolactam	0.123	0.128	-4.1	67	-0.19	6.08
42	t	Hexachlorobutadiene	0.192	0.180	6.3	62	-0.17	5.83
43	t	4-Chloro-3-methylphenol	0.389	0.426	-9.5	68	-0.17	6.20
44	t	2-Methylnaphthalene	0.609	0.620	-1.8	66	-0.17	6.29
45	t	1-Methylnaphthalene	0.667	0.684	-2.5	68	-0.18	6.37
46	t	Dimethylnaphthalene	0.615	0.593	3.6	65	-0.18	6.80
47	I	Acenaphthene-d10	1.000	1.000	0.0	66	-0.18	7.14
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	44.003	12.0	62	-0.18	6.42
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.374	0.374	0.0	63	-0.18	6.53
50	t	2,4,5-Trichlorophenol	0.390	0.393	-0.8	66	-0.17	6.57
51	S	2-Fluorobiphenyl	1.385	1.363	1.6	67	-0.18	6.59
52	t	2-Chloronaphthalene	1.147	1.150	-0.3	69	-0.18	6.68
53	t	Biphenyl	1.603	1.620	-1.1	68	-0.18	6.67
54	t	2-Nitroaniline	0.492	0.535	-8.7	70	-0.18	6.78
55	t	Dimethylphthalate	1.420	1.370	3.5	65	-0.18	6.93
56	t	Acenaphthylene	1.957	1.946	0.6	67	-0.18	7.02
57	t	2,6-Dinitrotoluene	0.311	0.310	0.3	65	-0.17	6.98
58	t	3-Nitroaniline	0.351	0.376	-7.1	67	-0.17	7.12
59	t	Acenaphthene	1.148	1.220	-6.3	70	-0.18	7.16
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	43.177	13.6	58	-0.07	7.21
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.259	0.263	-1.5	63	-0.17	7.30
62	t	Dibenzofuran	1.584	1.738	-9.7	72	-0.18	7.31
63	t	2,4-Dinitrotoluene	0.400	0.426	-6.5	66	-0.17	7.31
64		2,3,4,6-Tetrachlorophenol	0.362	0.337	6.9	65	-0.18	7.42
65	t	Diethylphthalate	1.475	1.573	-6.6	68	-0.17	7.51
66	t	Fluorene	1.358	1.500	-10.5	70	-0.18	7.58
67	t	4-Chlorophenyl-phenylethe	0.653	0.676	-3.5	66	-0.18	7.59
68	t	4-Nitroaniline	0.303	0.330	-8.9	70	-0.18	7.62
69	I	Phenanthrene-d10	1.000	1.000	0.0	65	-0.21	8.40
70	t	4,6-Dinitro-2-methylpheno	0.119	0.121	-1.7	64	-0.18	7.65
71	t	n-Nitrosodiphenylamine	0.540	0.561	-3.9	70	-0.18	7.69
72	t	1,2-Diphenylhydrazine	1.053	1.110	-5.4	71	-0.18	7.72
73	S	2,4,6-Tribromophenol	0.140	0.117	16.4	62	-0.19	7.79
74	t	4-Bromophenyl-phenylether	0.239	0.236	1.3	66	-0.19	8.00
75	t	Hexachlorobenzene	0.265	0.263	0.8	65	-0.20	8.06
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	45.845	8.3	64	-0.20	8.24
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	0.996	1.080	-8.4	71	-0.21	8.42
78	t	Anthracene	1.013	1.104	-9.0	71	-0.22	8.47
79	t	Carbazole	1.048	1.102	-5.2	67	-0.21	8.64
80	t	Di-n-butylphthalate	1.590	1.759	-10.6	67	-0.22	9.02
81	t	Fluoranthene	1.416	1.506	-6.4	64	-0.25	9.70
82	t	Octadecane	0.329	0.384	-16.7	77	-0.20	8.32

Continuing Calibration Summary

Job Number: JC86406 **Sample:** E2P3831-CC3816
Account: BBLNYS Arcadis **Lab FileID:** 2P86728.D
Project: National Grid, Philly Coke, Philadelphia, PA

83	I	Chrysene-d12	1.000	1.000	0.0	69	-0.28	11.62
84	t	Pyrene	1.556	1.502	3.5	66	-0.26	9.97
85	S	Terphenyl-d14	0.995	0.935	6.0	65	-0.26	10.20
86	t	Butylbenzylphthalate	0.873	0.896	-2.6	68	-0.26	10.90
87	t	Benzo[a]anthracene	1.502	1.482	1.3	68	-0.28	11.60
		----------	True	Calc.	% Drift	----------		
88	t	3,3'-Dichlorobenzidine	25.000	21.802	12.8	66	-0.28	11.60
		----------	AvgRF	CCRF	% Dev	----------		
89	t	Chrysene	1.066	1.104	-3.6	72	-0.29	11.65
90	t	bis(2-Ethylhexyl)phthalat	0.898	1.019	-13.5	74	-0.26	11.77
91	I	Perylene-d12	1.000	1.000	0.0	63	-0.29	13.60
92	t	Di-n-octylphthalate	1.912	2.269	-18.7	69	-0.27	12.70
93	t	Benzo[b]fluoranthene	1.311	1.529	-16.6	68	-0.30	13.10
94	t	Benzo[k]fluoranthene	1.072	0.951	11.3	57	-0.30	13.14
95	t	Benzo[a]pyrene	1.102	1.157	-5.0	65	-0.30	13.52
96	t	Indeno[1,2,3-cd]pyrene	1.255	1.393	-11.0	66	-0.36	14.93
97	t	Dibenz(a,h)acridine	1.088	1.086	0.2	64	-0.34	14.65
98	t	Dibenz[a,h]anthracene	0.978	1.117	-14.2	68	-0.37	14.96
99	t	7,12-Dimethylbenz(a)anthr	0.596	0.746	-25.2#	79	-0.30	13.10
100	t	Benzo[g,h,i]perylene	0.994	1.110	-11.7	66	-0.27	15.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86293a.D M2P3816.M Fri Apr 19 10:25:29 2019 RPT1

8.7.11

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3831-CC3783
Lab FileID: 2P86730.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P3831\2p86730.D Vial: 4
Acq On : 18 Apr 2019 11:21 pm Operator: carolb
Sample : cc3783-25 Inst : MS2P
Misc : op13652,e2p3831,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 05 14:31:57 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	136	-0.17	4.67
102	Benzaldehyde	1.446	1.485	-2.7	133	-0.25	4.31
103 I	Naphthalene-d8a	1.000	1.000	0.0	125	-0.17	5.70
104	Hydroquinone	0.302	0.373	-23.5#	156	-0.20	6.09
105 I	Acenaphthene-d10a	1.000	1.000	0.0	129	-0.18	7.14
	----------	True	Calc.	% Drift	----------		
106	Atrazine	25.000	25.072	-0.3	129	0.00	8.16
	----------	AvgRF	CCRF	% Dev	----------		
107	1,2,4,5-Tetrachlorobenzen	0.599	0.564	5.8	119	0.00	6.43
108 I	Chrysene-d12a	1.000	1.000	0.0	165	0.00	11.61
	----------	AvgRF	CCRF	% Dev	----------		
110 I	Phenanthrene-d10a	1.000	1.000	0.0	115	-0.21	8.40
111 s	1-Chlorooctadecane	0.301	0.463	-53.8#	148	-0.08	9.62
112 s	o-terphenyl	0.538	0.553	-2.8	112	0.00	8.79
	----------	True	Calc.	% Drift	----------		
113	Pentachloronitrobenzene	25.000	24.531	1.9	115	0.00	8.25

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86293a.D M2P3816.M Fri Apr 19 10:17:30 2019 RPT1

8.7.12

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3832-CC3816
Lab FileID: 2P86756.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\2p3832\2p86756.d Vial: 2
Acq On : 22 Apr 2019 1:22 pm Operator: yujiac
Sample : cc3816-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Tue Apr 23 04:19:39 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	70	0.00	4.66
			True	Calc.	% Drift			
2	t	1,4-Dioxane	50.000	56.546	-13.1	76	-0.15	1.93
			AvgRF	CCRF	% Dev			
3	t	Pyridine	2.750	3.551	-29.1#	80	0.00	2.29
4	t	N-Nitrosodimethylamine	1.722	2.099	-21.9#	77	-0.12	2.28
5	S	2-Fluorophenol	2.013	2.344	-16.4	72	-0.04	3.62
6	t	Indene	2.151	2.417	-12.4	75	0.00	4.87
7	t	Cumene	5.081	5.711	-12.4	72	-0.03	4.01
8	S	Phenol-d5	2.206	2.491	-12.9	73	0.00	4.41
9	t	Phenol	2.302	2.735	-18.8	81	0.00	4.42
10		Aniline	2.557	3.040	-18.9	84	0.00	4.40
11	t	bis(2-Chloroethyl)ether	1.645	1.738	-5.7	75	0.00	4.46
12	t	2-Chlorophenol	1.478	1.537	-4.0	71	0.00	4.50
13	t	Decane	1.400	1.598	-14.1	85	0.00	4.55
14	t	1,3-Dichlorobenzene	1.631	1.644	-0.8	70	0.00	4.62
15	t	1,4-Dichlorobenzene	1.458	1.589	-9.0	72	0.00	4.67
16	t	Benzyl alcohol	0.808	0.963	-19.2	74	0.01	4.80
17	t	1,2-Dichlorobenzene	1.402	1.584	-13.0	75	0.00	4.80
18	t	Acetophenone	2.017	2.336	-15.8	79	0.01	5.00
19	t	2-Methylphenol	1.174	1.349	-14.9	80	0.01	4.90
20	t	2,2'-oxybis(1-Chloropropa	0.340	0.371	-9.1	76	0.01	4.90
21	t	3&4-Methylphenol	1.190	1.407	-18.2	79	0.02	5.03
22	t	n-Nitroso-di-n-propylamin	1.064	1.259	-18.3	85	0.01	5.01
23	t	Hexachloroethane	0.493	0.497	-0.8	67	0.00	5.07
24	I	Naphthalene-d8	1.000	1.000	0.0	76	0.00	5.70
25	S	Nitrobenzene-d5	0.538	0.569	-5.8	84	-0.01	5.12
26	t	Nitrobenzene	0.527	0.547	-3.8	84	-0.01	5.13
27	t	Quinoline	0.707	0.804	-13.7	80	0.01	6.01
28	t	Isophorone	0.925	1.009	-9.1	83	0.00	5.34
29	t	2-Nitrophenol	0.215	0.221	-2.8	71	0.00	5.40
30	t	2,4-Dimethylphenol	0.381	0.462	-21.3#	86	0.00	5.45
31	t	Benzoic acid	0.335	0.390	-16.4	81	0.02	5.62
32	t	bis(2-Chloroethoxy)methan	0.515	0.528	-2.5	80	0.00	5.51
33	t	2,4-Dichlorophenol	0.301	0.315	-4.7	74	0.00	5.60
34	t	2,6-Dichlorophenol	0.270	0.293	-8.5	77	0.00	5.78
35		1,3,5-Trichlorobenzene	0.364	0.364	0.0	72	0.00	5.40
36	t	1,2,4-Trichlorobenzene	0.335	0.319	4.8	70	0.00	5.65
37		1,2,3-Trichlorobenzene	0.295	0.303	-2.7	76	0.00	5.84

Continuing Calibration Summary

Job Number: JC86406 **Sample:** E2P3832-CC3816
Account: BBLNYS Arcadis **Lab FileID:** 2P86756.D
Project: National Grid, Philly Coke, Philadelphia, PA

38	t	Naphthalene	0.957	1.012	-5.7	77	0.00	5.71
39	t	4-Chloroaniline	0.393	0.432	-9.9	80	0.00	5.77
40	t	2,3-Dichloroaniline	0.378	0.398	-5.3	75	0.02	6.51
41	t	Caprolactam	0.123	0.139	-13.0	80	0.01	6.10
42	t	Hexachlorobutadiene	0.192	0.195	-1.6	71	0.00	5.82
43	t	4-Chloro-3-methylphenol	0.389	0.473	-21.6#	85	0.02	6.20
44	t	2-Methylnaphthalene	0.609	0.635	-4.3	75	0.02	6.28
45	t	1-Methylnaphthalene	0.667	0.685	-2.7	75	0.01	6.36
46	t	Dimethylnaphthalene	0.615	0.616	-0.2	73	0.03	6.79
47	I	Acenaphthene-d10	1.000	1.000	0.0	80	0.00	7.13
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	100.000	82.809	17.2	65	-0.02	6.41
			AvgRF	CCRF	% Dev			
49	t	2,4,6-Trichlorophenol	0.374	0.375	-0.3	74	-0.01	6.53
50	t	2,4,5-Trichlorophenol	0.390	0.389	0.3	75	0.00	6.57
51	S	2-Fluorobiphenyl	1.385	1.321	4.6	78	-0.01	6.58
52	t	2-Chloronaphthalene	1.147	1.121	2.3	81	-0.01	6.68
53	t	Biphenyl	1.603	1.568	2.2	77	-0.01	6.66
54	t	2-Nitroaniline	0.492	0.513	-4.3	85	0.00	6.78
55	t	Dimethylphthalate	1.420	1.456	-2.5	79	0.00	6.93
56	t	Acenaphthylene	1.957	1.955	0.1	79	0.00	7.01
57	t	2,6-Dinitrotoluene	0.311	0.317	-1.9	76	0.00	6.97
58	t	3-Nitroaniline	0.351	0.385	-9.7	82	0.00	7.12
59	t	Acenaphthene	1.148	1.235	-7.6	80	0.00	7.16
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	100.000	89.364	10.6	69	0.01	7.21
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.259	0.304	-17.4	81	0.01	7.29
62	t	Dibenzofuran	1.584	1.718	-8.5	81	0.00	7.30
63	t	2,4-Dinitrotoluene	0.400	0.407	-1.7	72	0.02	7.31
64		2,3,4,6-Tetrachlorophenol	0.362	0.346	4.4	70	0.00	7.41
65	t	Diethylphthalate	1.475	1.636	-10.9	84	0.01	7.50
66	t	Fluorene	1.358	1.481	-9.1	80	0.00	7.58
67	t	4-Chlorophenyl-phenylethe	0.653	0.739	-13.2	79	0.01	7.58
68	t	4-Nitroaniline	0.303	0.310	-2.3	77	0.02	7.63
69	I	Phenanthrene-d10	1.000	1.000	0.0	81	0.00	8.39
70	t	4,6-Dinitro-2-methylpheno	0.119	0.123	-3.4	74	0.02	7.65
71	t	n-Nitrosodiphenylamine	0.540	0.541	-0.2	79	0.00	7.69
72	t	1,2-Diphenylhydrazine	1.053	1.084	-2.9	94	0.00	7.71
73	S	2,4,6-Tribromophenol	0.140	0.115	17.9	64	0.00	7.78
74	t	4-Bromophenyl-phenylether	0.239	0.244	-2.1	72	0.00	7.99
75	t	Hexachlorobenzene	0.265	0.264	0.4	72	0.00	8.05
			True	Calc.	% Drift			
76	t	Pentachlorophenol	100.000	89.759	10.2	70	0.00	8.24
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	0.996	1.100	-10.4	83	0.00	8.41
78	t	Anthracene	1.013	1.129	-11.5	85	0.00	8.47
79	t	Carbazole	1.048	1.125	-7.3	79	0.00	8.63
80	t	Di-n-butylphthalate	1.590	1.898	-19.4	91	0.00	9.01
81	t	Fluoranthene	1.416	1.601	-13.1	85	0.00	9.69
82	t	Octadecane	0.329	0.360	-9.4	100	0.00	8.32

8.7.13

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3832-CC3816
Lab FileID: 2P86756.D

83	I	Chrysene-d12	1.000	1.000	0.0	91	0.00	11.61
84	t	Pyrene	1.556	1.590	-2.2	87	-0.02	9.96
85	S	Terphenyl-d14	0.995	1.033	-3.8	84	-0.01	10.19
86	t	Butylbenzylphthalate	0.873	0.975	-11.7	89	0.00	10.88
87	t	Benzo[a]anthracene	1.502	1.608	-7.1	87	0.00	11.59
			True	Calc.	% Drift			
88	t	3,3'-Dichlorobenzidine	50.000	45.539	8.9	81	0.00	11.60
			AvgRF	CCRF	% Dev			
89	t	Chrysene	1.066	1.155	-8.3	91	0.00	11.65
90	t	bis(2-Ethylhexyl)phthalat	0.898	1.098	-22.3#	100	0.00	11.75
91	I	Perylene-d12	1.000	1.000	0.0	90	0.00	13.59
92	t	Di-n-octylphthalate	1.912	2.322	-21.4#	96	0.00	12.69
93	t	Benzo[b]fluoranthene	1.311	1.401	-6.9	84	0.00	13.11
94	t	Benzo[k]fluoranthene	1.072	1.132	-5.6	94	0.00	13.14
95	t	Benzo[a]pyrene	1.102	1.257	-14.1	93	0.00	13.52
96	t	Indeno[1,2,3-cd]pyrene	1.255	1.509	-20.2#	92	-0.02	14.94
97	t	Dibenz(a,h)acridine	1.088	1.251	-15.0	94	0.00	14.64
98	t	Dibenz[a,h]anthracene	0.978	1.208	-23.5#	97	-0.03	14.97
99	t	7,12-Dimethylbenz(a)anthr	0.596	0.688	-15.4	90	-0.01	13.09
100	t	Benzo[g,h,i]perylene	0.994	1.129	-13.6	89	-0.05	15.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Tue Apr 23 04:21:02 2019

8.7.13

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3832-CC3783
Lab FileID: 2P86757.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\2p3832\2p86757.d Vial: 3
Acq On : 22 Apr 2019 1:44 pm Operator: yujiac
Sample : cc3783-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Tue Apr 23 04:19:39 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	171	0.00	4.66
102	Benzaldehyde	1.446	1.550	-7.2	183	-0.09	4.31
103 I	Naphthalene-d8a	1.000	1.000	0.0	163	0.00	5.69
104	Hydroquinone	0.302	0.423	-40.1#	219#	-0.01	6.08
105 I	Acenaphthene-d10a	1.000	1.000	0.0	187	0.00	7.12
	----------	True	Calc.	% Drift	----------		
106	Atrazine	50.000	52.532	-5.1	196	-0.05	8.15
	----------	AvgRF	CCRF	% Dev	----------		
107	1,2,4,5-Tetrachlorobenzen	0.599	0.560	6.5	174	-0.10	6.42
108 I	Chrysene-d12a	1.000	1.000	0.0	228#	-0.02	11.60
	----------	True	Calc.	% Drift	----------		
109	Benzidine	----------	NA	----------			
	----------	AvgRF	CCRF	% Dev	----------		
110 I	Phenanthrene-d10a	1.000	1.000	0.0	165	0.00	8.39
111 s	1-Chlorooctadecane	0.301	0.429	-42.5#	214#	-0.10	9.60
112 s	o-terphenyl	0.538	0.641	-19.1	183	-0.10	8.77
	----------	True	Calc.	% Drift	----------		
113	Pentachloronitrobenzene	50.000	51.219	-2.4	172	-0.09	8.24

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86292a.D M2P3816.M Tue Apr 23 04:21:10 2019

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3839-CC3816
Lab FileID: 2P86897.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\2p3839\2p86897.d Vial: 2
Acq On : 27 Apr 2019 12:29 am Operator: chriss2
Sample : cc3816-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Tue Apr 23 04:19:39 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	69	-0.10	4.56
			True	Calc.	% Drift			
2	t	1,4-Dioxane	25.000	26.264	-5.1	64	-0.29	1.78
			AvgRF	CCRF	% Dev			
3	t	Pyridine	2.750	2.576	6.3	61	-0.14	2.15
4	t	N-Nitrosodimethylamine	1.722	1.541	10.5	60	-0.26	2.14
5	S	2-Fluorophenol	2.013	1.864	7.4	62	-0.13	3.52
6	t	Indene	2.151	2.121	1.4	66	-0.10	4.77
7	t	Cumene	5.081	5.036	0.9	66	-0.13	3.90
8	S	Phenol-d5	2.206	2.133	3.3	62	-0.09	4.33
9	t	Phenol	2.302	2.210	4.0	63	-0.09	4.34
10		Aniline	2.557	2.541	0.6	69	-0.11	4.30
11	t	bis(2-Chloroethyl)ether	1.645	1.484	9.8	62	-0.10	4.36
12	t	2-Chlorophenol	1.478	1.503	-1.7	68	-0.10	4.41
13	t	Decane	1.400	1.348	3.7	67	-0.10	4.45
14	t	1,3-Dichlorobenzene	1.631	1.612	1.2	68	-0.11	4.51
15	t	1,4-Dichlorobenzene	1.458	1.499	-2.8	70	-0.10	4.58
16	t	Benzyl alcohol	0.808	0.790	2.2	61	-0.09	4.70
17	t	1,2-Dichlorobenzene	1.402	1.493	-6.5	73	-0.10	4.70
18	t	Acetophenone	2.017	1.920	4.8	65	-0.09	4.90
19	t	2-Methylphenol	1.174	1.198	-2.0	68	-0.08	4.81
20	t	2,2'-oxybis(1-Chloropropa	0.340	0.316	7.1	64	-0.08	4.80
21	t	3&4-Methylphenol	1.190	1.192	-0.2	66	-0.07	4.94
22	t	n-Nitroso-di-n-propylamin	1.064	0.983	7.6	63	-0.09	4.91
23	t	Hexachloroethane	0.493	0.484	1.8	68	-0.09	4.97
24	I	Naphthalene-d8	1.000	1.000	0.0	67	-0.10	5.60
25	S	Nitrobenzene-d5	0.538	0.478	11.2	61	-0.11	5.02
26	t	Nitrobenzene	0.527	0.474	10.1	62	-0.11	5.04
27	t	Quinoline	0.707	0.701	0.8	65	-0.09	5.90
28	t	Isophorone	0.925	0.821	11.2	59	-0.11	5.23
29	t	2-Nitrophenol	0.215	0.225	-4.7	68	-0.10	5.30
30	t	2,4-Dimethylphenol	0.381	0.402	-5.5	68	-0.09	5.36
31	t	Benzoic acid	0.335	0.321	4.2	66	-0.09	5.51
32	t	bis(2-Chloroethoxy)methan	0.515	0.454	11.8	60	-0.10	5.42
33	t	2,4-Dichlorophenol	0.301	0.308	-2.3	68	-0.10	5.51
34	t	2,6-Dichlorophenol	0.270	0.282	-4.4	69	-0.09	5.68
35		1,3,5-Trichlorobenzene	0.364	0.381	-4.7	70	-0.11	5.30
36	t	1,2,4-Trichlorobenzene	0.335	0.332	0.9	68	-0.10	5.56
37		1,2,3-Trichlorobenzene	0.295	0.302	-2.4	69	-0.09	5.74

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3839-CC3816
Lab FileID: 2P86897.D

38	t	Naphthalene	0.957	0.994	-3.9	70	-0.10	5.61
39	t	4-Chloroaniline	0.393	0.416	-5.9	69	-0.09	5.68
40	t	2,3-Dichloroaniline	0.378	0.382	-1.1	68	-0.07	6.42
41	t	Caprolactam	0.123	0.114	7.3	61	-0.11	5.98
42	t	Hexachlorobutadiene	0.192	0.187	2.6	66	-0.10	5.73
43	t	4-Chloro-3-methylphenol	0.389	0.399	-2.6	65	-0.07	6.11
44	t	2-Methylnaphthalene	0.609	0.599	1.6	64	-0.08	6.18
45	t	1-Methylnaphthalene	0.667	0.662	0.7	67	-0.08	6.26
46	t	Dimethylnaphthalene	0.615	0.573	6.8	64	-0.07	6.69
47	I	Acenaphthene-d10	1.000	1.000	0.0	68	-0.10	7.03
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	50.000	39.803	20.4#	56	-0.12	6.32
			AvgRF	CCRF	% Dev			
49	t	2,4,6-Trichlorophenol	0.374	0.394	-5.3	68	-0.11	6.43
50	t	2,4,5-Trichlorophenol	0.390	0.418	-7.2	72	-0.11	6.47
51	S	2-Fluorobiphenyl	1.385	1.376	0.6	70	-0.11	6.49
52	t	2-Chloronaphthalene	1.147	1.124	2.0	69	-0.11	6.58
53	t	Biphenyl	1.603	1.561	2.6	67	-0.11	6.57
54	t	2-Nitroaniline	0.492	0.430	12.6	58	-0.10	6.68
55	t	Dimethylphthalate	1.420	1.394	1.8	67	-0.10	6.83
56	t	Acenaphthylene	1.957	1.928	1.5	68	-0.11	6.91
57	t	2,6-Dinitrotoluene	0.311	0.311	0.0	67	-0.10	6.88
58	t	3-Nitroaniline	0.351	0.371	-5.7	68	-0.09	7.02
59	t	Acenaphthene	1.148	1.171	-2.0	69	-0.11	7.05
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	50.516	-1.0	71	-0.09	7.11
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.259	0.242	6.6	59	-0.07	7.20
62	t	Dibenzofuran	1.584	1.652	-4.3	70	-0.10	7.20
63	t	2,4-Dinitrotoluene	0.400	0.411	-2.7	65	-0.08	7.21
64		2,3,4,6-Tetrachlorophenol	0.362	0.328	9.4	65	-0.09	7.32
65	t	Diethylphthalate	1.475	1.493	-1.2	67	-0.08	7.41
66	t	Fluorene	1.358	1.420	-4.6	68	-0.10	7.48
67	t	4-Chlorophenyl-phenylethe	0.653	0.674	-3.2	68	-0.09	7.48
68	t	4-Nitroaniline	0.303	0.335	-10.6	73	-0.09	7.52
69	I	Phenanthrene-d10	1.000	1.000	0.0	70	-0.11	8.28
70	t	4,6-Dinitro-2-methylpheno	0.119	0.136	-14.3	76	-0.08	7.56
71	t	n-Nitrosodiphenylamine	0.540	0.531	1.7	70	-0.09	7.59
72	t	1,2-Diphenylhydrazine	1.053	0.864	17.9	59	-0.09	7.61
73	S	2,4,6-Tribromophenol	0.140	0.119	15.0	67	-0.09	7.68
74	t	4-Bromophenyl-phenylether	0.239	0.229	4.2	68	-0.10	7.88
75	t	Hexachlorobenzene	0.265	0.266	-0.4	70	-0.10	7.95
			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	44.930	10.1	67	-0.11	8.13
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	0.996	1.012	-1.6	71	-0.12	8.30
78	t	Anthracene	1.013	1.032	-1.9	71	-0.12	8.35
79	t	Carbazole	1.048	1.074	-2.5	70	-0.12	8.51
80	t	Di-n-butylphthalate	1.590	1.646	-3.5	67	-0.12	8.89
81	t	Fluoranthene	1.416	1.490	-5.2	67	-0.15	9.55
82	t	Octadecane	0.329	0.310	5.8	66	-0.10	8.21

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3839-CC3816
Lab FileID: 2P86897.D

83	I	Chrysene-d12	1.000	1.000	0.0	72	-0.16	11.46
84	t	Pyrene	1.556	1.482	4.8	68	-0.17	9.82
85	S	Terphenyl-d14	0.995	0.967	2.8	70	-0.16	10.05
86	t	Butylbenzylphthalate	0.873	0.837	4.1	67	-0.15	10.74
87	t	Benzo[a]anthracene	1.502	1.462	2.7	70	-0.16	11.43
		----------	True	Calc.	% Drift	----------		
88	t	3,3'-Dichlorobenzidine	25.000	23.761	5.0	75	-0.16	11.44
		----------	AvgRF	CCRF	% Dev	----------		
89	t	Chrysene	1.066	1.051	1.4	71	-0.17	11.49
90	t	bis(2-Ethylhexyl)phthalat	0.898	0.955	-6.3	72	-0.13	11.61
91	I	Perylene-d12	1.000	1.000	0.0	67	-0.16	13.43
92	t	Di-n-octylphthalate	1.912	2.004	-4.8	65	-0.15	12.54
93	t	Benzo[b]fluoranthene	1.311	1.358	-3.6	64	-0.17	12.94
94	t	Benzo[k]fluoranthene	1.072	1.160	-8.2	74	-0.17	12.97
95	t	Benzo[a]pyrene	1.102	1.141	-3.5	68	-0.16	13.35
96	t	Indeno[1,2,3-cd]pyrene	1.255	1.190	5.2	60	-0.21	14.74
97	t	Dibenz(a,h)acridine	1.088	0.937	13.9	59	-0.18	14.47
98	t	Dibenz[a,h]anthracene	0.978	0.978	0.0	64	-0.22	14.77
99	t	7,12-Dimethylbenz(a)anthr	0.596	0.640	-7.4	72	-0.17	12.93
100	t	Benzo[g,h,i]perylene	0.994	0.911	8.4	57	-0.26	15.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86293a.D M2P3816.M Mon Apr 29 03:21:20 2019

8.7.15

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E2P3839-CC3783
Lab FileID: 2P86898.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\2p3839\2p86898.d Vial: 3
Acq On : 27 Apr 2019 12:50 am Operator: chriss2
Sample : cc3783-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P3816.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Tue Apr 23 04:19:39 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	147	-0.10	4.56
102	Benzaldehyde	1.446	1.291	10.7	125	-0.20	4.20
103 I	Naphthalene-d8a	1.000	1.000	0.0	142	-0.10	5.59
104	Hydroquinone	0.302	0.361	-19.5	171	-0.10	5.99
105 I	Acenaphthene-d10a	1.000	1.000	0.0	162	-0.10	7.03
	----------	True	Calc.	% Drift	----------		
106	Atrazine	25.000	27.308	-9.2	177	-0.16	8.05
	----------	AvgRF	CCRF	% Dev	----------		
107	1,2,4,5-Tetrachlorobenzen	0.599	0.601	-0.3	159	-0.20	6.32
108 I	Chrysene-d12a	1.000	1.000	0.0	225#	-0.17	11.44
	----------	True	Calc.	% Drift	----------		
109	Benzidine	----------NA----------					
	----------	AvgRF	CCRF	% Dev	----------		
110 I	Phenanthrene-d10a	1.000	1.000	0.0	150	-0.11	8.28
111 s	1-Chlorooctadecane	0.301	0.331	-10.0	137	-0.22	9.48
112 s	o-terphenyl	0.538	0.575	-6.9	152	-0.22	8.65
	----------	True	Calc.	% Drift	----------		
113	Pentachloronitrobenzene	25.000	29.174	-16.7	181	-0.20	8.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p86293a.D M2P3816.M Mon Apr 29 03:21:27 2019

8.7.16

8

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

Response Factor Report MSM

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

Calibration Files
2 =m153407.D 5 =m153406.D 100 =m153401a.D 50 =m153403.D
1 =m153408.D 10 =m153405.D 80 =m153402.D 25 =m153404.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.708	0.743	0.878	0.834	0.754	0.769	0.838	0.806	0.791	7.22
3) Pyridine	1.719	1.899	2.080	1.986	1.599	1.929	2.017	2.015	1.906	8.67
4) N-Nitrosodim	0.611	0.658	0.748	0.726	0.596	0.660	0.712	0.712	0.678	8.19
5) 2-Fluorophen	1.392	1.557	1.642	1.697	1.337	1.606	1.626	1.654	1.564	8.32
6) Indene	2.197	2.273	1.875	2.043	2.326	2.246	1.879	2.081	2.115	8.25
7) Cumene	3.772	3.943	3.403	3.707	3.790	3.993	3.431	3.854	3.737	5.83
8) Phenol-d5	1.761	1.954	1.939	2.047	1.803	2.022	1.926	1.997	1.931	5.25
9) Phenol	2.008	2.159	1.806	2.027	2.088	2.201	1.835	2.112	2.030	7.08
10) Aniline	2.230	2.299		1.746	2.255	2.178	1.604	1.919	2.033	13.60
11) bis(2-Chloro	1.442	1.502	1.304	1.367	1.444	1.477	1.291	1.404	1.404	5.53
12) 2-Chlorophen	1.342	1.505	1.320	1.415	1.325	1.493	1.323	1.431	1.394	5.56
13) Decane	1.149	1.177	0.887	0.992	1.191	1.157	0.904	1.063	1.065	11.59
14) 1,3-Dichloro	1.704	1.742	1.423	1.582	1.760	1.682	1.435	1.629	1.620	8.08
15) 1,4-Dichloro	1.545	1.528	1.346	1.462	1.480	1.533	1.382	1.491	1.471	4.92
16) Benzyl alcoh	0.716	0.815	0.858	0.887	0.795	0.828	0.836	0.838	0.822	6.20
17) 1,2-Dichloro	1.478	1.541	1.289	1.452	1.528	1.552	1.324	1.480	1.455	6.77
18) Acetophenone	1.906	1.989	1.617	1.746	2.053	1.960	1.627	1.824	1.840	8.97
19) 2-Methylphen	1.157	1.289	1.049	1.152	1.225	1.264	1.052	1.202	1.174	7.63
20) 2,2'-oxybis(	0.347	0.382	0.334	0.356	0.421	0.370	0.335	0.358	0.363	7.84
21) 3&4-Methylph	1.176	1.253	1.052	1.174	1.212	1.284	1.084	1.208	1.180	6.68
22) n-Nitroso-di	0.983	1.035	0.775	0.855	0.991	1.011	0.778	0.915	0.918	11.35
23) Hexachloroet	0.615	0.653	0.576	0.628	0.629	0.644	0.590	0.637	0.621	4.29
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.405	0.451	0.411	0.428	0.422	0.451	0.411	0.436	0.427	4.23
26) Nitrobenzene	0.423	0.440	0.377	0.407	0.412	0.450	0.385	0.420	0.414	6.01
27) Quinoline	0.727	0.785	0.726	0.777	0.735	0.801	0.739	0.772	0.758	3.87
28) Isophorone	0.769	0.806	0.711	0.775	0.767	0.826	0.729	0.801	0.773	5.02
29) 2-Nitropheno	0.156	0.189	0.192	0.216	0.144	0.215	0.205	0.216	0.192	14.59
30) 2,4-Dimethyl	0.268	0.310	0.342	0.348	0.251	0.321	0.347	0.351	0.317	12.19
31) Benzoic acid		0.168	0.256	0.297		0.239	0.292	0.262	0.252	18.58
32) bis(2-Chloro	0.476	0.495	0.432	0.456	0.503	0.488	0.438	0.463	0.469	5.55
33) 2,4-Dichloro	0.318	0.354	0.303	0.339	0.331	0.350	0.318	0.348	0.333	5.47
34) 2,6-Dichloro	0.297	0.328	0.277	0.303	0.288	0.324	0.285	0.312	0.302	6.18
35) 1,3,5-Trichl	0.456	0.454	0.341	0.390	0.474	0.450	0.355	0.421	0.418	12.02
36) 1,2,4-Trichl	0.439	0.438	0.348	0.390	0.434	0.433	0.364	0.408	0.407	8.83
37) 1,2,3-Trichl	0.403	0.405	0.315	0.351	0.442	0.402	0.328	0.374	0.378	11.49
38) Naphthalene	0.990	1.041	0.871	0.955	1.062	1.027	0.900	0.989	0.979	6.87
39) 4-Chloroanil	0.451	0.466	0.383	0.434	0.432	0.467	0.399	0.441	0.434	6.85
40) 2,3-Dichloro	0.432	0.459	0.379	0.418	0.416	0.458	0.395	0.436	0.424	6.62
41) Caprolactam	0.133	0.160	0.163	0.166	0.122	0.165	0.164	0.159	0.154	10.90
42) Hexachlorobu	0.245	0.261	0.213	0.234	0.261	0.260	0.220	0.245	0.242	7.75
43) 4-Chloro-3-m	0.311	0.354	0.344	0.372	0.286	0.369	0.352	0.367	0.344	8.87
44) 2-Methylnaph	0.614	0.662	0.549	0.614	0.649	0.668	0.575	0.637	0.621	6.76
45) 1-Methylnaph	0.822	0.839	0.690	0.768	0.854	0.835	0.713	0.795	0.790	7.72

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

```
46) Dimethylnaph 0.710 0.748 0.603 0.672 0.698 0.746 0.624 0.699 0.687   7.63

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.348 0.400 0.384 0.414 0.335 0.419 0.397 0.415 0.389   8.17
49) 2,4,6-Trichl 0.448 0.456 0.391 0.426 0.418 0.474 0.404 0.447 0.433   6.49
50) 2,4,5-Trichl 0.470 0.471 0.434 0.465 0.442 0.509 0.458 0.467 0.465   4.87
51) 2-Fluorobiph 1.636 1.609 1.284 1.377 1.646 1.579 1.311 1.454 1.487  10.04
52) 2-Chloronaph 1.385 1.362 1.026 1.108 1.411 1.306 1.054 1.193 1.231  12.62
53) Biphenyl     1.718 1.712 1.406 1.518 1.746 1.720 1.431 1.605 1.607   8.64
54) 2-Nitroanili 0.238 0.328 0.375 0.374 0.254 0.359 0.371 0.356 0.332  16.70
55) Dimethylphth 1.523 1.567 1.384 1.472 1.580 1.595 1.408 1.498 1.503   5.21
56) Acenaphthyle 2.012 2.074 1.715 1.849 2.035 2.078 1.751 1.942 1.932   7.46
57) 2,6-Dinitrot 0.208 0.271 0.307 0.330 0.195 0.308 0.314 0.320 0.282  18.60
58) 3-Nitroanili 0.258 0.324 0.368 0.376       0.367 0.371 0.366 0.347  12.41
59) Acenaphthene 1.184 1.223 1.081 1.142 1.219 1.222 1.112 1.177 1.170   4.59
60) 2,4-Dinitrop 0.037 0.065 0.162 0.168       0.101 0.170 0.133 0.119  44.46
         ----- Quadratic regression -----              Coefficient =  0.9976
              Response Ratio = -0.03138 + 0.18187 *A + -0.00221 *A^2

61) 4-Nitropheno       0.151 0.212 0.209       0.183 0.205 0.196 0.193  11.89
62) Dibenzofuran 1.894 1.911 1.525 1.637 1.871 1.865 1.554 1.736 1.749   9.08
63) 2,4-Dinitrot 0.224 0.340 0.380 0.398 0.229 0.399 0.381 0.397 0.344  21.80
         ----- Quadratic regression -----              Coefficient =  0.9999
              Response Ratio = -0.00674 + 0.41733 *A + -0.01431 *A^2

64) 2,3,4,6-Tetr 0.354 0.432 0.430 0.461 0.292 0.459 0.441 0.459 0.416  14.64
65) Diethylphtha 1.430 1.511 1.380 1.463 1.412 1.539 1.399 1.488 1.453   3.92
66) Fluorene     1.516 1.533 1.303 1.397 1.567 1.528 1.331 1.438 1.452   6.88
67) 4-Chlorophen 0.802 0.818 0.646 0.699 0.848 0.799 0.666 0.752 0.754   9.97
68) 4-Nitroanili 0.258 0.325 0.333 0.335 0.222 0.338 0.328 0.334 0.309  14.20

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.040 0.064 0.119 0.126       0.091 0.127 0.108 0.096  34.65
         ----- Quadratic regression -----              Coefficient =  0.9979
              Response Ratio = -0.01033 + 0.14209 *A + -0.00691 *A^2

71) n-Nitrosodip 0.547 0.581 0.465 0.508 0.565 0.574 0.479 0.534 0.532   8.25
72) 1,2-Diphenyl 0.746 0.781 0.656 0.692 0.763 0.791 0.668 0.735 0.729   7.05
73) 2,4,6-Tribro 0.105 0.140 0.134 0.148 0.112 0.148 0.141 0.148 0.135  12.52
74) 4-Bromopheny 0.273 0.289 0.243 0.269 0.287 0.294 0.254 0.275 0.273   6.54
75) Hexachlorobe 0.336 0.325 0.254 0.282 0.343 0.323 0.264 0.299 0.303  11.10
76) Pentachlorop 0.114 0.167 0.168 0.186       0.185 0.175 0.188 0.169  15.31
77) Phenanthrene 1.093 1.072 0.832 0.913 1.139 1.050 0.861 0.975 0.992  11.50
78) Anthracene   1.096 1.138 0.912 1.003 1.077 1.134 0.941 1.056 1.045   8.13
79) Carbazole    1.008 1.095 0.897 0.986 0.992 1.090 0.928 1.038 1.004   7.00
80) Di-n-butylph 1.063 1.269 1.168 1.274 1.029 1.350 1.206 1.321 1.210   9.67
81) Fluoranthene 1.306 1.426 1.155 1.283 1.315 1.441 1.201 1.362 1.311   7.63
82) Octadecane   0.318 0.339 0.293 0.313 0.325 0.346 0.304 0.330 0.321   5.47

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.449 1.522 1.423 1.470 1.454 1.535 1.390 1.474 1.465   3.28
85) Terphenyl-d1 1.025 1.080 1.100 1.104 1.041 1.111 1.071 1.098 1.079   2.90
86) Butylbenzylp 0.422 0.545 0.671 0.671       0.609 0.656 0.638 0.602  15.09
87) Benzo[a]anth 1.245 1.356 1.360 1.463 1.305 1.401 1.408 1.419 1.370   5.07
88) 3,3'-Dichlor 0.325 0.417 0.525 0.516       0.457 0.509 0.488 0.463  15.43
89) Chrysene     1.227 1.229 1.237 1.216 1.232 1.224 1.177 1.196 1.217   1.70
90) bis(2-Ethylh 0.429 0.641 0.885 0.849       0.736 0.822 0.795 0.737  21.41
         ----- Quadratic regression -----              Coefficient =  0.9986
              Response Ratio = -0.01303 + 0.78239 *A + 0.03842 *A^2
```

8.7.17

8

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

```
 91) I   Perylene-d12          ----------------ISTD--------------------
 92) Di-n-octylph 0.593 0.938 1.309 1.353       1.204 1.308 1.292 1.142  24.47
          ----- Quadratic regression -----                Coefficient =  0.9998
               Response Ratio = -0.05184 + 1.42207 *A + -0.03846 *A^2

 93) Benzo[b]fluo 1.115 1.346 1.253 1.322 0.999 1.407 1.283 1.357 1.260  10.92
 94) Benzo[k]fluo 1.279 1.297 1.061 1.153 1.238 1.296 1.064 1.208 1.200   8.13
 95) Benzo[a]pyre 0.955 1.160 1.036 1.200 0.887 1.245 1.147 1.219 1.106  11.88
 96) Indeno[1,2,3 0.695 0.937 1.073 1.100 0.589 1.099 1.069 1.119 0.960  21.46
          ----- Quadratic regression -----                Coefficient =  0.9999
               Response Ratio = -0.01582 + 1.14231 *A + -0.02711 *A^2

 97) Dibenz(a,h)a 0.719 0.949 1.041 1.109       1.095 1.056 1.131 1.014  14.13
 98) Dibenz[a,h]a 0.822 1.081 1.067 1.108 0.708 1.172 1.069 1.129 1.020  16.04
 99) 7,12-Dimethy 0.350 0.395 0.534 0.542       0.490 0.525 0.546 0.483  16.29
100) Benzo[g,h,i] 0.883 1.072 1.069 1.118 0.845 1.179 1.072 1.154 1.049  11.58

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MM6556.M          Mon Apr 15 12:00:07 2019
```

8.7.17

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153409.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153409.D Vial: 10
Acq On : 12 Apr 2019 9:43 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:20:55 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	4.59
4	t	N-Nitrosodimethylamine	0.678	0.565	16.7	76	0.01	2.42
11	t	bis(2-Chloroethyl)ether	1.404	1.437	-2.4	102	0.00	4.39
14	t	1,3-Dichlorobenzene	1.620	1.516	6.4	93	0.00	4.55
15	t	1,4-Dichlorobenzene	1.471	1.383	6.0	92	0.00	4.60
17	t	1,2-Dichlorobenzene	1.455	1.349	7.3	90	0.00	4.72
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.401	-10.5	110	0.00	4.80
22	t	n-Nitroso-di-n-propylamin	0.918	0.943	-2.7	107	0.00	4.91
23	t	Hexachloroethane	0.621	0.560	9.8	87	0.00	5.00
24	I	Naphthalene-d8	1.000	1.000	0.0	90	0.00	5.70
26	t	Nitrobenzene	0.414	0.373	9.9	83	0.00	5.04
28	t	Isophorone	0.773	0.707	8.5	82	0.00	5.25
32	t	bis(2-Chloroethoxy)methan	0.469	0.458	2.3	91	0.00	5.46
36	t	1,2,4-Trichlorobenzene	0.407	0.384	5.7	89	0.00	5.64
38	t	Naphthalene	0.979	0.926	5.4	87	0.00	5.72
42	t	Hexachlorobutadiene	0.242	0.234	3.3	90	0.00	5.86
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
48	t	Hexachlorocyclopentadiene	0.389	0.377	3.1	81	0.00	6.73
52	t	2-Chloronaphthalene	1.231	1.176	4.5	95	0.00	7.15
55	t	Dimethylphthalate	1.503	1.333	11.3	81	0.00	7.61
56	t	Acenaphthylene	1.932	1.650	14.6	80	0.00	7.76
57	t	2,6-Dinitrotoluene	0.282	0.244	13.5	66	0.00	7.68
59	t	Acenaphthene	1.170	0.994	15.0	78	0.00	8.04
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	50.000	38.321	23.4	68	0.00	8.33
		----------	AvgRF	CCRF	% Dev	----------		
65	t	Diethylphthalate	1.453	1.283	11.7	79	0.00	8.79
66	t	Fluorene	1.452	1.263	13.0	81	0.00	8.90
67	t	4-Chlorophenyl-phenylethe	0.754	0.629	16.6	81	0.00	8.94
69	I	Phenanthrene-d10	1.000	1.000	0.0	85	0.00	10.57

8.7.18
8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153409.D

71	t	n-Nitrosodiphenylamine	0.532	0.445	16.4	74	0.00	9.15
72	t	1,2-Diphenylhydrazine	0.729	0.634	13.0	78	0.00	9.21
74	t	4-Bromophenyl-phenylether	0.273	0.245	10.3	77	0.00	9.80
75	t	Hexachlorobenzene	0.303	0.254	16.2	76	0.00	9.89
77	t	Phenanthrene	0.992	0.904	8.9	84	0.00	10.62
78	t	Anthracene	1.045	0.924	11.6	78	0.00	10.71
80	t	Di-n-butylphthalate	1.210	1.104	8.8	74	0.00	11.88
81	t	Fluoranthene	1.311	1.142	12.9	76	0.00	12.89
83	I	Chrysene-d12	1.000	1.000	0.0	79	0.00	15.71
84	t	Pyrene	1.465	1.357	7.4	73	0.00	13.31
86	t	Butylbenzylphthalate	0.602	0.596	1.0	70	0.00	14.80
87	t	Benzo[a]anthracene	1.370	1.292	5.7	70	0.00	15.69
89	t	Chrysene	1.217	1.090	10.4	71	0.00	15.75
			True	Calc.	% Drift			
90	t	bis(2-Ethylhexyl)phthalat	50.000	45.228	9.5	68	0.00	16.03
			AvgRF	CCRF	% Dev			
91	I	Perylene-d12	1.000	1.000	0.0	75	0.00	18.30
			True	Calc.	% Drift			
92	t	Di-n-octylphthalate	50.000	44.043	11.9	65	0.00	17.25
			AvgRF	CCRF	% Dev			
93	t	Benzo[b]fluoranthene	1.260	1.158	8.1	66	0.00	17.67
94	t	Benzo[k]fluoranthene	1.200	1.130	5.8	74	-0.01	17.72
95	t	Benzo[a]pyrene	1.106	1.111	-0.5	70	0.00	18.20
			True	Calc.	% Drift			
96	t	Indeno[1,2,3-cd]pyrene	50.000	46.704	6.6	70	-0.01	19.96
			AvgRF	CCRF	% Dev			
98	t	Dibenz[a,h]anthracene	1.020	0.964	5.5	66	0.00	20.02
100	t	Benzo[g,h,i]perylene	1.049	1.073	-2.3	72	0.00	20.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:24:59 2019

8.7.18

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153410.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153410.D Vial: 11
Acq On : 12 Apr 2019 10:12 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:20:55 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	4.59
2	t	1,4-Dioxane	0.791	0.669	15.4	83	0.02	2.14
6	t	Indene	2.115	2.248	-6.3	114	0.00	4.79
7	t	Cumene	3.737	3.309	11.5	92	0.00	4.00
13	t	Decane	1.065	0.918	13.8	96	0.00	4.48
18	t	Acetophenone	1.840	1.709	7.1	101	0.00	4.90
24	I	Naphthalene-d8	1.000	1.000	0.0	106	0.00	5.70
27	t	Quinoline	0.758	0.648	14.5	88	-0.02	6.07
40	t	2,3-Dichloroaniline	0.424	0.327	22.9	83	0.00	6.87
41	t	Caprolactam	0.154	0.115	25.3	74	-0.04	6.14
45	t	1-Methylnaphthalene	0.790	0.638	19.2	88	0.00	6.63
46	t	Dimethylnaphthalene	0.687	0.576	16.2	91	0.00	7.36
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
53	t	Biphenyl	1.607	1.507	6.2	90	0.00	7.13
69	I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00	10.57
82	t	Octadecane	0.321	0.314	2.2	91	0.00	10.61
83	I	Chrysene-d12	1.000	1.000	0.0	105	-0.02	15.70
		----------	AvgRF	CCRF	% Dev		----------	
91	I	Perylene-d12	1.000	1.000	0.0	77	0.00	18.30
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.387	19.9	55	-0.02	17.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:34:24 2019

8.7.19

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153411.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153411.D Vial: 12
Acq On : 12 Apr 2019 10:40 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:38:00 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	4.59
9	t	Phenol	2.030	1.988	2.1	99	0.00	4.34
12	t	2-Chlorophenol	1.394	1.399	-0.4	99	0.00	4.43
19	t	2-Methylphenol	1.174	1.239	-5.5	108	0.00	4.78
21	t	3&4-Methylphenol	1.180	1.273	-7.9	109	0.00	4.91
24	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	5.70
29	t	2-Nitrophenol	0.192	0.214	-11.5	90	0.00	5.33
30	t	2,4-Dimethylphenol	0.317	0.372	-17.4	97	0.00	5.37
31	t	Benzoic acid	0.252	0.240	4.8	74	-0.02	5.48
33	t	2,4-Dichlorophenol	0.333	0.329	1.2	88	0.00	5.55
34	t	2,6-Dichlorophenol	0.302	0.324	-7.3	97	0.00	5.78
43	t	4-Chloro-3-methylphenol	0.344	0.347	-0.9	85	-0.02	6.32
47	I	Acenaphthene-d10	1.000	1.000	0.0	92	0.00	7.99
49	t	2,4,6-Trichlorophenol	0.433	0.467	-7.9	101	0.00	6.88
50	t	2,4,5-Trichlorophenol	0.465	0.447	3.9	89	-0.01	6.93
		----------	True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	37.761	24.5	76	-0.02	8.10
		----------	AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.193	0.172	10.9	76	-0.02	8.25
		----------	AvgRF	CCRF	% Dev			
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.402	3.4	81	0.00	8.54
69	I	Phenanthrene-d10	1.000	1.000	0.0	81	0.00	10.57
		----------	True	Calc.	% Drift			
70	t	4,6-Dinitro-2-methylpheno	50.000	46.695	6.6	75	-0.02	9.01
76	t	Pentachlorophenol	0.169	0.216	-27.8	94	0.00	10.26

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:41:07 2019

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153413.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153413.D Vial: 14
Acq On : 12 Apr 2019 11:37 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	4.59
5	S	2-Fluorophenol	1.564	1.346	13.9	85	0.00	3.61
8	S	Phenol-d5	1.931	1.610	16.6	84	0.00	4.32
24	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00	5.70
25	S	Nitrobenzene-d5	0.427	0.382	10.5	91	0.00	5.03
47	I	Acenaphthene-d10	1.000	1.000	0.0	93	0.00	7.99
51	S	2-Fluorobiphenyl	1.487	1.360	8.5	92	0.00	7.00
69	I	Phenanthrene-d10	1.000	1.000	0.0	85	0.00	10.57
73	S	2,4,6-Tribromophenol	0.135	0.136	-0.7	78	0.00	9.32
83	I	Chrysene-d12	1.000	1.000	0.0	85	-0.01	15.70
85	S	Terphenyl-d14	1.079	1.040	3.6	80	0.00	13.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:56:06 2019

8.7.21

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153414.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153414.D Vial: 15
Acq On : 13 Apr 2019 12:06 am Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	155	0.00	15.71
88 t	3,3'-Dichlorobenzidine	0.463	0.428	7.6	129	0.00	15.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:59:07 2019

8.7.22

8

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICC6557
Lab FileID: M153422.D

Response Factor Report MSM

Method : C:\MSDCHEM\1\METHODS\MM6557.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

Calibration Files
2 =m153426.D 5 =m153425.D 100 =m153420.D 50 =m153422.D
1 =m153427.D 10 =m153424.D 80 =m153421.D 25 =m153423.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
101) I 1,4-Dichlorobenzene-d	ISTD									
102) Benzaldehyde	1.151	1.145	1.016	1.112	1.161	1.125	1.076	1.194	1.122	4.93
103) I Acenaphthene-d10a	ISTD									
104) 1,2,4,5-Tetr	0.709	0.733	0.583	0.654	0.751	0.705	0.610	0.718	0.683	8.87
105) Atrazine	0.138	0.163	0.196	0.213		0.186	0.202	0.214	0.187	14.95
108) Chrysene-d12b	ISTD									
109) 1-chloroocta		0.208	0.240	0.265		0.238	0.246	0.280	0.246	9.95
110) I Phenanthrene-d10a	ISTD									
111) o-terphenyl	0.576	0.606	0.551	0.609	0.568	0.607	0.572	0.661	0.594	5.80
112) Pentachloron		0.033	0.052	0.054		0.041	0.053	0.051	0.047#	18.00
113) I Naphthalene-d8a	ISTD									
114) Hydroquinone			0.353	0.351		0.240	0.356	0.328	0.326	15.05

(#) = Out of Range ### Number of calibration levels exceeded format ###

MM6556.M Mon Apr 15 12:56:13 2019

8.7.23

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICV6557
Lab FileID: M153441.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6557\m153441.D Vial: 21
Acq On : 14 Apr 2019 7:00 pm Operator: chriss2
Sample : icv6557-50 Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	101	0.00	4.59
102	t	Benzaldehyde	1.122	1.084	3.4	99	0.00	4.26
103	I	Acenaphthene-d10a	1.000	1.000	0.0	103	0.00	7.99
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.641	6.1	101	0.00	6.73
105	t	Atrazine	0.187	0.205	-9.6	99	0.01	10.19
110	I	Phenanthrene-d10a	1.000	1.000	0.0	100	0.00	10.57
112		Pentachloronitrobenzene	0.047	0.047#	0.0	86	0.00	10.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153422a.D MM6556.M Mon Apr 15 12:56:40 2019

8.7.24
8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICV6557
Lab FileID: M153442.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6557\m153442.D Vial: 22
Acq On : 14 Apr 2019 7:28 pm Operator: chriss2
Sample : icv6557-50 Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
113 I	Naphthalene-d8a	1.000	1.000	0.0	116	0.00	5.69
114	Hydroquinone	0.326	0.304	6.7	101	0.00	6.14

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153422a.D MM6556.M Mon Apr 15 12:56:42 2019

8.7.25

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6559-ICV6556
Lab FileID: M153444.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6559\m153444.D Vial: 2
Acq On : 15 Apr 2019 2:05 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6559,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 13:37:21 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	4.59
3	t	Pyridine	1.906	1.645	13.7	82	0.08	2.53
10	t	Aniline	2.033	2.248	-10.6	127	0.00	4.35
16	t	Benzyl alcohol	0.822	0.855	-4.0	95	0.00	4.70
24	I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.69
39	t	4-Chloroaniline	0.434	0.404	6.9	94	0.00	5.77
44	t	2-Methylnaphthalene	0.621	0.527	15.1	86	0.00	6.50
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
54	t	2-Nitroaniline	0.332	0.313	5.7	75	-0.01	7.30
58	t	3-Nitroaniline	0.347	0.328	5.5	78	-0.01	7.93
62	t	Dibenzofuran	1.749	1.620	7.4	89	0.00	8.32
68	t	4-Nitroaniline	0.309	0.317	-2.6	85	-0.02	8.95
69	I	Phenanthrene-d10	1.000	1.000	0.0	83	-0.01	10.57
79	t	Carbazole	1.004	0.941	6.3	79	-0.01	11.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Mon Apr 15 14:54:07 2019

8.7.26

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6566-CC6556
Lab FileID: M153630.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\em6566\m153630.d Vial: 2
Acq On : 20 Apr 2019 10:56 pm Operator: carolb
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu Apr 18 21:21:30 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	67	-0.05	4.54
2	t	1,4-Dioxane	0.791	0.613	22.5#	50#	-0.06	2.06
3	t	Pyridine	1.906	1.396	26.8#	47#	-0.05	2.40
4	t	N-Nitrosodimethylamine	0.678	0.539	20.5#	50	-0.05	2.35
5	S	2-Fluorophenol	1.564	1.328	15.1	53	-0.04	3.56
6	t	Indene	2.115	2.141	-1.2	71	-0.05	4.74
7	t	Cumene	3.737	3.173	15.1	58	-0.05	3.94
8	S	Phenol-d5	1.931	1.693	12.3	56	-0.04	4.28
9	t	Phenol	2.030	1.878	7.5	62	-0.04	4.29
10	t	Aniline	2.033	1.743	14.3	67	-0.05	4.30
11	t	bis(2-Chloroethyl)ether	1.404	1.154	17.8	57	-0.05	4.35
12	t	2-Chlorophenol	1.394	1.333	4.4	64	-0.05	4.39
13	t	Decane	1.065	1.032	3.1	70	-0.05	4.43
14	t	1,3-Dichlorobenzene	1.620	1.576	2.7	67	-0.05	4.50
15	t	1,4-Dichlorobenzene	1.471	1.474	-0.2	68	-0.05	4.55
16	t	Benzyl alcohol	0.822	0.787	4.3	60	-0.05	4.65
17	t	1,2-Dichlorobenzene	1.455	1.419	2.5	66	-0.05	4.67
18	t	Acetophenone	1.840	1.722	6.4	67	-0.05	4.85
19	t	2-Methylphenol	1.174	1.129	3.8	66	-0.04	4.75
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.305	16.0	58	-0.05	4.75
21	t	3&4-Methylphenol	1.180	1.185	-0.4	68	-0.05	4.86
22	t	n-Nitroso-di-n-propylamin	0.918	0.868	5.4	68	-0.05	4.86
23	t	Hexachloroethane	0.621	0.595	4.2	64	-0.05	4.94
24	I	Naphthalene-d8	1.000	1.000	0.0	62	-0.06	5.64
25	S	Nitrobenzene-d5	0.427	0.379	11.2	55	-0.05	4.98
26	t	Nitrobenzene	0.414	0.376	9.2	58	-0.05	4.99
27	t	Quinoline	0.758	0.714	5.8	57	-0.07	6.02
28	t	Isophorone	0.773	0.694	10.2	56	-0.06	5.20
29	t	2-Nitrophenol	0.192	0.228	-18.8	66	-0.06	5.27
30	t	2,4-Dimethylphenol	0.317	0.321	-1.3	58	-0.05	5.32
31	t	Benzoic acid	0.252	0.260	-3.2	55	-0.07	5.43
32	t	bis(2-Chloroethoxy)methan	0.469	0.414	11.7	57	-0.06	5.40
33	t	2,4-Dichlorophenol	0.333	0.336	-0.9	62	-0.05	5.50
34	t	2,6-Dichlorophenol	0.302	0.315	-4.3	65	-0.07	5.72
35	t	1,3,5-Trichlorobenzene	0.418	0.418	0.0	67	-0.06	5.29
36	t	1,2,4-Trichlorobenzene	0.407	0.386	5.2	62	-0.07	5.58
37	t	1,2,3-Trichlorobenzene	0.378	0.360	4.8	64	-0.07	5.81
38	t	Naphthalene	0.979	1.004	-2.6	66	-0.06	5.66
39	t	4-Chloroaniline	0.434	0.443	-2.1	64	-0.06	5.72
40	t	2,3-Dichloroaniline	0.424	0.418	1.4	63	-0.08	6.80
41	t	Caprolactam	0.154	0.146	5.2	55	-0.07	6.11

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6566-CC6556
Lab FileID: M153630.D

42	t	Hexachlorobutadiene	0.242	0.227	6.2	61	-0.07	5.80
43	t	4-Chloro-3-methylphenol	0.344	0.313	9.0	53	-0.07	6.27
44	t	2-Methylnaphthalene	0.621	0.597	3.9	61	-0.07	6.44
45	t	1-Methylnaphthalene	0.790	0.769	2.7	63	-0.07	6.56
46	t	Dimethylnaphthalene	0.687	0.639	7.0	59	-0.08	7.29
47	I	Acenaphthene-d10	1.000	1.000	0.0	58	-0.09	7.91
48	t	Hexachlorocyclopentadiene	0.389	0.490	-26.0#	69	-0.08	6.65
49	t	2,4,6-Trichlorophenol	0.433	0.469	-8.3	64	-0.08	6.81
50	t	2,4,5-Trichlorophenol	0.465	0.488	-4.9	61	-0.07	6.87
51	S	2-Fluorobiphenyl	1.487	1.467	1.3	62	-0.08	6.93
52	t	2-Chloronaphthalene	1.231	1.197	2.8	63	-0.08	7.08
53	t	Biphenyl	1.607	1.630	-1.4	63	-0.08	7.06
54	t	2-Nitroaniline	0.332	0.381	-14.8	59	-0.08	7.24
55	t	Dimethylphthalate	1.503	1.383	8.0	55	-0.08	7.54
56	t	Acenaphthylene	1.932	1.944	-0.6	61	-0.08	7.68
57	t	2,6-Dinitrotoluene	0.282	0.324	-14.9	57	-0.08	7.61
58	t	3-Nitroaniline	0.347	0.368	-6.1	57	-0.08	7.86
59	t	Acenaphthene	1.170	1.212	-3.6	62	-0.09	7.96
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	119.929	-19.9	69	-0.09	8.03
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.193	0.167	13.5	46#	-0.07	8.20
62	t	Dibenzofuran	1.749	1.764	-0.9	63	-0.08	8.24
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	50.000	54.806	-9.6	63	-0.09	8.25
		----------	AvgRF	CCRF	% Dev	----------		
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.467	-12.3	59	-0.08	8.47
65	t	Diethylphthalate	1.453	1.362	6.3	54	-0.09	8.71
66	t	Fluorene	1.452	1.449	0.2	60	-0.09	8.82
67	t	4-Chlorophenyl-phenylethe	0.754	0.704	6.6	59	-0.09	8.85
68	t	4-Nitroaniline	0.309	0.330	-6.8	57	-0.09	8.88
69	I	Phenanthrene-d10	1.000	1.000	0.0	55	-0.10	10.48
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	60.189	-20.4#	65	-0.09	8.94
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.532	0.530	0.4	57	-0.09	9.07
72	t	1,2-Diphenylhydrazine	0.729	0.661	9.3	52	-0.09	9.13
73	S	2,4,6-Tribromophenol	0.135	0.175	-29.6#	65	-0.09	9.24
74	t	4-Bromophenyl-phenylether	0.273	0.276	-1.1	56	-0.09	9.72
75	t	Hexachlorobenzene	0.303	0.315	-4.0	61	-0.09	9.80
76	t	Pentachlorophenol	0.169	0.217	-28.4#	64	-0.09	10.18
77	t	Phenanthrene	0.992	1.067	-7.6	64	-0.09	10.53
78	t	Anthracene	1.045	1.066	-2.0	58	-0.10	10.62
79	t	Carbazole	1.004	1.035	-3.1	58	-0.09	10.97
80	t	Di-n-butylphthalate	1.210	1.259	-4.0	54	-0.09	11.79
81	t	Fluoranthene	1.311	1.280	2.4	55	-0.10	12.79
82	t	Octadecane	0.321	0.341	-6.2	60	-0.09	10.52
83	I	Chrysene-d12	1.000	1.000	0.0	59	-0.11	15.60
84	t	Pyrene	1.465	1.404	4.2	56	-0.10	13.21
85	S	Terphenyl-d14	1.079	1.044	3.2	56	-0.10	13.64
86	t	Butylbenzylphthalate	0.602	0.594	1.3	52	-0.10	14.70

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6566-CC6556
Lab FileID: M153630.D

87	t	Benzo[a]anthracene	1.370	1.333	2.7	54	-0.11	15.58
88	t	3,3'-Dichlorobenzidine	0.463	0.512	-10.6	58	-0.10	15.63
89	t	Chrysene	1.217	1.168	4.0	56	-0.11	15.65
		----------	True	Calc.	% Drift	----------		
90	t	bis(2-Ethylhexyl)phthalat	50.000	47.436	5.1	54	-0.11	15.92
		----------	AvgRF	CCRF	% Dev	----------		
91	I	Perylene-d12	1.000	1.000	0.0	55	-0.11	18.19
		----------	True	Calc.	% Drift	----------		
92	t	Di-n-octylphthalate	50.000	47.338	5.3	51	-0.11	17.14
		----------	AvgRF	CCRF	% Dev	----------		
93	t	Benzo[b]fluoranthene	1.260	1.336	-6.0	55	-0.11	17.56
94	t	Benzo[k]fluoranthene	1.200	1.153	3.9	55	-0.11	17.62
95	t	Benzo[a]pyrene	1.106	1.159	-4.8	53	-0.11	18.10
		----------	True	Calc.	% Drift	----------		
96	t	Indeno[1,2,3-cd]pyrene	50.000	48.666	2.7	53	-0.13	19.84
		----------	AvgRF	CCRF	% Dev	----------		
97	t	Dibenz(a,h)acridine	1.014	1.047	-3.3	52	-0.11	19.52
98	t	Dibenz[a,h]anthracene	1.020	1.067	-4.6	53	-0.13	19.89
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.590	-22.2#	60	-0.12	17.58
100	t	Benzo[g,h,i]perylene	1.049	1.052	-0.3	52	-0.14	20.25

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Mon Apr 22 00:46:05 2019

8.7.27

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6566-CC6557
Lab FileID: M153631.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\michellc\em6566\m153631.d Vial: 3
Acq On : 20 Apr 2019 11:24 pm Operator: carolb
Sample : cc6557-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu Apr 18 21:21:30 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	67	-0.05	4.54
102	t	Benzaldehyde	1.122	1.061	5.4	64	-0.05	4.21
103	I	Acenaphthene-d10a	1.000	1.000	0.0	67	-0.08	7.91
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.699	-2.3	72	-0.07	6.66
105	t	Atrazine	0.187	0.224	-19.8	71	-0.07	10.10
108		Chrysene-d12b	1.000	1.000	0.0	69	-0.10	15.59
109	s	1-chlorooctadecane	0.246	0.270	-9.8	70	-0.09	12.83
110	I	Phenanthrene-d10a	1.000	1.000	0.0	69	-0.09	10.48
111	s	o-terphenyl	0.594	0.651	-9.6	74	-0.09	11.30
112		Pentachloronitrobenzene	0.047	0.059	-25.5#	77	-0.09	10.19
113	I	Naphthalene-d8a	1.000	1.000	0.0	66	-0.06	5.63
114		Hydroquinone	0.326	0.385	-18.1	72	-0.04	6.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Mon Apr 22 00:46:09 2019

8.7.28

8

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICC6761
Lab FileID: Z137241.D

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

Calibration Files
100 =z137239a.D 80 =z137240.D 50 =z1372241.D 25 =z137242.D
10 =z137243.D 5 =z137244.D 2 =z137245.D 1 =z137246.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.332	0.343	0.338	0.330	0.339	0.328	0.297		0.330	4.62
3) Pyridine	1.127	1.164	1.092	1.053	1.064	0.992	0.726		1.031	14.10
4) N-Nitrosodim	0.641	0.655	0.627	0.608	0.625	0.647	0.402		0.601	14.79
5) 2-Fluorophen	1.302	1.228	1.178	1.116	1.048	1.042			1.152	8.94
6) Indene	2.346	2.341	2.285	2.170	2.122	2.093	1.928	2.123	2.176	6.55
7) Cumene	3.020	3.042	3.011	2.863	2.968	2.874	2.777	2.953	2.939	3.14
8) Phenol-d5	1.904	1.885	1.738	1.599	1.620	1.576	1.413	1.267	1.625	13.45
9) Phenol	2.137	2.045	1.871	1.733	1.743	1.698	1.655	1.334	1.777	13.96
10) Aniline	1.682	1.699	1.620	1.614	1.839	1.886	1.821	1.949	1.764	7.19
11) bis(2-Chloro	1.225	1.259	1.206	1.236	1.297	1.319	1.293	1.189	1.253	3.72
12) 2-Chlorophen	1.609	1.564	1.514	1.410	1.354	1.336	1.225	1.152	1.396	11.55
13) Decane	1.125	1.202	1.276	1.212	1.234	1.224	1.185	1.220	1.210	3.58
14) 1,3-Dichloro	1.640	1.635	1.584	1.530	1.488	1.553	1.434	1.443	1.538	5.18
15) 1,4-Dichloro	1.729	1.704	1.635	1.592	1.538	1.554	1.445	1.469	1.583	6.48
16) Benzyl alcoh	0.988	0.976	0.925	0.841	0.755	0.644	0.508		0.805	22.37
----- Quadratic regression -----									Coefficient =	0.9998
Response Ratio = -0.03237 + 0.89354 *A + 0.04458 *A^2										
17) 1,2-Dichloro	1.667	1.664	1.610	1.525	1.458	1.538	1.414	1.441	1.540	6.46
18) Acetophenone	2.141	2.136	2.105	1.999	2.037	1.983	1.850	1.715	1.996	7.45
19) 2-Methylphen	1.451	1.455	1.366	1.339	1.307	1.329	1.160	1.076	1.310	10.10
20) 2,2'-oxybis(	0.381	0.383	0.386	0.366	0.369	0.348	0.300		0.362	8.35
21) 3&4-Methylph	1.543	1.577	1.441	1.365	1.314	1.235	1.160	0.845	1.310	18.03
22) n-Nitroso-di	1.118	1.150	1.146	1.102	1.107	1.044	1.030	0.918	1.077	7.18
23) Hexachloroet	0.550	0.547	0.536	0.510	0.509	0.507	0.509	0.511	0.522	3.56
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.393	0.406	0.397	0.386	0.363	0.355	0.338	0.325	0.370	7.99
26) Nitrobenzene	0.409	0.407	0.403	0.396	0.362	0.377	0.377	0.337	0.384	6.60
27) Quinoline	0.769	0.797	0.750	0.751	0.696	0.703	0.666	0.633	0.721	7.71
28) Isophorone	0.614	0.651	0.668	0.669	0.634	0.633	0.610	0.597	0.634	4.21
29) 2-Nitropheno	0.234	0.225	0.216	0.199	0.186	0.179	0.161	0.145	0.193	16.23
30) 2,4-Dimethyl	0.381	0.388	0.354	0.315	0.251	0.195			0.314	24.57
----- Quadratic regression -----									Coefficient =	0.9990
Response Ratio = -0.02963 + 0.36977 *A + 0.01114 *A^2										
31) Benzoic Acid	0.188	0.159	0.196	0.128	0.058				0.146	38.35
----- Quadratic regression -----									Coefficient =	0.9769
Response Ratio = -0.03357 + 0.19838 *A + -0.00155 *A^2										
32) bis(2-Chloro	0.398	0.410	0.399	0.396	0.367	0.374	0.357	0.325	0.378	7.44
33) 2,4-Dichloro	0.343	0.340	0.313	0.299	0.280	0.269	0.243	0.186	0.284	18.46
34) 2,6-Dichloro	0.344	0.341	0.312	0.300	0.284	0.277	0.271	0.236	0.296	12.38
35) 1,3,5-Trichl	0.355	0.352	0.337	0.319	0.285	0.294	0.282	0.286	0.314	9.88
36) 1,2,4-Trichl	0.338	0.333	0.316	0.306	0.287	0.287	0.283	0.288	0.305	7.21

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICC6761
Lab FileID: Z137241.D

37)	1,2,3-Trichl	0.349	0.345	0.323	0.310	0.290	0.294	0.293	0.298	0.313	7.58
38)	Naphthalene	1.131	1.139	1.075	1.026	0.998	0.960	1.011	1.004	1.043	6.25
39)	4-Chloroanil	0.481	0.484	0.450	0.441	0.423	0.421	0.430	0.364	0.437	8.69
40)	2,3-Dichloro	0.434	0.434	0.402	0.389	0.361	0.375	0.350	0.343	0.386	9.20
41)	Caprolactam	0.171	0.173	0.171	0.170	0.163	0.156	0.146		0.164	6.07
42)	Hexachlorobu	0.178	0.178	0.172	0.165	0.156	0.156	0.155	0.154	0.164	6.31
43)	4-Chloro-3-m	0.346	0.354	0.328	0.321	0.307	0.290	0.258	0.225	0.304	14.55
44)	2-Methylnaph	0.648	0.640	0.605	0.592	0.564	0.542	0.534	0.517	0.580	8.43
45)	1-Methylnaph	0.738	0.733	0.684	0.660	0.622	0.619	0.658	0.616	0.666	7.35
46)	Dimethylnaph	0.729	0.725	0.668	0.653	0.594	0.605	0.588	0.608	0.646	8.83
47)	I Acenaphthene-d10	ISTD									
48)	Hexachlorocy	0.276	0.282	0.244	0.198	0.136	0.088			0.204	38.57
	----- Quadratic regression -----								Coefficient =		0.9977
	Response Ratio = -0.05990 + 0.25481 *A + 0.00768 *A^2										
49)	2,4,6-Trichl	0.405	0.410	0.394	0.370	0.347	0.325	0.309	0.262	0.353	14.80
50)	2,4,5-Trichl	0.434	0.439	0.427	0.398	0.370	0.352	0.296	0.290	0.376	15.85
51)	2-Fluorobiph	1.445	1.477	1.449	1.368	1.300	1.276	1.273	1.238	1.353	6.93
52)	2-Chloronaph	1.262	1.281	1.239	1.172	1.110	1.097	1.045	1.049	1.157	8.23
53)	Biphenyl	1.664	1.671	1.667	1.555	1.485	1.423	1.403	1.429	1.537	7.64
54)	2-Nitroanili	0.388	0.416	0.419	0.413	0.399	0.361	0.321	0.293	0.376	12.61
55)	Dimethylphth	1.405	1.428	1.438	1.362	1.294	1.264	1.298	1.307	1.350	5.02
56)	Acenaphthyle	2.016	2.114	2.024	1.913	1.838	1.796	1.730	1.697	1.891	7.97
57)	2,6-Dinitrot	0.323	0.327	0.325	0.311	0.295	0.273	0.265	0.259	0.297	9.53
58)	3-Nitroanili	0.391	0.391	0.401	0.371	0.366	0.345	0.317		0.369	8.08
59)	Acenaphthene	1.359	1.378	1.364	1.273	1.222	1.194	1.222	1.222	1.279	5.94
60)	2,4-Dinitrop	0.203	0.202	0.187	0.166	0.135	0.075			0.161	30.79
61)	4-Nitropheno	0.215	0.230	0.232	0.213	0.193	0.159			0.207	13.26
62)	Dibenzofuran	1.793	1.840	1.792	1.671	1.625	1.560	1.497	1.562	1.667	7.66
63)	2,4-Dinitrot	0.465	0.478	0.461	0.438	0.430	0.414	0.347	0.302	0.417	14.77
64)	2,3,4,6-Tetr	0.348	0.357	0.339	0.311	0.315	0.252	0.233		0.308	15.62
65)	Diethylphtha	1.485	1.519	1.521	1.448	1.451	1.374	1.357	1.361	1.439	4.73
66)	Fluorene	1.480	1.519	1.521	1.408	1.368	1.273	1.249	1.290	1.389	8.00
67)	4-Chlorophen	0.636	0.653	0.641	0.602	0.576	0.564	0.546	0.572	0.599	6.74
68)	4-Nitroanili	0.377	0.391	0.398	0.387	0.376	0.336	0.320	0.238	0.353	15.30
69)	I Phenanthrene-d10	ISTD									
70)	4,6-Dinitro-	0.158	0.156	0.149	0.134	0.123	0.099			0.136	16.60
71)	n-Nitrosodip	0.606	0.590	0.591	0.538	0.532	0.498	0.476	0.483	0.539	9.55
72)	1,2-Diphenyl	0.940	0.872	0.896	0.837	0.835	0.799	0.751	0.767	0.837	7.69
73)	2,4,6-Tribro	0.125	0.117	0.113	0.101	0.097	0.085			0.106	13.64
74)	4-Bromopheny	0.225	0.218	0.216	0.196	0.191	0.179	0.166	0.180	0.196	10.90
75)	Hexachlorobe	0.249	0.239	0.237	0.216	0.220	0.206	0.189	0.206	0.220	9.15
76)	Pentachlorop	0.170	0.160	0.146	0.132	0.107	0.092	0.078		0.126	27.52
	----- Quadratic regression -----								Coefficient =		0.9999
	Response Ratio = -0.00816 + 0.12672 *A + 0.00887 *A^2										
77)	Phenanthrene	1.237	1.224	1.208	1.122	1.113	1.063	1.057	1.057	1.135	6.80
78)	Anthracene	1.248	1.221	1.199	1.127	1.116	1.073	1.072	0.999	1.132	7.55
79)	Carbazole	1.239	1.240	1.220	1.133	1.112	1.040	1.045	1.020	1.131	8.17
80)	Di-n-butylph	1.600	1.589	1.613	1.465	1.429	1.392	1.312	1.244	1.455	9.50
81)	Fluoranthene	1.399	1.363	1.346	1.239	1.181	1.173	1.062	1.121	1.235	9.93
82)	Octadecane	0.444	0.456	0.471	0.450	0.436	0.422	0.404	0.378	0.433	6.96
83)	I Chrysene-d12	ISTD									
84)	Pyrene	1.371	1.398	1.393	1.363	1.291	1.363	1.247	1.264	1.336	4.45
85)	Terphenyl-d1	0.867	0.869	0.886	0.824	0.830	0.841	0.775	0.755	0.831	5.56
86)	Butylbenzylp	0.718	0.721	0.744	0.731	0.703	0.707	0.653	0.607	0.698	6.53
87)	Benzo[a]anth	1.245	1.264	1.267	1.233	1.208	1.234	1.254	1.258	1.245	1.58

8.7.29

8

Initial Calibration Summary

Job Number: JC86406 **Sample:** EZ6761-ICC6761
Account: BBLNYS Arcadis **Lab FileID:** Z137241.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
 88) 3,3'-Dichlor 0.517 0.517 0.518 0.511 0.492 0.475 0.440 0.386 0.482   9.80
 89) Chrysene     1.231 1.245 1.245 1.263 1.169 1.192 1.168 1.193 1.213   3.07
 90) bis(2-Ethylh 0.976 1.010 1.021 1.040 0.965 0.966 0.860 0.814 0.957   8.31

 91) I   Perylene-d12          ----------------ISTD--------------------
 92) Di-n-octylph 2.001 1.949 1.859 1.698 1.560 1.489 1.338       1.699  14.68
 93) Benzo[b]fluo 1.650 1.515 1.421 1.234 1.168 1.078 1.058 1.035 1.270  18.25
 94) Benzo[k]fluo 1.179 1.231 1.198 1.160 1.133 1.085 1.034 0.999 1.128   7.21
 95) Benzo[a]pyre 1.179 1.168 1.124 1.062 1.018 0.969 0.913 0.875 1.039  11.05
 96) Indeno[1,2,3 0.997 1.000 1.090 1.004 1.047 0.926 0.873 0.843 0.973   8.75
 97) Dibenz(a,h)a 0.900 0.931 1.026 0.932 0.895 0.827 0.807 0.773 0.886   9.19
 98) Dibenz[a,h]a 1.051 1.040 1.146 1.053 1.074 0.966 0.903 0.854 1.011   9.53
 99) 7,12-Dimethy 0.627 0.601 0.559 0.468 0.356 0.260             0.479  30.46
          ----- Quadratic regression -----               Coefficient =  0.9998
               Response Ratio = -0.04262 + 0.52734 *A + 0.04711 *A^2

100) Benzo[g,h,i] 0.856 0.840 0.997 0.955 1.039 0.880 0.868 0.888 0.916   7.92

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MZ6761.M          Fri Apr 26 10:13:09 2019
```

8.7.29

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137247.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137247.D Vial: 10
Acq On : 25 Apr 2019 9:37 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu Apr 25 10:41:52 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	4.08
4	t	N-Nitrosodimethylamine	0.601	0.608	-1.2	104	0.00	1.72
11	t	bis(2-Chloroethyl)ether	1.253	1.221	2.6	109	0.00	3.90
14	t	1,3-Dichlorobenzene	1.538	1.542	-0.3	105	0.00	4.04
15	t	1,4-Dichlorobenzene	1.583	1.638	-3.5	108	0.00	4.09
17	t	1,2-Dichlorobenzene	1.540	1.497	2.8	100	0.00	4.20
20	t	2,2'-oxybis(1-Chloropropa	0.362	0.420	-16.0	117	0.00	4.30
22	t	n-Nitroso-di-n-propylamin	1.077	1.049	2.6	99	0.00	4.39
23	t	Hexachloroethane	0.522	0.505	3.3	102	0.00	4.45
24	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	5.00
26	t	Nitrobenzene	0.384	0.377	1.8	96	0.00	4.51
28	t	Isophorone	0.634	0.669	-5.5	103	0.00	4.68
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.378	0.397	-5.0	102	0.00	4.85
36	t	1,2,4-Trichlorobenzene	0.305	0.303	0.7	98	0.00	4.96
38	t	Naphthalene	1.043	1.086	-4.1	103	0.00	5.02
42	t	Hexachlorobutadiene	0.164	0.168	-2.4	100	0.00	5.11
47	I	Acenaphthene-d10	1.000	1.000	0.0	107	0.00	6.25
		----------	True	Calc.	% Drift	----------		
52	t	2-Chloronaphthalene	1.157	1.146	1.0	99	0.00	5.85
55	t	Dimethylphthalate	1.350	1.329	1.6	99	0.00	6.07
56	t	Acenaphthylene	1.891	1.932	-2.2	103	0.00	6.15
57	t	2,6-Dinitrotoluene	0.297	0.293	1.3	97	0.00	6.11

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137247.D

59	t	Acenaphthene	1.279	1.212	5.2	95	0.00	6.28
63	t	2,4-Dinitrotoluene	0.417	0.396	5.0	92	0.00	6.42
65	t	Diethylphthalate	1.439	1.389	3.5	98	0.00	6.63
66	t	Fluorene	1.389	1.420	-2.2	100	0.00	6.71
67	t	4-Chlorophenyl-phenylethe	0.599	0.605	-1.0	101	0.00	6.72
69	I	Phenanthrene-d10	1.000	1.000	0.0	110	0.00	7.64
71	t	n-Nitrosodiphenylamine	0.539	0.536	0.6	100	0.00	6.83
72	t	1,2-Diphenylhydrazine	0.837	0.845	-1.0	104	0.00	6.86
74	t	4-Bromophenyl-phenylether	0.196	0.202	-3.1	103	0.00	7.18
75	t	Hexachlorobenzene	0.220	0.215	2.3	100	0.00	7.25

			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.135	1.100	3.1	100	0.00	7.67
78	t	Anthracene	1.132	1.130	0.2	104	0.00	7.73
80	t	Di-n-butylphthalate	1.455	1.363	6.3	93	0.00	8.42
81	t	Fluoranthene	1.235	1.184	4.1	97	0.00	9.15
83	I	Chrysene-d12	1.000	1.000	0.0	96	0.00	11.24
84	t	Pyrene	1.336	1.346	-0.7	93	0.00	9.46
86	t	Butylbenzylphthalate	0.698	0.698	0.0	90	0.00	10.53
87	t	Benzo[a]anthracene	1.245	1.198	3.8	91	0.00	11.23
89	t	Chrysene	1.213	1.180	2.7	91	0.00	11.28
90	t	bis(2-Ethylhexyl)phthalat	0.957	0.972	-1.6	92	0.00	11.47
91	I	Perylene-d12	1.000	1.000	0.0	94	0.00	13.28
92	t	Di-n-octylphthalate	1.699	1.654	2.6	84	0.00	12.43
93	t	Benzo[b]fluoranthene	1.270	1.116	12.1	74	-0.01	12.78
94	t	Benzo[k]fluoranthene	1.128	1.144	-1.4	90	-0.02	12.81
95	t	Benzo[a]pyrene	1.039	1.033	0.6	86	-0.01	13.20
96	t	Indeno[1,2,3-cd]pyrene	0.973	1.021	-4.9	88	-0.01	14.58
98	t	Dibenz[a,h]anthracene	1.011	0.984	2.7	81	-0.01	14.61

			AvgRF	CCRF	% Dev			
100	t	Benzo[g,h,i]perylene	0.916	0.963	-5.1	91	-0.01	14.86

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137241.D MZ6761.M Thu Apr 25 11:26:26 2019

8.7.30

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137248.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137248.D Vial: 11
Acq On : 25 Apr 2019 10:05 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu Apr 25 10:41:52 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	4.08
2		1,4-Dioxane	0.330	0.324	1.8	107	0.01	1.47
6	t	Indene	2.176	2.289	-5.2	112	0.00	4.26
7	t	Cumene	2.939	2.945	-0.2	109	0.00	3.46
13	t	Decane	1.210	1.087	10.2	95	0.00	3.98
18	t	Acetophenone	1.996	1.888	5.4	100	0.00	4.38
24	I	Naphthalene-d8	1.000	1.000	0.0	107	0.00	5.00
27	t	Quinoline	0.721	0.731	-1.4	105	-0.02	5.25
40	t	2,3-Dichloroaniline	0.386	0.358	7.3	96	0.00	5.71
41	t	Caprolactam	0.164	0.145	11.6	92	-0.03	5.31
45	t	1-Methylnaphthalene	0.666	0.616	7.5	97	0.00	5.57
46	t	Dimethylnaphthalene	0.646	0.633	2.0	102	0.00	5.95
47	I	Acenaphthene-d10	1.000	1.000	0.0	110	0.00	6.25
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	50.000	44.534	10.9	75	0.00	5.62
53	t	Biphenyl	1.537	1.504	2.1	99	0.00	5.84
69	I	Phenanthrene-d10	1.000	1.000	0.0	113	0.00	7.64
82	t	Octadecane	0.433	0.421	2.8	101	0.00	7.59
91	I	Perylene-d12	1.000	1.000	0.0	94	-0.01	13.27
			True	Calc.	% Drift			
99	t	7,12-Dimethylbenz(a)anthr	50.000	36.901	26.2	65	-0.02	12.77

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137248.D

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   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    z137241.D  MZ6761.M         Thu Apr 25 11:26:28 2019
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8.7.31

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137249.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137249.D Vial: 12
Acq On : 25 Apr 2019 10:33 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 10:08:29 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	76	0.00	4.08
3	t	Pyridine	1.031	1.182	-14.6	83	0.08	1.81
10	t	Aniline	1.764	2.500	-41.7#	118	0.00	3.84
			True	Calc.	% Drift			
16	t	Benzyl alcohol	50.000	56.349	-12.7	87	0.00	4.20
24	I	Naphthalene-d8	1.000	1.000	0.0	85	0.00	5.00
39	t	4-Chloroaniline	0.437	0.473	-8.2	89	0.00	5.07
44	t	2-Methylnaphthalene	0.580	0.598	-3.1	84	0.00	5.50
47	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00	6.25
54	t	2-Nitroaniline	0.376	0.385	-2.4	80	0.00	5.93
58	t	3-Nitroaniline	0.369	0.376	-1.9	82	0.00	6.24
62	t	Dibenzofuran	1.667	1.706	-2.3	83	0.00	6.42
68	t	4-Nitroaniline	0.353	0.383	-8.5	84	-0.01	6.74
69	I	Phenanthrene-d10	1.000	1.000	0.0	96	0.00	7.64
79	t	Carbazole	1.131	1.074	5.0	84	0.00	7.93

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137277a.D MZ6761.M Fri Apr 26 10:13:59 2019

8.7.32

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137250.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137250.D Vial: 13
Acq On : 25 Apr 2019 11:01 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu Apr 25 10:41:52 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	4.08
9	t	Phenol	1.777	1.857	-4.5	105	0.00	3.86
12	t	2-Chlorophenol	1.396	1.583	-13.4	110	0.00	3.93
19	t	2-Methylphenol	1.310	1.418	-8.2	110	-0.01	4.30
21	t	3&4-Methylphenol	1.310	1.535	-17.2	113	0.00	4.41
24	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	5.00
29	t	2-Nitrophenol	0.193	0.199	-3.1	94	0.00	4.74
		----------	True	Calc.	% Drift	----------		
30	t	2,4-Dimethylphenol	50.000	51.386	-2.8	107	0.00	4.79
31		Benzoic Acid	50.000	36.134	27.7	60	0.00	4.92
33	t	2,4-Dichlorophenol	0.284	0.330	-16.2	108	0.00	4.92
34		2,6-Dichlorophenol	0.296	0.328	-10.8	107	0.00	5.07
43	t	4-Chloro-3-methylphenol	0.304	0.353	-16.1	110	-0.01	5.43
47	I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00	6.25
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.353	0.417	-18.1	109	0.00	5.72
50	t	2,4,5-Trichlorophenol	0.376	0.434	-15.4	105	-0.01	5.74
61	t	4-Nitrophenol	0.207	0.193	6.8	86	-0.01	6.40
64		2,3,4,6-Tetrachlorophenol	0.308	0.327	-6.2	99	0.00	6.53
69	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.00	7.64
70	t	4,6-Dinitro-2-methylpheno	0.136	0.133	2.2	96	-0.02	6.78

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137250.D

			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	47.774	4.5	90	0.00	7.46

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137241.D MZ6761.M Thu Apr 25 11:26:32 2019

8.7.33

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137251.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137251.D Vial: 14
Acq On : 25 Apr 2019 11:29 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu Apr 25 10:41:52 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	4.08
5	S	2-Fluorophenol	1.152	1.206	-4.7	104	0.00	3.08
8	S	Phenol-d5	1.625	1.637	-0.7	96	0.00	3.85
24	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00	5.00
25	S	Nitrobenzene-d5	0.370	0.373	-0.8	93	0.00	4.49
47	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.00	6.25
51	S	2-Fluorobiphenyl	1.353	1.321	2.4	93	0.00	5.77
69	I	Phenanthrene-d10	1.000	1.000	0.0	106	-0.01	7.64
73	S	2,4,6-Tribromophenol	0.106	0.096	9.4	90	0.00	6.93
83	I	Chrysene-d12	1.000	1.000	0.0	93	-0.02	11.23
85	S	Terphenyl-d14	0.831	0.944	-13.6	99	0.00	9.75

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137241.D MZ6761.M Thu Apr 25 11:59:36 2019

8.7.34

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6761-ICV6761
Lab FileID: Z137252.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6761\z137252.D Vial: 15
Acq On : 25 Apr 2019 11:57 am Operator: chriss2
Sample : icv6761-50 Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu Apr 25 10:41:52 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	169	-0.01	11.24
88 t	3,3'-Dichlorobenzidine	0.482	0.503	-4.4	164	0.00	11.26

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137241.D MZ6761.M Thu Apr 25 13:30:07 2019

8.7.35

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6762-CC6761
Lab FileID: Z137254.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6762\z137254.D Vial: 2
Acq On : 25 Apr 2019 3:00 pm Operator: angelar
Sample : cc6761-50 Inst : GCMSZ
Misc : op17006,ez6762,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 10:08:29 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	0.00	4.08
2		1,4-Dioxane	0.330	0.321	2.7	76	0.00	1.45
3	t	Pyridine	1.031	1.107	-7.4	81	0.00	1.73
4	t	N-Nitrosodimethylamine	0.601	0.623	-3.7	79	0.00	1.71
5	S	2-Fluorophenol	1.152	1.132	1.7	77	0.00	3.07
6	t	Indene	2.176	2.239	-2.9	78	0.00	4.26
7	t	Cumene	2.939	3.049	-3.7	81	0.00	3.46
8	S	Phenol-d5	1.625	1.787	-10.0	82	0.00	3.85
9	t	Phenol	1.777	2.025	-14.0	86	0.00	3.86
10	t	Aniline	1.764	1.922	-9.0	95	0.00	3.84
11	t	bis(2-Chloroethyl)ether	1.253	1.234	1.5	82	0.00	3.90
12	t	2-Chlorophenol	1.396	1.464	-4.9	77	0.00	3.93
13	t	Decane	1.210	1.230	-1.7	77	0.00	3.98
14	t	1,3-Dichlorobenzene	1.538	1.600	-4.0	81	0.00	4.04
15	t	1,4-Dichlorobenzene	1.583	1.610	-1.7	79	0.00	4.09
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	50.000	48.885	2.2	78	0.00	4.20
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.540	1.574	-2.2	78	0.00	4.20
18	t	Acetophenone	1.996	2.076	-4.0	79	0.00	4.38
19	t	2-Methylphenol	1.310	1.354	-3.4	79	0.00	4.30
20	t	2,2'-oxybis(1-Chloropropa	0.362	0.363	-0.3	75	0.00	4.30
21	t	3&4-Methylphenol	1.310	1.416	-8.1	78	0.00	4.41
22	t	n-Nitroso-di-n-propylamin	1.077	1.096	-1.8	76	0.00	4.39
23	t	Hexachloroethane	0.522	0.520	0.4	77	0.00	4.45
24	I	Naphthalene-d8	1.000	1.000	0.0	76	0.00	5.00
25	S	Nitrobenzene-d5	0.370	0.403	-8.9	77	0.00	4.49
26	t	Nitrobenzene	0.384	0.416	-8.3	79	0.00	4.51
27	t	Quinoline	0.721	0.800	-11.0	81	-0.01	5.26
28	t	Isophorone	0.634	0.699	-10.3	80	0.00	4.68
29	t	2-Nitrophenol	0.193	0.216	-11.9	76	0.00	4.73
		----------	True	Calc.	% Drift	----------		
30	t	2,4-Dimethylphenol	50.000	50.642	-1.3	79	0.00	4.79
31		Benzoic Acid	50.000	42.005	16.0	54	-0.01	4.91
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.378	0.408	-7.9	78	0.00	4.85
33	t	2,4-Dichlorophenol	0.284	0.315	-10.9	77	0.00	4.92

8.7.36

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6762-CC6761
Lab FileID: Z137254.D

34		2,6-Dichlorophenol	0.296	0.328	-10.8	80	0.00	5.07
35	t	1,3,5-Trichlorobenzene	0.314	0.337	-7.3	76	0.00	4.74
36	t	1,2,4-Trichlorobenzene	0.305	0.320	-4.9	77	0.00	4.96
37	t	1,2,3-Trichlorobenzene	0.313	0.332	-6.1	78	0.00	5.12
38	t	Naphthalene	1.043	1.072	-2.8	76	0.00	5.01
39	t	4-Chloroaniline	0.437	0.473	-8.2	80	0.00	5.07
40	t	2,3-Dichloroaniline	0.386	0.426	-10.4	81	0.00	5.71
41	t	Caprolactam	0.164	0.177	-7.9	79	-0.01	5.33
42	t	Hexachlorobutadiene	0.164	0.179	-9.1	79	0.00	5.11
43	t	4-Chloro-3-methylphenol	0.304	0.352	-15.8	82	0.00	5.43
44	t	2-Methylnaphthalene	0.580	0.626	-7.9	79	0.00	5.50
45	t	1-Methylnaphthalene	0.666	0.708	-6.3	79	0.00	5.57
46	t	Dimethylnaphthalene	0.646	0.701	-8.5	80	0.00	5.95
47	I	Acenaphthene-d10	1.000	1.000	0.0	80	0.00	6.25
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	100.000	97.942	2.1	80	0.00	5.62
			AvgRF	CCRF	% Dev			
49	t	2,4,6-Trichlorophenol	0.353	0.391	-10.8	79	0.00	5.72
50	t	2,4,5-Trichlorophenol	0.376	0.417	-10.9	78	0.00	5.75
51	S	2-Fluorobiphenyl	1.353	1.461	-8.0	81	0.00	5.77
52	t	2-Chloronaphthalene	1.157	1.255	-8.5	81	0.00	5.85
53	t	Biphenyl	1.537	1.638	-6.6	79	0.00	5.84
54	t	2-Nitroaniline	0.376	0.529	-40.7#	101	0.00	5.93
55	t	Dimethylphthalate	1.350	1.437	-6.4	80	0.00	6.07
56	t	Acenaphthylene	1.891	2.020	-6.8	80	0.00	6.15
57	t	2,6-Dinitrotoluene	0.297	0.317	-6.7	78	0.00	6.11
58	t	3-Nitroaniline	0.369	0.392	-6.2	78	0.00	6.24
59	t	Acenaphthene	1.279	1.368	-7.0	80	0.00	6.28
60	t	2,4-Dinitrophenol	0.161	0.183	-13.7	78	0.00	6.33
61	t	4-Nitrophenol	0.207	0.238	-15.0	82	0.00	6.40
62	t	Dibenzofuran	1.667	1.797	-7.8	80	0.00	6.42
63	t	2,4-Dinitrotoluene	0.417	0.483	-15.8	84	0.00	6.42
64		2,3,4,6-Tetrachlorophenol	0.308	0.345	-12.0	81	0.00	6.54
65	t	Diethylphthalate	1.439	1.524	-5.9	80	0.00	6.63
66	t	Fluorene	1.389	1.504	-8.3	79	0.00	6.71
67	t	4-Chlorophenyl-phenylethe	0.599	0.643	-7.3	80	0.00	6.71
68	t	4-Nitroaniline	0.353	0.406	-15.0	82	0.00	6.75
69	I	Phenanthrene-d10	1.000	1.000	0.0	84	0.00	7.64
70	t	4,6-Dinitro-2-methylpheno	0.136	0.144	-5.9	81	0.00	6.79
71	t	n-Nitrosodiphenylamine	0.539	0.565	-4.8	80	0.00	6.83
72	t	1,2-Diphenylhydrazine	0.837	0.866	-3.5	81	0.00	6.86
73	S	2,4,6-Tribromophenol	0.106	0.106	0.0	79	0.00	6.94
74	t	4-Bromophenyl-phenylether	0.196	0.207	-5.6	81	0.00	7.18
75	t	Hexachlorobenzene	0.220	0.245	-11.4	87	0.00	7.24
			True	Calc.	% Drift			
76	t	Pentachlorophenol	100.000	102.658	-2.7	86	0.00	7.46
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.135	1.192	-5.0	83	0.00	7.67
78	t	Anthracene	1.132	1.200	-6.0	84	0.00	7.73
79	t	Carbazole	1.131	1.169	-3.4	81	0.00	7.93
80	t	Di-n-butylphthalate	1.455	1.512	-3.9	79	0.00	8.42
81	t	Fluoranthene	1.235	1.325	-7.3	83	0.00	9.15
82	t	Octadecane	0.433	0.449	-3.7	80	0.00	7.59

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6762-CC6761
Lab FileID: Z137254.D

83	I	Chrysene-d12	1.000	1.000	0.0	79	-0.01	11.24
84	t	Pyrene	1.336	1.401	-4.9	80	0.00	9.45
85	S	Terphenyl-d14	0.831	0.917	-10.3	82	0.00	9.75
86	t	Butylbenzylphthalate	0.698	0.755	-8.2	81	0.00	10.53
87	t	Benzo[a]anthracene	1.245	1.279	-2.7	80	0.00	11.23
88	t	3,3'-Dichlorobenzidine	0.482	0.531	-10.2	81	0.00	11.25
89	t	Chrysene	1.213	1.280	-5.5	82	0.00	11.28
90	t	bis(2-Ethylhexyl)phthalat	0.957	1.021	-6.7	79	0.00	11.47
91	I	Perylene-d12	1.000	1.000	0.0	80	-0.01	13.27
92	t	Di-n-octylphthalate	1.699	1.829	-7.7	79	0.00	12.43
93	t	Benzo[b]fluoranthene	1.270	1.406	-10.7	79	-0.01	12.77
94	t	Benzo[k]fluoranthene	1.128	1.237	-9.7	83	-0.01	12.82
95	t	Benzo[a]pyrene	1.039	1.161	-11.7	83	-0.01	13.20
96	t	Indeno[1,2,3-cd]pyrene	0.973	1.243	-27.7#	91	-0.01	14.58
97	t	Dibenz(a,h)acridine	0.886	1.046	-18.1	82	0.00	14.33
98	t	Dibenz[a,h]anthracene	1.011	1.270	-25.6#	89	-0.01	14.61
		---------- True	Calc.	% Drift	----------			
99	t	7,12-Dimethylbenz(a)anthr	50.000	52.814	-5.6	84	-0.01	12.78
		---------- AvgRF	CCRF	% Dev	----------			
100	t	Benzo[g,h,i]perylene	0.916	1.180	-28.8#	95	-0.01	14.86

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137277a.D MZ6761.M Fri Apr 26 10:34:31 2019

8.7.36

8

Initial Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6763-ICC6763
Lab FileID: Z137277.D

Response Factor Report GCMSZ

Method : C:\MSDCHEM\1\METHODS\MZ6763.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 08:42:02 2019
Response via : Initial Calibration

Calibration Files
100 =z137275.D 80 =z137276.D 50 =z137277.D 25 =z137278.D
10 =z137279.D 5 =z137280.D 2 =z137281.D 1 =z137282.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
101) 1,4-Dichlorobenzene-d	ISTD									
102) Benzaldehyde	1.134	1.123	1.069	1.104	0.929	0.956	0.741		1.008	14.17
103) Phenanthrene-d10a	ISTD									
104) 1-chloroocta	0.307	0.303	0.324	0.315	0.264	0.238	0.206		0.280	15.89
105) o-terphenyl	0.539	0.547	0.543	0.526	0.488	0.452	0.463	0.448	0.501	8.49
106) Atrazine	0.106	0.100	0.101	0.098	0.081	0.078	0.055		0.088	20.48
----- Quadratic regression -----									Coefficient =	0.9992
Response Ratio = -0.00204 + 0.09506 *A + 0.00441 *A^2										
109) Acenaphthene-d10a	ISTD									
110) 1,2,4,5-Tetr	0.555	0.565	0.572	0.554	0.535	0.508	0.469	0.550	0.538	6.36
111) I Naphthalene-d8a	ISTD									
112) Hydroquinone	0.352	0.355	0.367	0.358	0.309	0.280	0.206		0.318	18.40
113) Phenanthrene-d10b	ISTD									
114) Pentachloron	0.048	0.047	0.047	0.048	0.038	0.038			0.044#	11.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

MZ6761.M Fri Apr 26 08:44:58 2019

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6763-ICV6763
Lab FileID: Z137283.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6763\z137283.D Vial: 10
Acq On : 26 Apr 2019 7:19 am Operator: chriss2
Sample : icv6763-50 Inst : GCMSZ
Misc : op17006,ez6763,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 08:42:02 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	102	0.00	4.06
102	Benzaldehyde	1.008	1.150	-14.1	110	0.00	3.73
103	Phenanthrene-d10a	1.000	1.000	0.0	98	0.00	7.61
		True	Calc.	% Drift			
106	Atrazine	50.000	50.028	-0.1	96	0.00	7.36
109	Acenaphthene-d10a	1.000	1.000	0.0	101	0.00	6.23
110	1,2,4,5-Tetrachlorobenzen	0.538	0.544	-1.1	96	0.00	5.61
113	Phenanthrene-d10b	1.000	1.000	0.0	98	0.00	7.61
114	Pentachloronitrobenzene	0.044	0.039#	11.4	82	0.00	7.44

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137277a.D MZ6761.M Fri Apr 26 08:46:15 2019

8.7.38

8

Initial Calibration Verification

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6763-ICV6763
Lab FileID: Z137284.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6763\z137284.D Vial: 11
Acq On : 26 Apr 2019 7:47 am Operator: chriss2
Sample : icv6763-50 Inst : GCMSZ
Misc : op17006,ez6763,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 08:42:02 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
111 I	Naphthalene-d8a	1.000	1.000	0.0	128	0.00	4.98
112	Hydroquinone	0.318	0.377	-18.6	131	0.00	5.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137277a.D MZ6761.M Fri Apr 26 08:46:17 2019

8.7.39

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6764-CC6761
Lab FileID: Z137286.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6764\z137286.D Vial: 2
Acq On : 26 Apr 2019 9:25 am Operator: angelar
Sample : cc6761-25 Inst : GCMSZ
Misc : op17006,ez6764,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 10:08:29 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	76	-0.02	4.06
2		1,4-Dioxane	0.330	0.488	-47.9#	113	0.00	1.45
3	t	Pyridine	1.031	1.384	-34.2#	100	-0.01	1.72
4	t	N-Nitrosodimethylamine	0.601	0.763	-27.0#	96	-0.01	1.70
5	S	2-Fluorophenol	1.152	1.237	-7.4	84	-0.02	3.06
6	t	Indene	2.176	2.307	-6.0	81	-0.02	4.25
7	t	Cumene	2.939	3.199	-8.8	85	-0.02	3.45
8	S	Phenol-d5	1.625	1.672	-2.9	80	-0.02	3.83
9	t	Phenol	1.777	1.848	-4.0	81	-0.02	3.84
10	t	Aniline	1.764	1.899	-7.7	90	-0.02	3.82
11	t	bis(2-Chloroethyl)ether	1.253	1.304	-4.1	80	-0.02	3.88
12	t	2-Chlorophenol	1.396	1.429	-2.4	77	-0.02	3.91
13	t	Decane	1.210	1.363	-12.6	86	-0.02	3.97
14	t	1,3-Dichlorobenzene	1.538	1.609	-4.6	80	-0.02	4.02
15	t	1,4-Dichlorobenzene	1.583	1.725	-9.0	83	-0.02	4.07
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	25.000	24.601	1.6	78	-0.02	4.18
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.540	1.599	-3.8	80	-0.02	4.18
18	t	Acetophenone	1.996	1.999	-0.2	76	-0.02	4.37
19	t	2-Methylphenol	1.310	1.346	-2.7	77	-0.03	4.28
20	t	2,2'-oxybis(1-Chloropropa	0.362	0.385	-6.4	80	-0.02	4.28
21	t	3&4-Methylphenol	1.310	1.390	-6.1	78	-0.02	4.40
22	t	n-Nitroso-di-n-propylamin	1.077	1.033	4.1	71	-0.02	4.38
23	t	Hexachloroethane	0.522	0.545	-4.4	81	-0.02	4.43
24	I	Naphthalene-d8	1.000	1.000	0.0	72	-0.02	4.99
25	S	Nitrobenzene-d5	0.370	0.397	-7.3	74	-0.02	4.47
26	t	Nitrobenzene	0.384	0.402	-4.7	73	-0.02	4.49
27	t	Quinoline	0.721	0.714	1.0	68	-0.03	5.24
28	t	Isophorone	0.634	0.678	-6.9	73	-0.02	4.66
29	t	2-Nitrophenol	0.193	0.214	-10.9	77	-0.02	4.72
		----------	True	Calc.	% Drift	----------		
30	t	2,4-Dimethylphenol	25.000	25.408	-1.6	76	-0.02	4.77
31		Benzoic Acid	25.000	22.902	8.4	72	-0.05	4.87
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.378	0.415	-9.8	75	-0.02	4.83
33	t	2,4-Dichlorophenol	0.284	0.301	-6.0	72	-0.02	4.90

Continuing Calibration Summary

Job Number: JC86406 **Sample:** EZ6764-CC6761
Account: BBLNYS Arcadis **Lab FileID:** Z137286.D
Project: National Grid, Philly Coke, Philadelphia, PA

34		2,6-Dichlorophenol	0.296	0.298	-0.7	71	-0.02	5.06
35	t	1,3,5-Trichlorobenzene	0.314	0.334	-6.4	75	-0.02	4.72
36	t	1,2,4-Trichlorobenzene	0.305	0.311	-2.0	73	-0.02	4.95
37	t	1,2,3-Trichlorobenzene	0.313	0.313	0.0	72	-0.02	5.10
38	t	Naphthalene	1.043	1.071	-2.7	75	-0.02	5.00
39	t	4-Chloroaniline	0.437	0.461	-5.5	75	-0.02	5.05
40	t	2,3-Dichloroaniline	0.386	0.372	3.6	68	-0.02	5.69
41	t	Caprolactam	0.164	0.154	6.1	65	-0.04	5.30
42	t	Hexachlorobutadiene	0.164	0.165	-0.6	72	-0.02	5.10
43	t	4-Chloro-3-methylphenol	0.304	0.303	0.3	68	0.00	5.41
44	t	2-Methylnaphthalene	0.580	0.560	3.4	68	-0.02	5.49
45	t	1-Methylnaphthalene	0.666	0.640	3.9	70	-0.02	5.56
46	t	Dimethylnaphthalene	0.646	0.621	3.9	68	-0.02	5.93
47	I	Acenaphthene-d10	1.000	1.000	0.0	70	-0.02	6.24
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	47.594	4.8	72	-0.02	5.61
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.353	0.357	-1.1	68	-0.02	5.70
50	t	2,4,5-Trichlorophenol	0.376	0.367	2.4	65	-0.02	5.73
51	S	2-Fluorobiphenyl	1.353	1.331	1.6	68	-0.02	5.75
52	t	2-Chloronaphthalene	1.157	1.153	0.3	69	-0.02	5.83
53	t	Biphenyl	1.537	1.529	0.5	69	-0.02	5.82
54	t	2-Nitroaniline	0.376	0.460	-22.3#	78	-0.02	5.91
55	t	Dimethylphthalate	1.350	1.288	4.6	66	-0.02	6.04
56	t	Acenaphthylene	1.891	1.849	2.2	68	-0.02	6.12
57	t	2,6-Dinitrotoluene	0.297	0.298	-0.3	67	-0.03	6.09
58	t	3-Nitroaniline	0.369	0.382	-3.5	72	-0.03	6.21
59	t	Acenaphthene	1.279	1.293	-1.1	71	-0.02	6.26
60	t	2,4-Dinitrophenol	0.161	0.181	-12.4	76	-0.02	6.31
61	t	4-Nitrophenol	0.207	0.172	16.9	56	-0.03	6.38
62	t	Dibenzofuran	1.667	1.658	0.5	70	-0.02	6.40
63	t	2,4-Dinitrotoluene	0.417	0.434	-4.1	69	-0.03	6.40
64		2,3,4,6-Tetrachlorophenol	0.308	0.301	2.3	68	-0.02	6.51
65	t	Diethylphthalate	1.439	1.372	4.7	66	-0.02	6.61
66	t	Fluorene	1.389	1.338	3.7	67	-0.03	6.69
67	t	4-Chlorophenyl-phenylethe	0.599	0.561	6.3	65	-0.03	6.69
68	t	4-Nitroaniline	0.353	0.370	-4.8	67	-0.03	6.72
69	I	Phenanthrene-d10	1.000	1.000	0.0	62	-0.03	7.61
70	t	4,6-Dinitro-2-methylpheno	0.136	0.143	-5.1	66	-0.03	6.76
71	t	n-Nitrosodiphenylamine	0.539	0.591	-9.6	68	-0.03	6.80
72	t	1,2-Diphenylhydrazine	0.837	0.888	-6.1	66	-0.03	6.83
73	S	2,4,6-Tribromophenol	0.106	0.103	2.8	63	-0.03	6.91
74	t	4-Bromophenyl-phenylether	0.196	0.207	-5.6	66	-0.03	7.16
75	t	Hexachlorobenzene	0.220	0.222	-0.9	64	-0.03	7.21
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	48.181	3.6	59	-0.03	7.43
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.135	1.146	-1.0	63	-0.03	7.64
78	t	Anthracene	1.132	1.158	-2.3	64	-0.04	7.69
79	t	Carbazole	1.131	1.181	-4.4	65	-0.03	7.90
80	t	Di-n-butylphthalate	1.455	1.459	-0.3	62	-0.03	8.39
81	t	Fluoranthene	1.235	1.189	3.7	60	-0.04	9.12
82	t	Octadecane	0.433	0.482	-11.3	67	-0.03	7.57

8.7.40

8

Continuing Calibration Summary

Job Number: JC86406 **Sample:** EZ6764-CC6761
Account: BBLNYS Arcadis **Lab FileID:** Z137286.D
Project: National Grid, Philly Coke, Philadelphia, PA

83	I	Chrysene-d12	1.000	1.000	0.0	52	-0.05	11.20
84	t	Pyrene	1.336	1.545	-15.6	59	-0.04	9.41
85	S	Terphenyl-d14	0.831	0.920	-10.7	58	-0.04	9.71
86	t	Butylbenzylphthalate	0.698	0.767	-9.9	55	-0.04	10.49
87	t	Benzo[a]anthracene	1.245	1.305	-4.8	55	-0.04	11.19
88	t	3,3'-Dichlorobenzidine	0.482	0.496	-2.9	51	-0.04	11.22
89	t	Chrysene	1.213	1.346	-11.0	56	-0.05	11.24
90	t	bis(2-Ethylhexyl)phthalat	0.957	1.050	-9.7	53	-0.03	11.44
91	I	Perylene-d12	1.000	1.000	0.0	56	-0.05	13.23
92	t	Di-n-octylphthalate	1.699	1.512	11.0	50#	-0.04	12.40
93	t	Benzo[b]fluoranthene	1.270	1.145	9.8	52	-0.05	12.73
94	t	Benzo[k]fluoranthene	1.128	1.154	-2.3	55	-0.06	12.77
95	t	Benzo[a]pyrene	1.039	1.005	3.3	53	-0.06	13.15
96	t	Indeno[1,2,3-cd]pyrene	0.973	0.945	2.9	52	-0.06	14.53
97	t	Dibenz(a,h)acridine	0.886	0.878	0.9	52	-0.05	14.28
98	t	Dibenz[a,h]anthracene	1.011	1.028	-1.7	54	-0.06	14.56
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	25.000	24.850	0.6	58	-0.05	12.74
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	0.916	1.008	-10.0	59	-0.06	14.81

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137278a.D MZ6761.M Fri Apr 26 14:21:29 2019

8.7.40

8

Continuing Calibration Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EZ6764-CC6763
Lab FileID: Z137287.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez6764\z137287.D Vial: 3
Acq On : 26 Apr 2019 9:53 am Operator: angelar
Sample : cc6763-25 Inst : GCMSZ
Misc : op17006,ez6764,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MZ6761.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Fri Apr 26 10:08:29 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	112	0.00	4.06
102	Benzaldehyde	1.008	1.108	-9.9	113	0.00	3.73
103	Phenanthrene-d10a	1.000	1.000	0.0	109	0.00	7.61
104 s	1-chlorooctadecane	0.280	0.326	-16.4	113	0.00	9.10
105 s	o-terphenyl	0.501	0.529	-5.6	110	0.00	8.09
	----------	True	Calc.	% Drift	----------		
106	Atrazine	25.000	26.399	-5.6	111	0.00	7.35
	----------	AvgRF	CCRF	% Dev	----------		
109	Acenaphthene-d10a	1.000	1.000	0.0	110	0.00	6.23
110	1,2,4,5-Tetrachlorobenzen	0.538	0.548	-1.9	109	0.00	5.61
111 I	Naphthalene-d8a	1.000	1.000	0.0	112	0.00	4.98
112	Hydroquinone	0.318	0.372	-17.0	117	0.00	5.31
113	Phenanthrene-d10b	1.000	1.000	0.0	109	0.00	7.61
114	Pentachloronitrobenzene	0.044	0.040#	9.1	92	0.00	7.44

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z137278a.D MZ6761.M Fri Apr 26 14:19:06 2019

8.7.41

8

MS Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/24/19 10:50

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86743.D
Acq On : 19 Apr 2019 4:05 am
Operator : carolb
Sample : jc86406-1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 19 11:20:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	869974	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2729670	40.00	ppm	-0.17
47) Acenaphthene-d10	7.136	164	1090604	40.00	ppm	-0.18
69) Phenanthrene-d10	8.403	188	1806237	40.00	ppm	-0.20
83) Chrysene-d12	11.660	240	1531271	40.00	ppm	-0.24
91) Perylene-d12	13.666	264	1505761	40.00	ppm	-0.23
101) 1,4-Dichlorobenzene-d4a	4.670	152	869974	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2729670	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.136	164	1090604	40.00	ppm	-0.18
108) Chrysene-d12a	11.660	240	1531271	40.00	ppm	0.04
110) Phenanthrene-d10a	8.403	188	1806237	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1058260	24.17	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 48.34%			
8) Phenol-d5	4.429	99	1332256	27.77	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 55.54%			
25) Nitrobenzene-d5	5.124	82	1074950	29.30	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 58.60%			
51) 2-Fluorobiphenyl	6.590	172	1497911	39.68	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 79.36%#			
73) 2,4,6-Tribromophenol	7.788	330	204891	32.34	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 64.68%			
85) Terphenyl-d14	10.216	244	1149767	30.17	ppm	-0.24
Spiked Amount 50.000	Range 16 - 65		Recovery = 60.34%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.440	94	120544	2.41	ppm	86
18) Acetophenone	5.007	105	26102	0.60	ppm	85
19) 2-Methylphenol	4.921	108	12963	0.51	ppm	93
21) 3&4-Methylphenol	5.050	108	68847	2.66	ppm	86
38) Naphthalene	5.718	128	1648985	25.25	ppm	99
44) 2-Methylnaphthalene	6.285	141	255361	6.15	ppm	92
53) Biphenyl	6.670	154	79988	1.83	ppm	98
56) Acenaphthylene	7.023	152	2412200	45.22	ppm	100
59) Acenaphthene	7.162	153	105228	3.36	ppm	99
62) Dibenzofuran	7.301	168	301175	6.97	ppm	93
66) Fluorene	7.585	166	235227	6.35	ppm	96
77) Phenanthrene	8.430	178	4008126	89.08	ppm	100
78) Anthracene	8.478	178	1674006	36.59	ppm	99
79) Carbazole	8.639	167	441863	9.34	ppm	100
81) Fluoranthene	9.740	202	11095491	173.51	ppm	99
84) Pyrene	10.013	202	9488194	159.25	ppm	97
87) Benzo[a]anthracene	11.650	228	8436468	146.68	ppm	96
89) Chrysene	11.714	228	7205357	176.60	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86743.D
Acq On : 19 Apr 2019 4:05 am
Operator : carolb
Sample : jc86406-1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 19 11:20:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

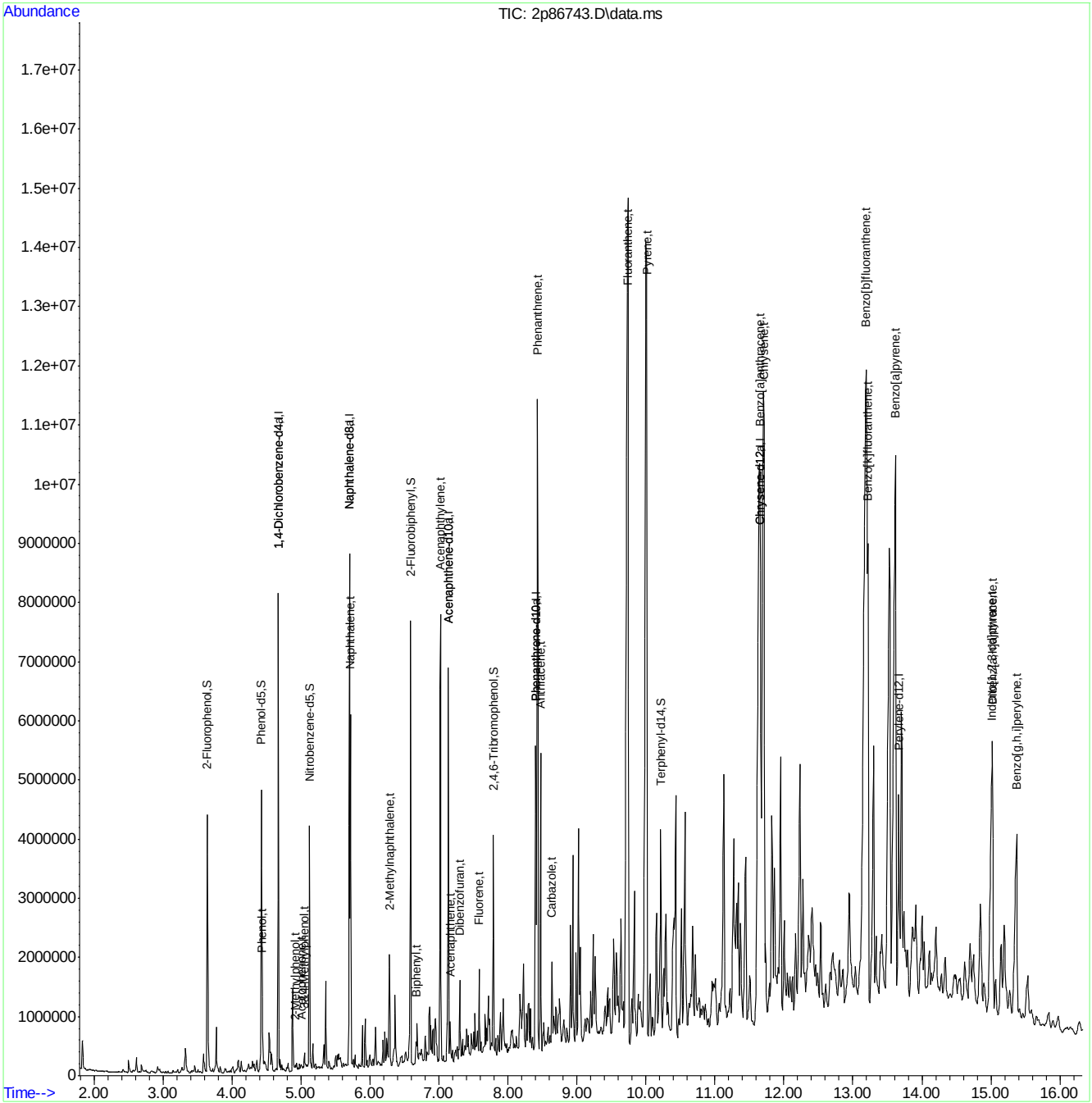
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	13.190	252	13812863m	279.96	ppm	
94)	Benzo[k]fluoranthene	13.217	252	1995264m	49.46	ppm	
95)	Benzo[a]pyrene	13.613	252	7274236	175.43	ppm	97
96)	Indeno[1,2,3-cd]pyrene	15.014	276	3361480	71.13	ppm	98
98)	Dibenz[a,h]anthracene	15.025	278	1183692	32.16	ppm	95
100)	Benzo[g,h,i]perylene	15.372	276	2434272	65.07	ppm	98

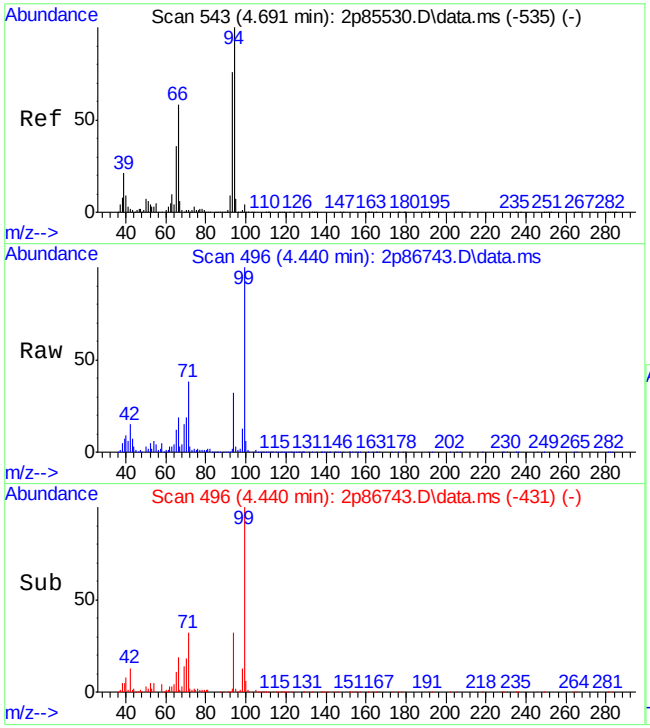
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86743.D
Acq On : 19 Apr 2019 4:05 am
Operator : carolb
Sample : jc86406-1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 19 11:20:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

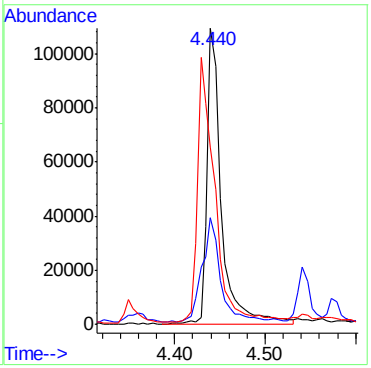


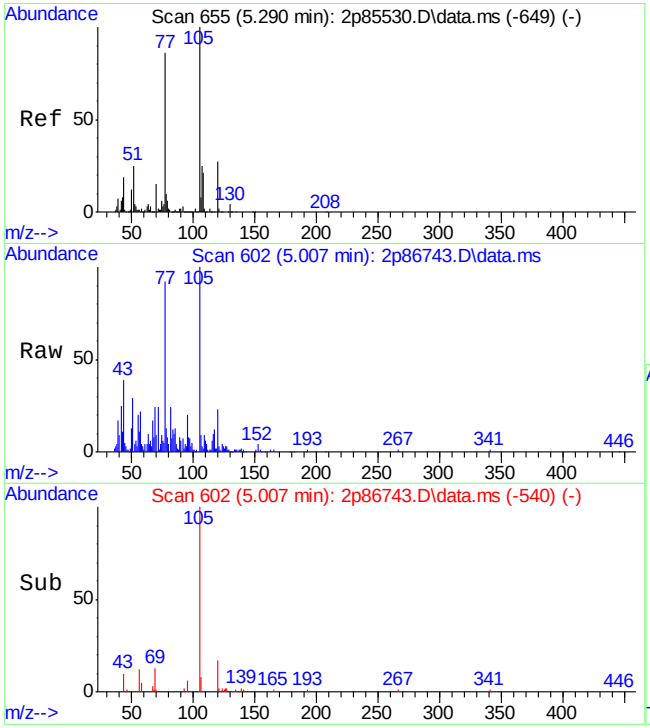


#9
Phenol
Concen: 2.41 ppm
RT: 4.440 min Scan# 496
Delta R.T. -0.150 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion: 94 Resp: 120544

Ion	Ratio	Lower	Upper
94	100		
65	34.5	1.5	61.5
66	58.8	15.3	75.3

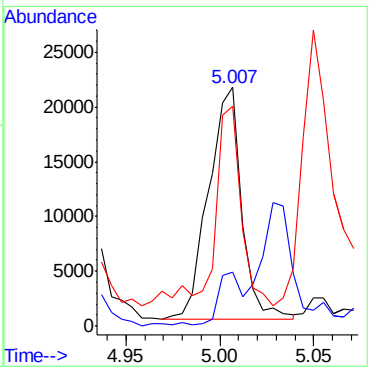


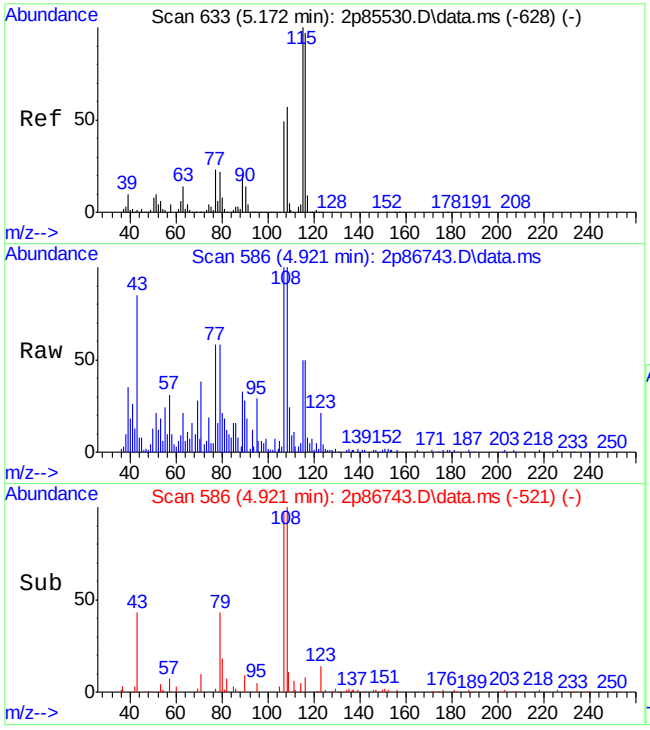


#18
Acetophenone
Concen: 0.60 ppm
RT: 5.007 min Scan# 602
Delta R.T. -0.166 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:105 Resp: 26102

Ion	Ratio	Lower	Upper
105	100		
120	11.7	0.0	54.6
77	75.8	56.6	116.6

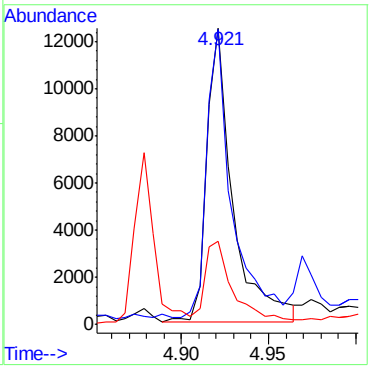


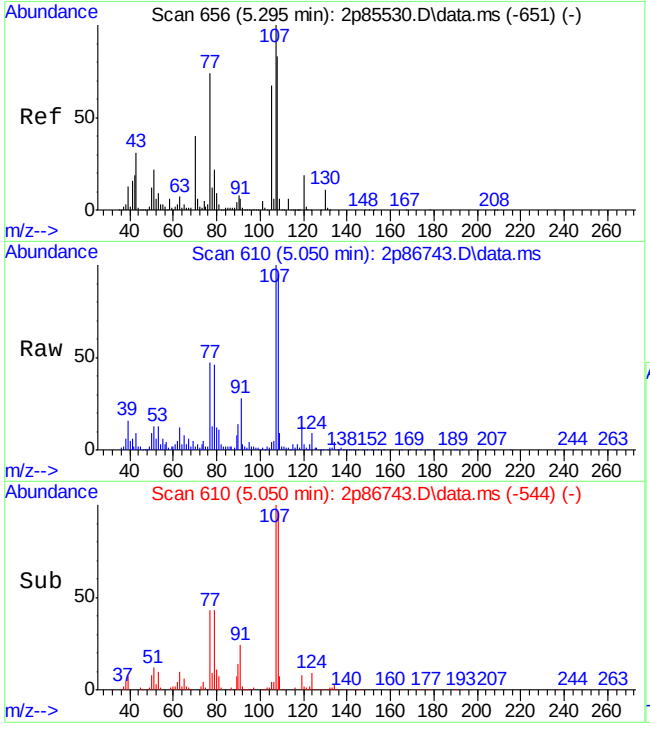


#19
2-Methylphenol
Concen: 0.51 ppm
RT: 4.921 min Scan# 586
Delta R.T. -0.150 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:108 Resp: 12963

Ion	Ratio	Lower	Upper
108	100		
107	96.2	58.4	118.4
90	24.5	0.0	53.9

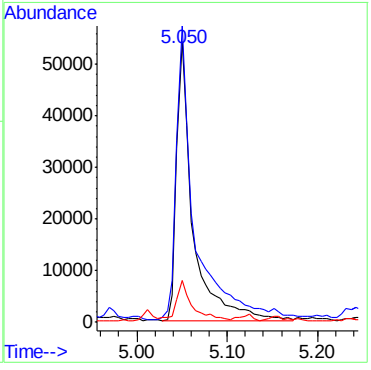


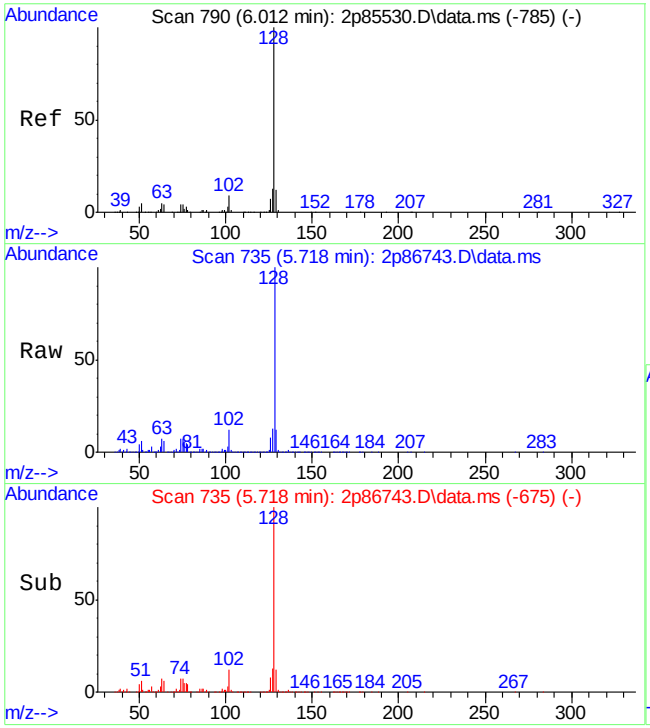


#21
3&4-Methylphenol
Concen: 2.66 ppm
RT: 5.050 min Scan# 610
Delta R.T. -0.149 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:108 Resp: 68847

Ion	Ratio	Lower	Upper
108	100		
107	104.2	90.6	150.6
90	13.9	0.0	39.9

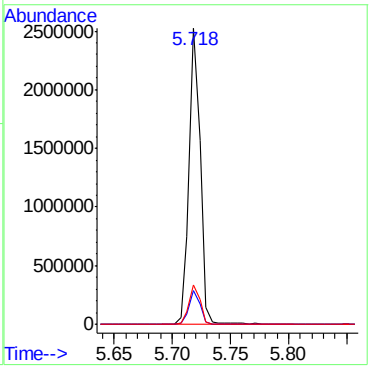


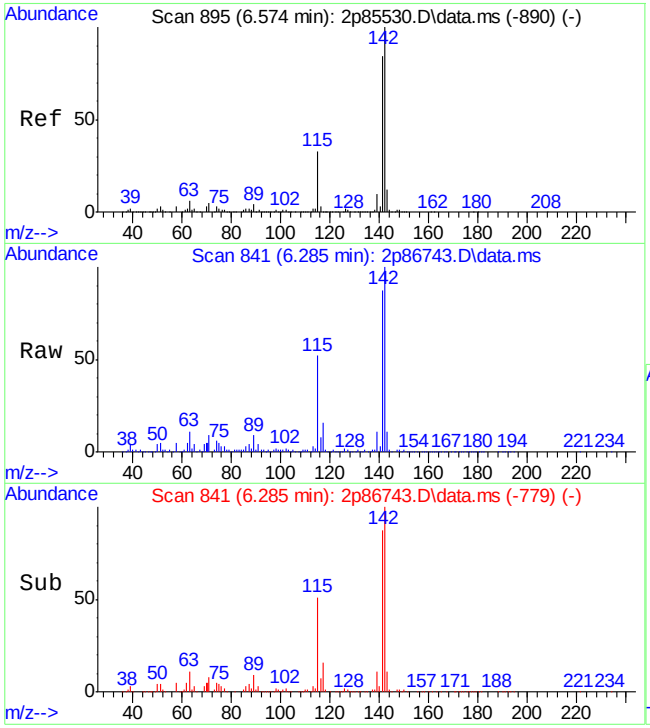


#38
Naphthalene
Concen: 25.25 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:128 Resp: 1648985

Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	41.2
127	13.4	0.0	43.7

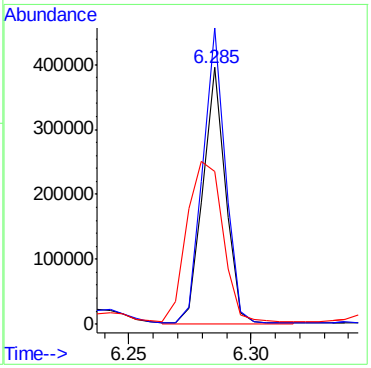


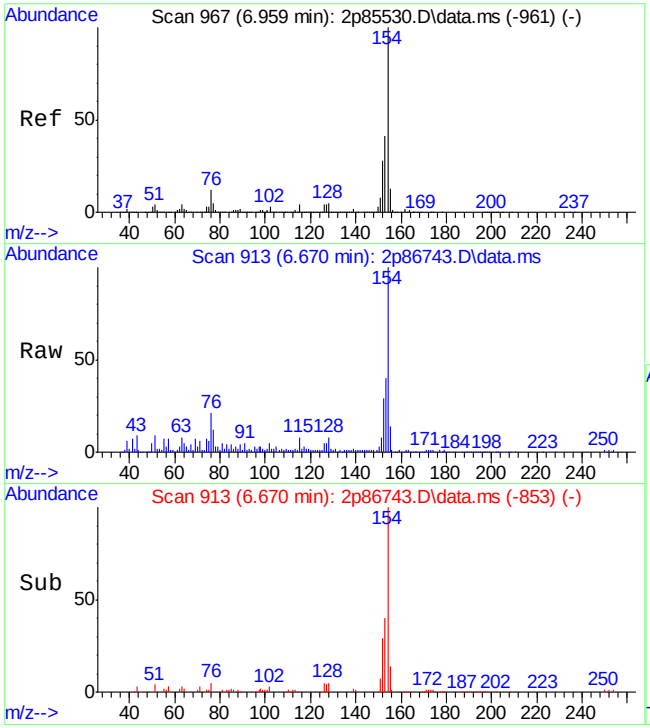


#44
2-Methylnaphthalene
Concen: 6.15 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:141 Resp: 255361

Ion	Ratio	Lower	Upper
141	100		
142	115.4	90.7	150.7
115	58.8	18.7	78.7

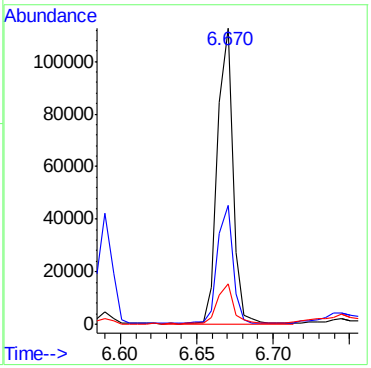


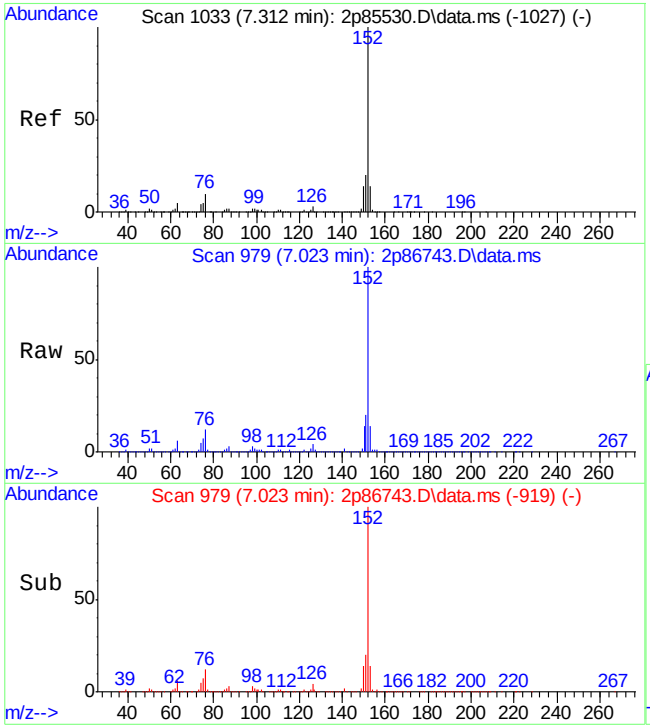


#53
Biphenyl
Concen: 1.83 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:154 Resp: 79988

Ion	Ratio	Lower	Upper
154	100		
153	39.8	11.1	71.1
155	13.3	0.0	43.4

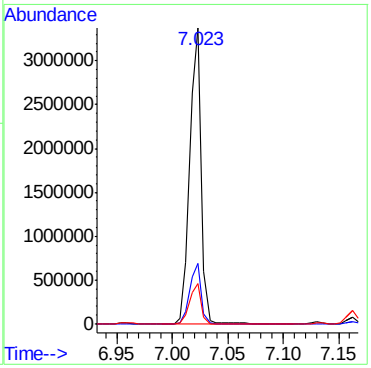


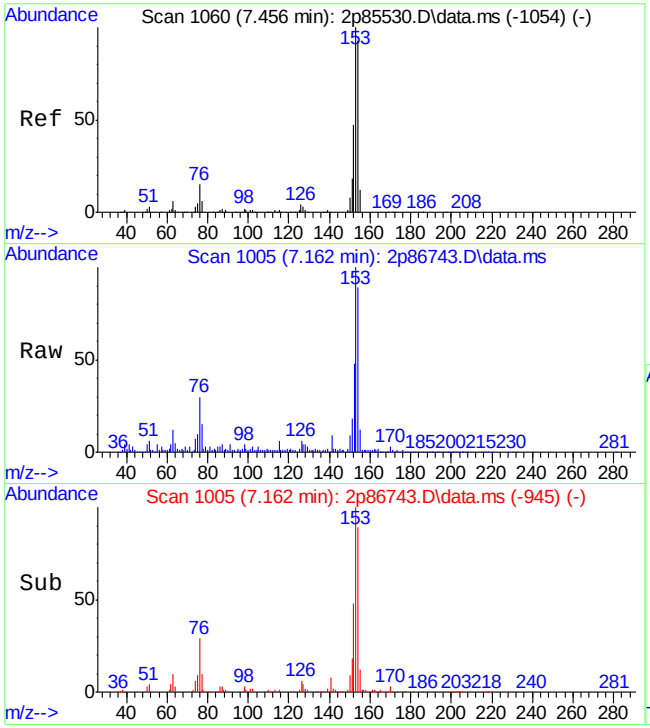


#56
Acenaphthylene
Concen: 45.22 ppm
RT: 7.023 min Scan# 979
Delta R.T. -0.177 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:152 Resp: 2412200

Ion	Ratio	Lower	Upper
152	100		
151	20.5	0.0	50.3
153	13.6	0.0	43.6

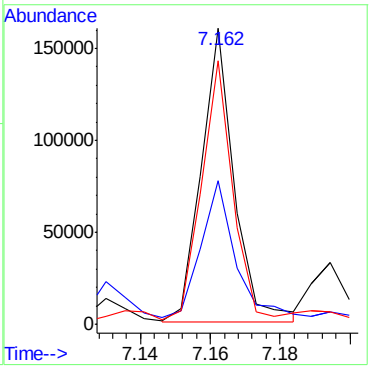


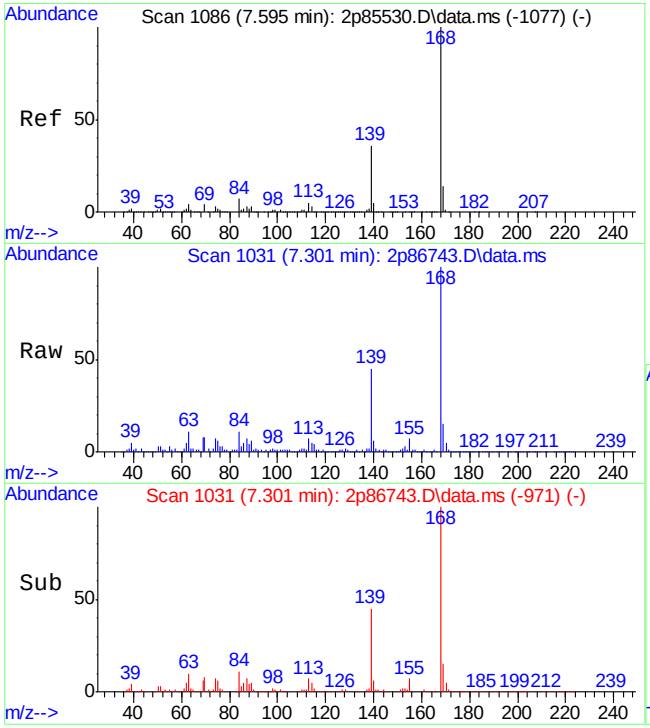


#59
Acenaphthene
Concen: 3.36 ppm
RT: 7.162 min Scan# 1005
Delta R.T. -0.182 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:153 Resp: 105228

Ion	Ratio	Lower	Upper
153	100		
152	46.7	17.8	77.8
154	88.6	59.8	119.8

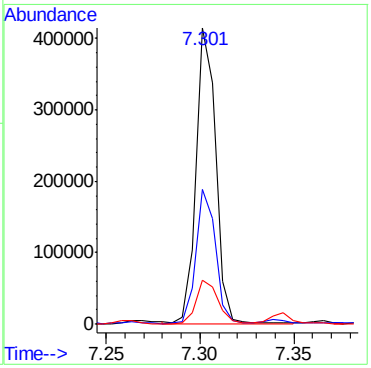


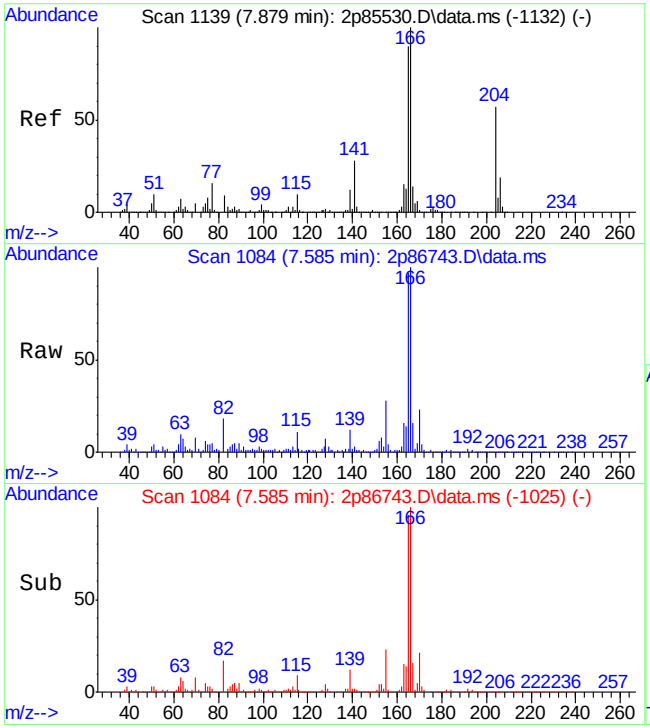


#62
Dibenzofuran
Concen: 6.97 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:168 Resp: 301175

Ion	Ratio	Lower	Upper
168	100		
139	45.2	9.2	69.2
169	14.1	0.0	44.1

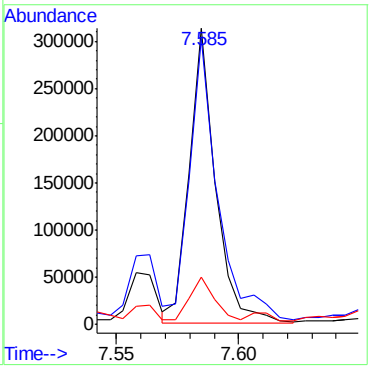


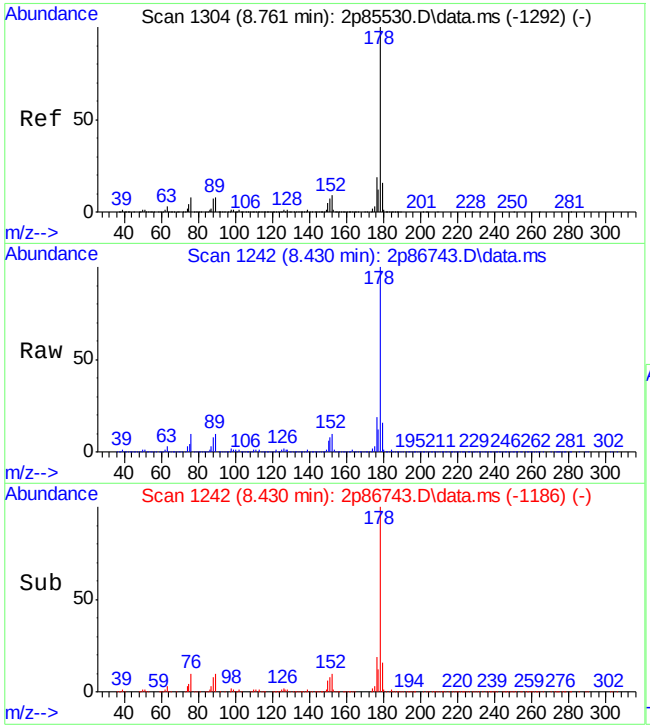


#66
Fluorene
Concen: 6.35 ppm
RT: 7.585 min Scan# 1084
Delta R.T. -0.182 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:166 Resp: 235227

Ion	Ratio	Lower	Upper
166	100		
165	95.1	60.6	120.6
167	14.9	0.0	44.1

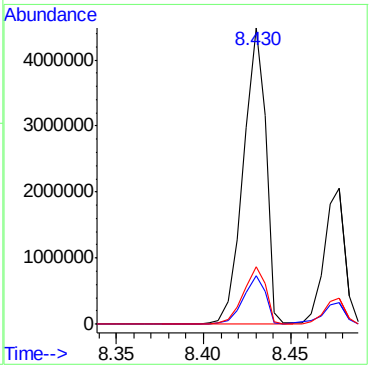


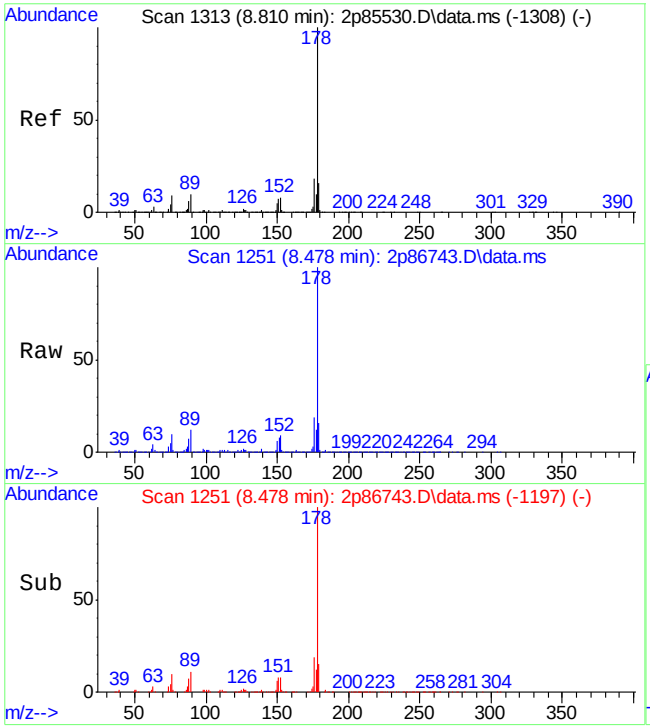


#77
Phenanthrene
Concen: 89.08 ppm
RT: 8.430 min Scan# 1242
Delta R.T. -0.203 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:178 Resp: 4008126

Ion	Ratio	Lower	Upper
178	100		
179	16.1	0.0	46.0
176	19.5	0.0	49.2

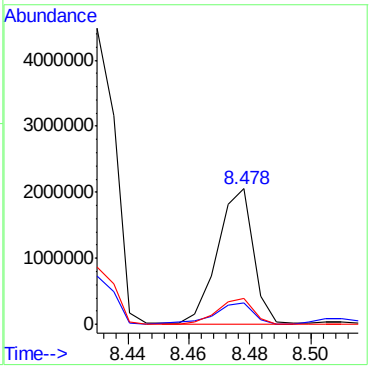


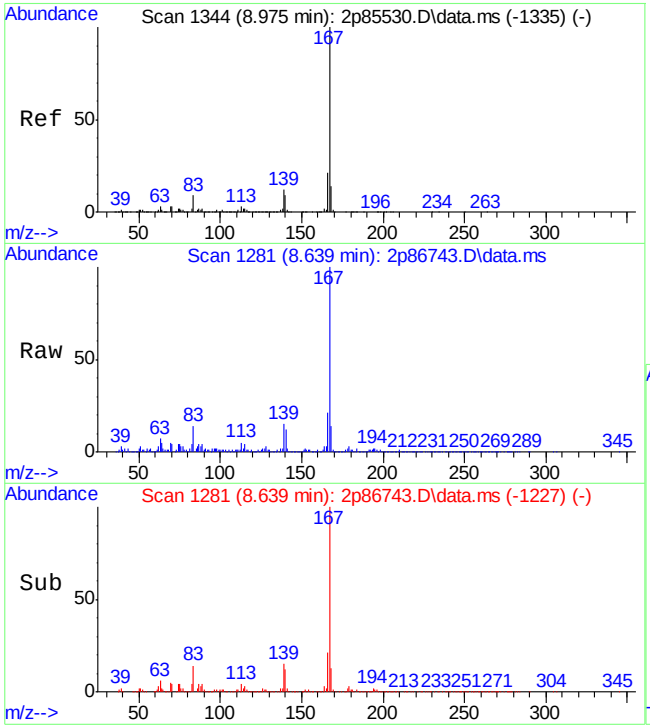


#78
Anthracene
Concen: 36.59 ppm
RT: 8.478 min Scan# 1251
Delta R.T. -0.209 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:178 Resp: 1674006

Ion	Ratio	Lower	Upper
178	100		
179	15.1	0.0	45.7
176	18.8	0.0	48.6

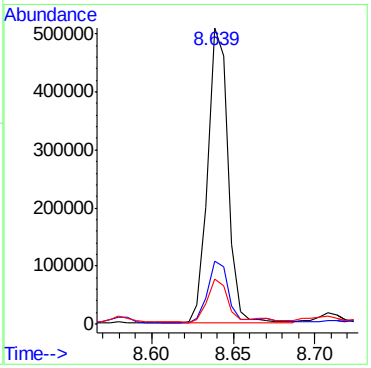


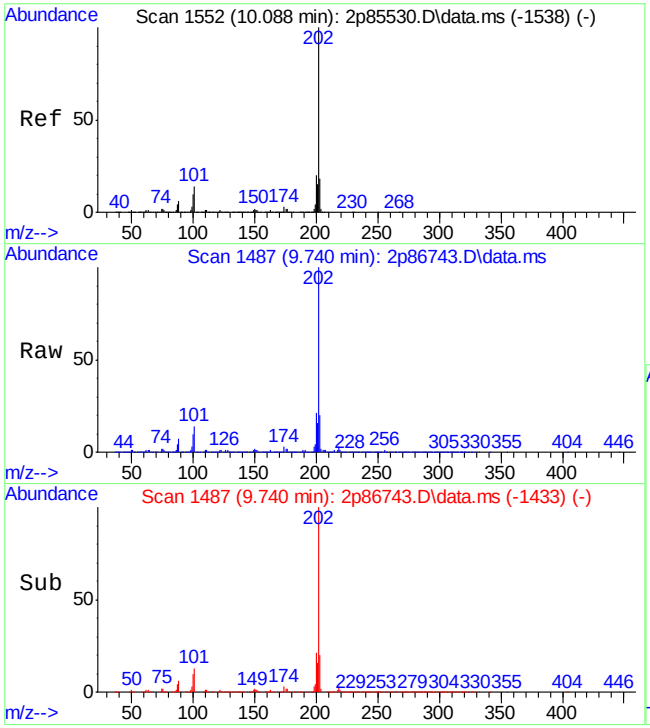


#79
Carbazole
Concen: 9.34 ppm
RT: 8.639 min Scan# 1281
Delta R.T. -0.213 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:167 Resp: 441863

Ion	Ratio	Lower	Upper
167	100		
166	20.7	0.0	50.8
139	14.5	0.0	44.2

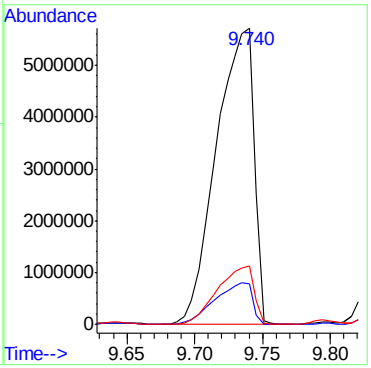


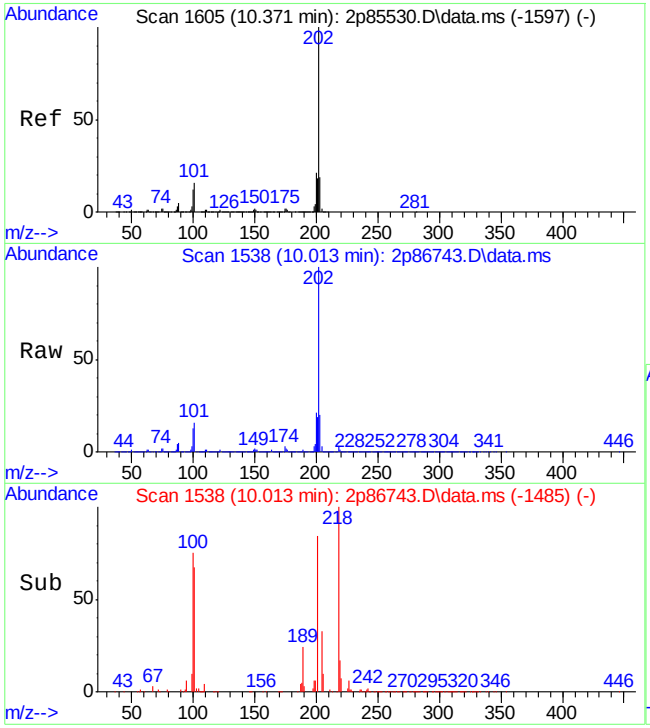


#81
Fluoranthene
Concen: 173.51 ppm
RT: 9.740 min Scan# 1487
Delta R.T. -0.209 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:202 Resp:11095491

Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	43.7
203	19.5	0.0	48.6

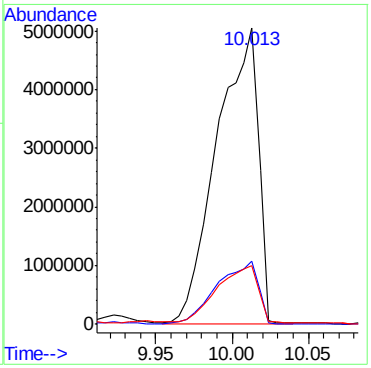


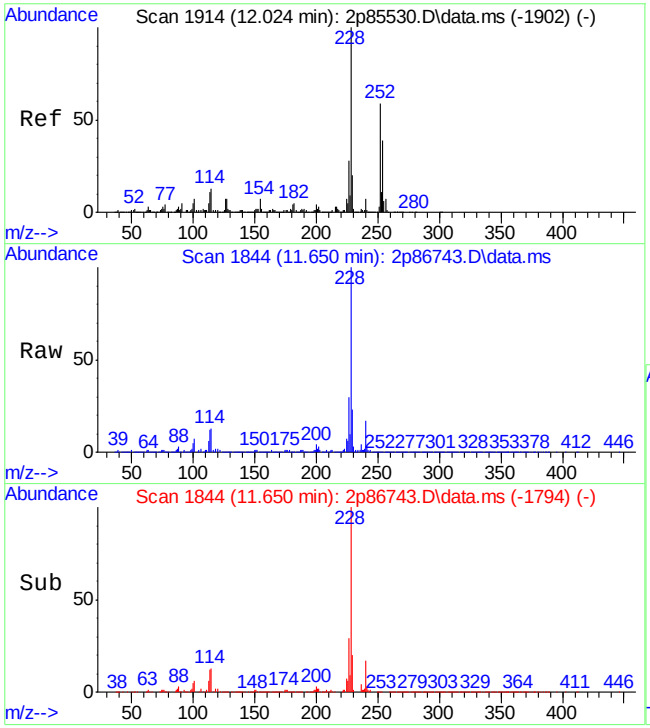


#84
Pyrene
Concen: 159.25 ppm
RT: 10.013 min Scan# 1538
Delta R.T. -0.219 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:202 Resp: 9488194

Ion	Ratio	Lower	Upper
202	100		
200	21.3	0.0	50.1
203	19.3	0.0	47.4

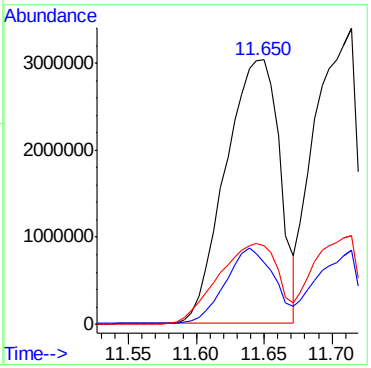


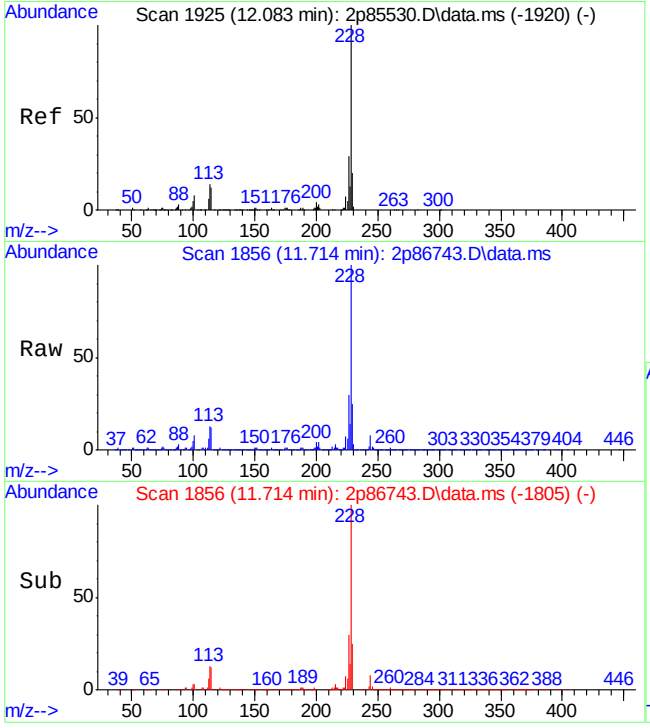


#87
Benzo[a]anthracene
Concen: 146.68 ppm
RT: 11.650 min Scan# 1844
Delta R.T. -0.230 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:228 Resp: 8436468

Ion	Ratio	Lower	Upper
228	100		
229	22.8	0.0	50.3
226	29.3	0.0	57.9

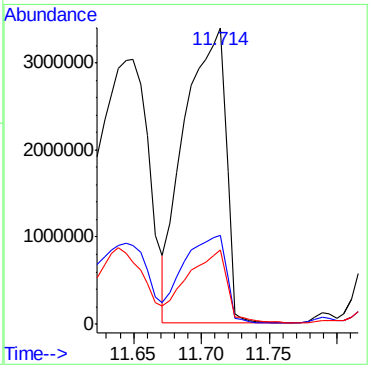


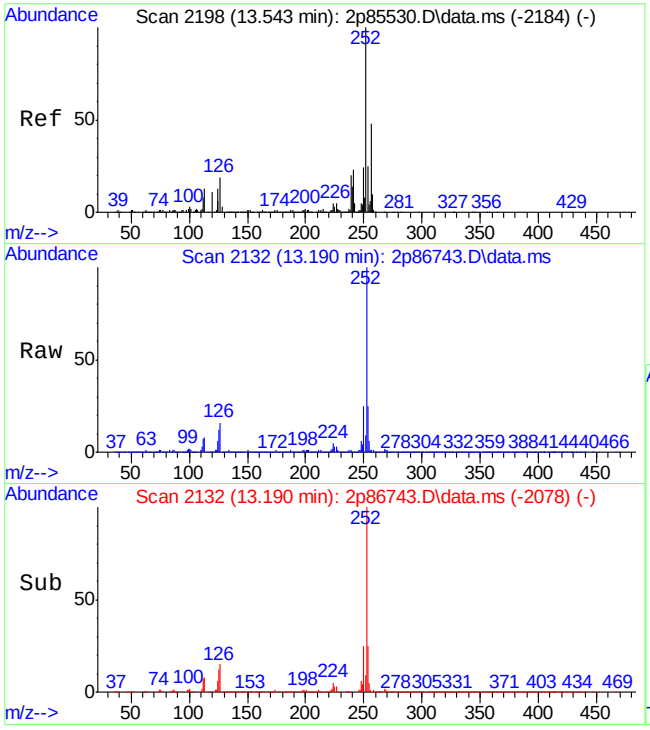


#89
Chrysene
Concen: 176.60 ppm
RT: 11.714 min Scan# 1856
Delta R.T. -0.225 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:228 Resp: 7205357

Ion	Ratio	Lower	Upper
228	100		
226	29.8	0.0	59.2
229	24.9	0.0	50.2

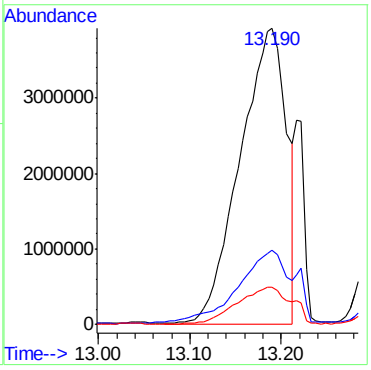


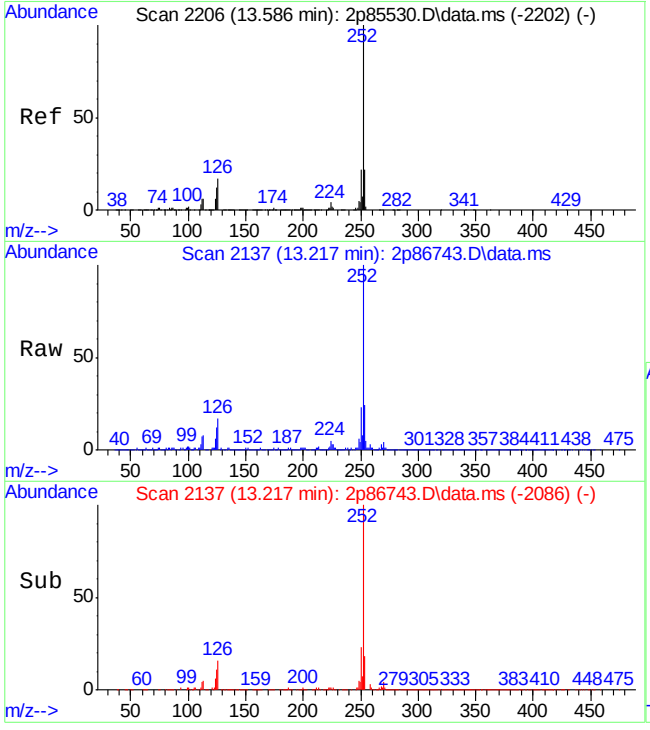


#93
Benzo[b]fluoranthene
Concen: 279.96 ppm m
RT: 13.190 min Scan# 2132
Delta R.T. -0.214 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:252 Resp:13812863

Ion	Ratio	Lower	Upper
252	100		
253	24.9	0.0	54.9
125	12.4	0.0	42.5

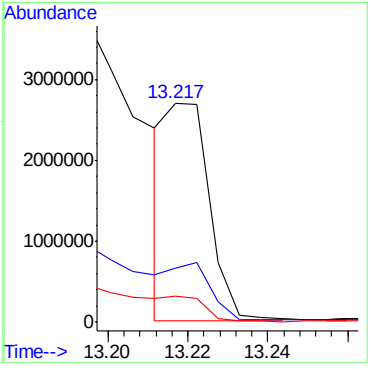


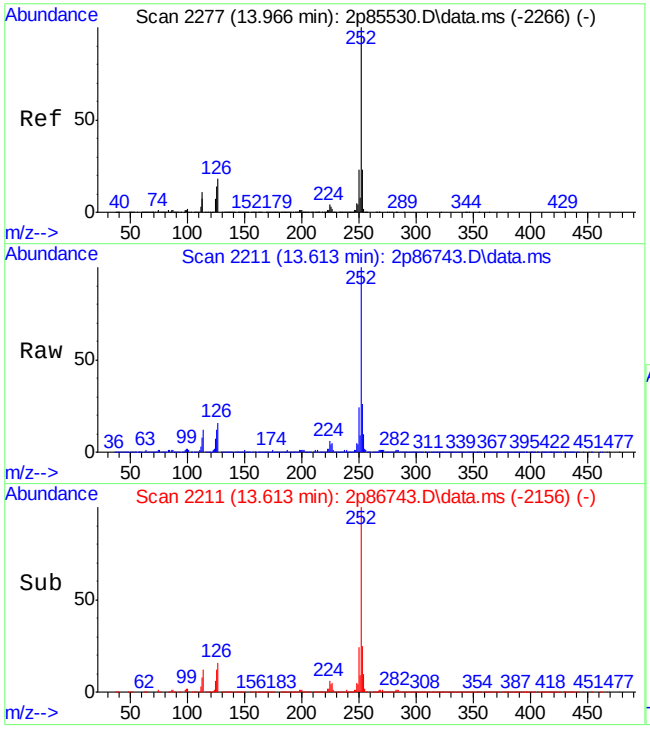


#94
Benzo[k]fluoranthene
Concen: 49.46 ppm m
RT: 13.217 min Scan# 2137
Delta R.T. -0.225 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:252 Resp: 1995264

Ion	Ratio	Lower	Upper
252	100		
253	24.5	0.0	52.4
125	11.8	0.0	40.8

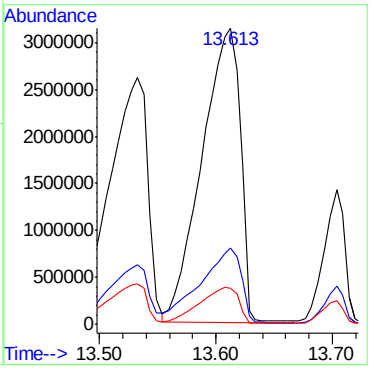


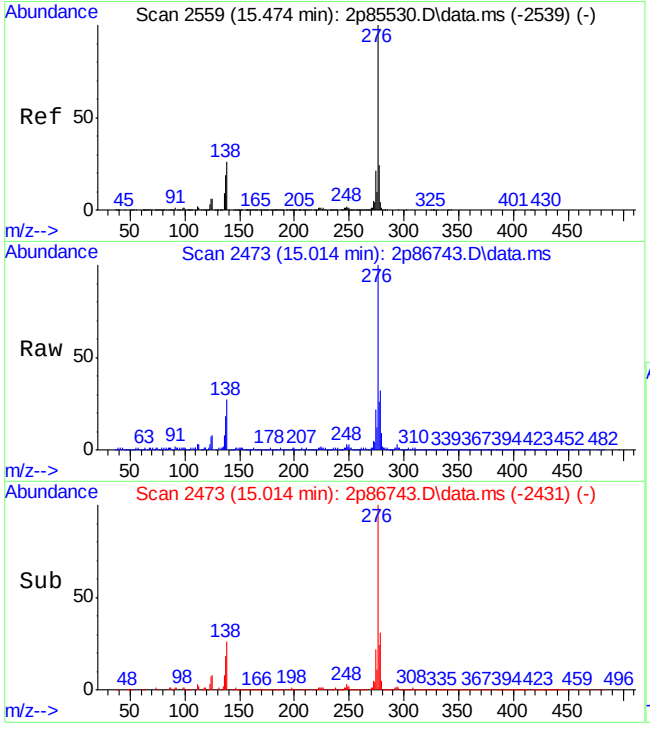


#95
Benzo[a]pyrene
Concen: 175.43 ppm
RT: 13.613 min Scan# 2211
Delta R.T. -0.208 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:252 Resp: 7274236

Ion	Ratio	Lower	Upper
252	100		
253	24.2	0.0	52.1
125	11.9	0.0	42.5

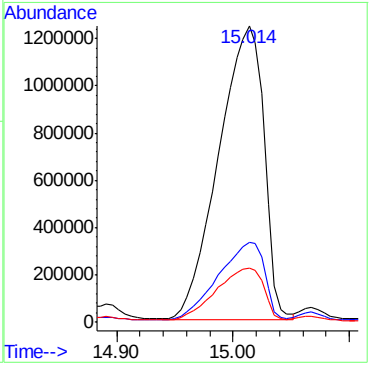


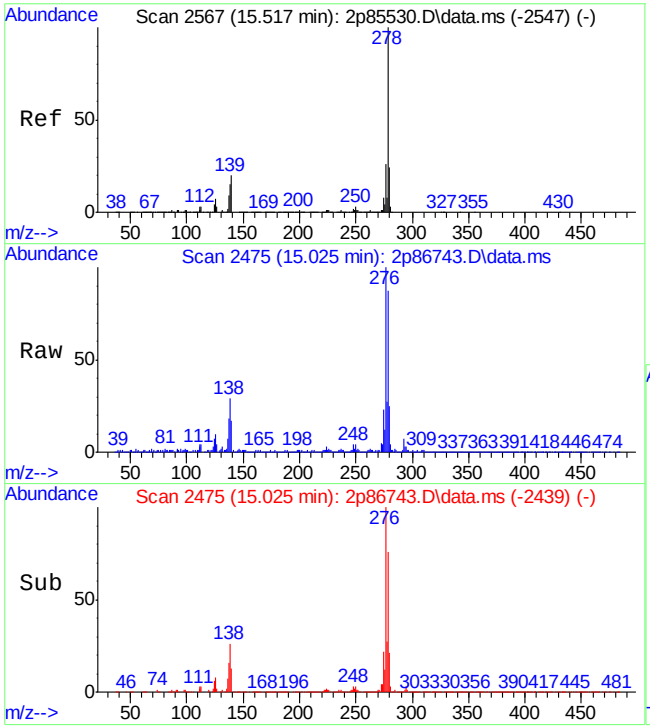


#96
Indeno[1,2,3-cd]pyrene
Concen: 71.13 ppm
RT: 15.014 min Scan# 2473
Delta R.T. -0.278 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:276 Resp: 3361480

Ion	Ratio	Lower	Upper
276	100		
138	26.2	0.0	55.3
137	17.8	0.0	48.5

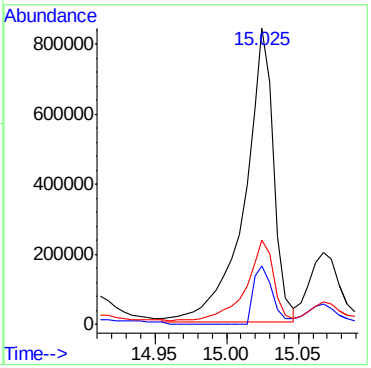


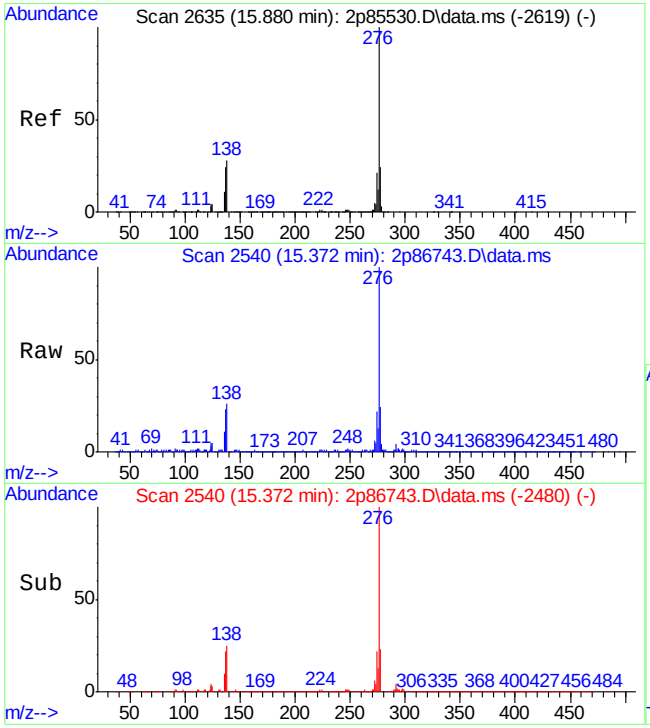


#98
Dibenz[a,h]anthracene
Concen: 32.16 ppm
RT: 15.025 min Scan# 2475
Delta R.T. -0.305 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:278 Resp: 1183692

Ion	Ratio	Lower	Upper
278	100		
139	18.9	0.0	50.3
279	27.7	0.0	54.3

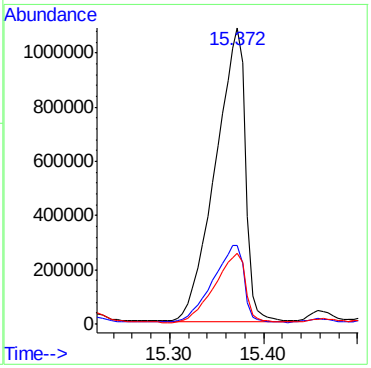




#100
Benzo[g,h,i]perylene
Concen: 65.07 ppm
RT: 15.372 min Scan# 2540
Delta R.T. -0.178 min
Lab File: 2p86743.D
Acq: 19 Apr 2019 4:05 am

Tgt Ion:276 Resp: 2434272

Ion	Ratio	Lower	Upper
276	100		
138	26.1	0.0	57.9
277	23.7	0.0	54.0



Manual Integration Approval Summary

Sample Number: JC86406-1
Lab FileID: 2P86743.D
Injection Time: 04/19/19 04:05

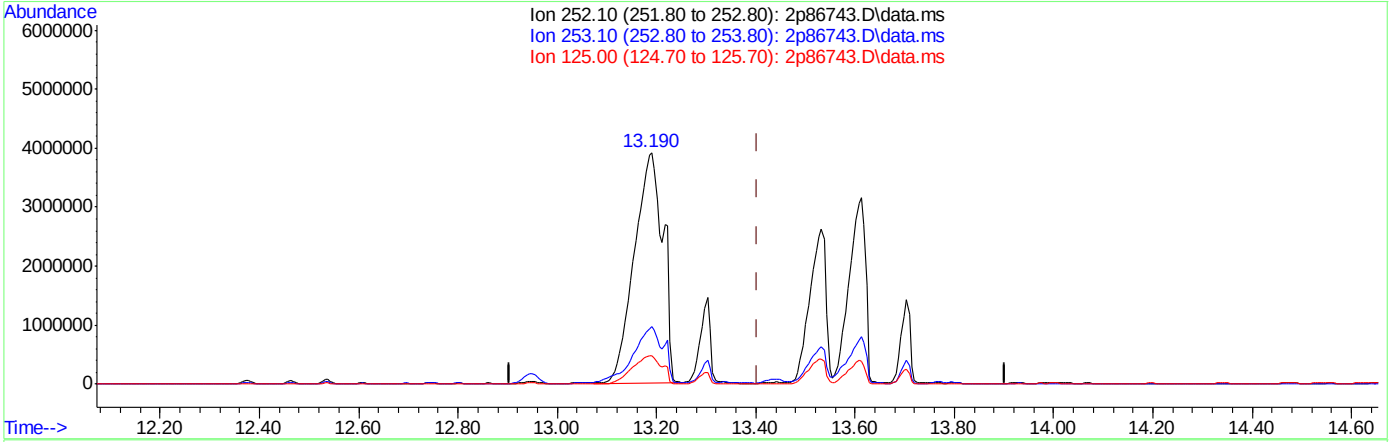
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/24/19 10:50 Kristi Schollenberger

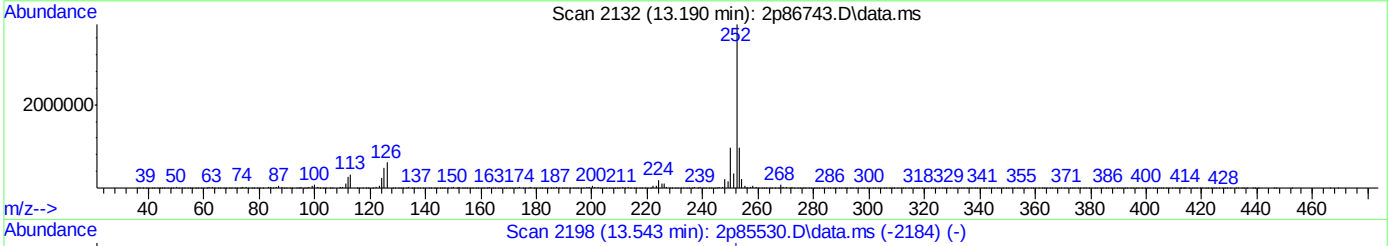
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		13.19	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.22	Overlapping peak

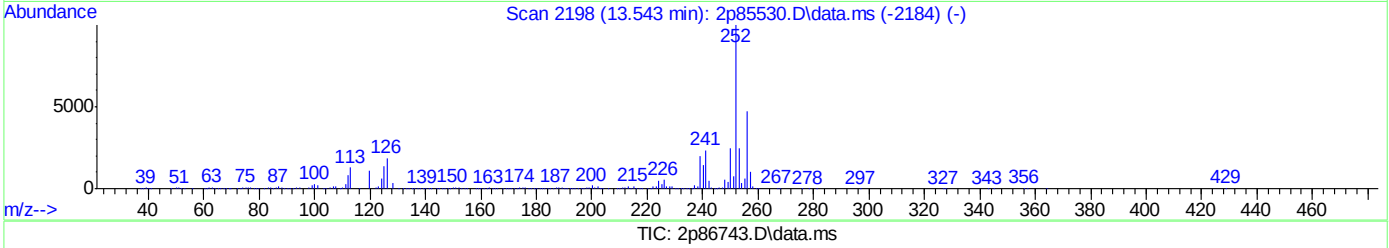
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86743.D
Acq On : 19 Apr 2019 4:05 am
Operator : carolb
Sample : jc86406-1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 19 11:16:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86743.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.190min (-0.214) 317.70ppm

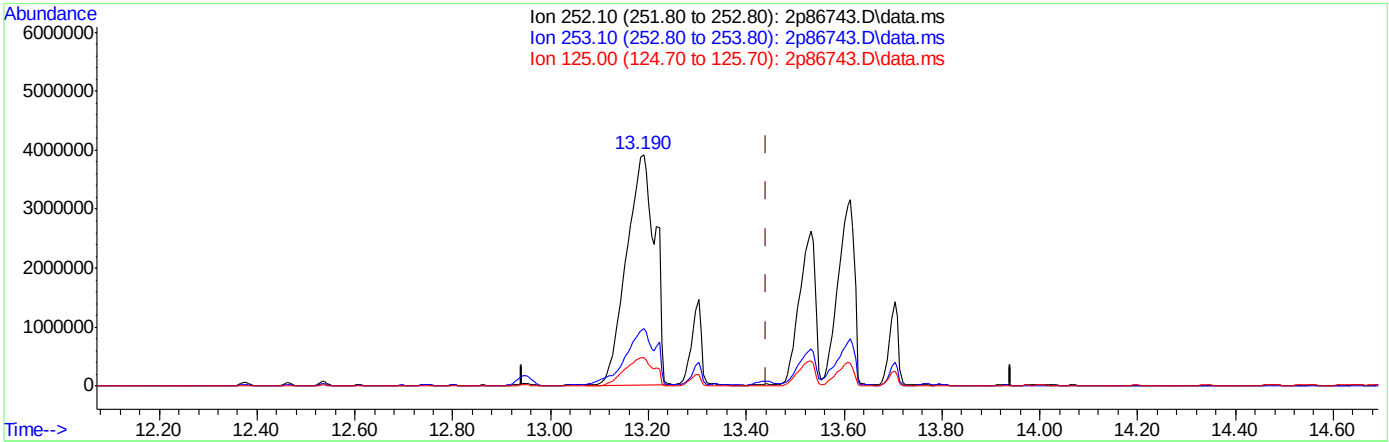
response 15675056

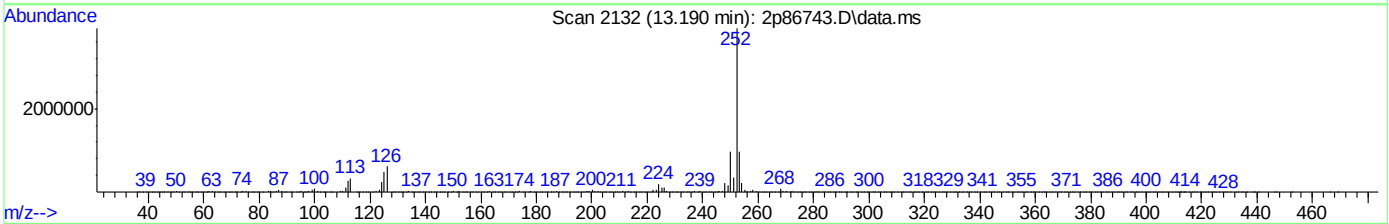
Ion	Exp%	Act%
252.10	100	100
253.10	24.90	24.38
125.00	12.50	12.31
0.00	0.00	0.00

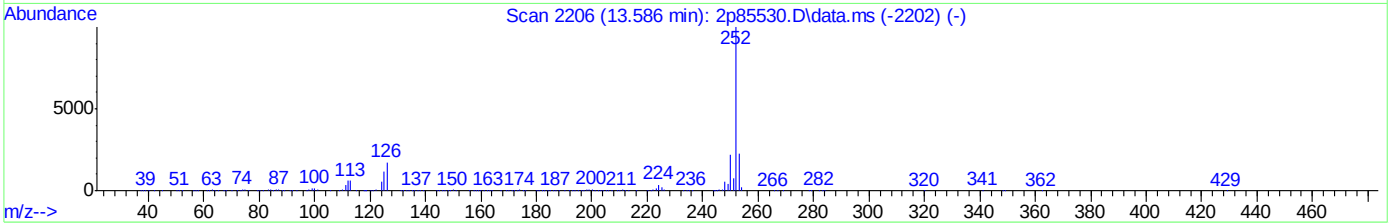
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86743.D
Acq On : 19 Apr 2019 4:05 am
Operator : carolb
Sample : jc86406-1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 19 11:16:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86743.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.190min (-0.252) 388.78ppm

response 15685208

Ion	Exp%	Act%
252.10	100	100
253.10	22.40	24.38
125.00	10.80	12.31
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/24/19 10:50

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86767.d
Acq On : 22 Apr 2019 6:07 pm
Operator : yujiac
Sample : jc86406-1 Inst : MS2P
Misc : op19810,e2p3832,30.0,,,1,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:31:17 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

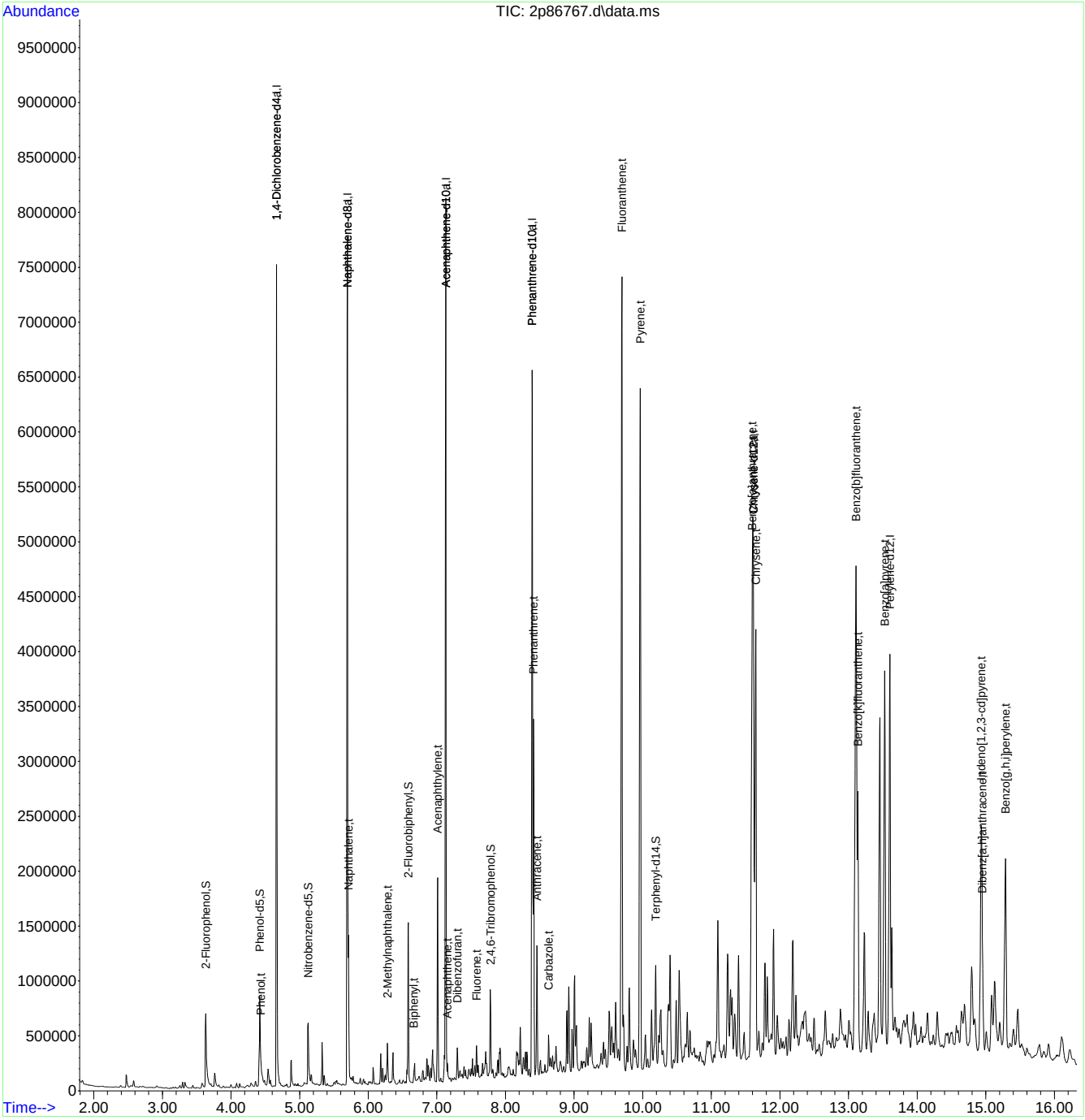
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	787055	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	2507009	40.00	ppm	0.00
47) Acenaphthene-d10	7.130	164	1139888	40.00	ppm	0.00
69) Phenanthrene-d10	8.387	188	1967076	40.00	ppm	0.00
83) Chrysene-d12	11.612	240	1476792	40.00	ppm	0.02
91) Perylene-d12	13.602	264	1543946	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4a	4.664	152	787055	40.00	ppm	0.00
103) Naphthalene-d8a	5.697	136	2507009	40.00	ppm	0.00
105) Acenaphthene-d10a	7.130	164	1139888	40.00	ppm	0.00
108) Chrysene-d12a	11.612	240	1476792	40.00	ppm	0.02
110) Phenanthrene-d10a	8.387	188	1967076	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.632	112	228074	5.76	ppm	0.02
Spiked Amount 50.000	Range 11 - 58		Recovery = 11.52%			
8) Phenol-d5	4.418	99	325403	7.50	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 15.00%			
25) Nitrobenzene-d5	5.124	82	260014	7.72	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 15.44%#			
51) 2-Fluorobiphenyl	6.585	172	338556	8.58	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 17.16%#			
73) 2,4,6-Tribromophenol	7.783	330	33378	4.84	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 9.68%#			
85) Terphenyl-d14	10.189	244	256708	6.98	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 13.96%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.434	94	26411	0.58	ppm	# 71
38) Naphthalene	5.713	128	390042	6.50	ppm	99
44) 2-Methylnaphthalene	6.280	141	56335	1.48	ppm	94
53) Biphenyl	6.665	154	20918	0.46	ppm	97
56) Acenaphthylene	7.012	152	594232	10.66	ppm	99
59) Acenaphthene	7.151	153	23114	0.71	ppm	94
62) Dibenzofuran	7.296	168	70635	1.57	ppm	94
66) Fluorene	7.579	166	55166	1.43	ppm	96
77) Phenanthrene	8.408	178	908307	18.54	ppm	99
78) Anthracene	8.457	178	367892	7.38	ppm	99
79) Carbazole	8.628	167	111827	2.17	ppm	98
81) Fluoranthene	9.697	202	2940387	42.22	ppm	99
84) Pyrene	9.965	202	2395894	41.70	ppm	100
87) Benzo[a]anthracene	11.596	228	1872323	33.75	ppm	99
89) Chrysene	11.650	228	1596830	40.58	ppm	98
93) Benzo[b]fluoranthene	13.110	252	2573144	50.86	ppm	98
94) Benzo[k]fluoranthene	13.137	252	732899	17.72	ppm	99
95) Benzo[a]pyrene	13.527	252	1497810	35.23	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.934	276	1134627	23.41	ppm	94
98) Dibenz[a,h]anthracene	14.950	278	334400m	8.86	ppm	
100) Benzo[g,h,i]perylene	15.287	276	1035559	27.00	ppm	95

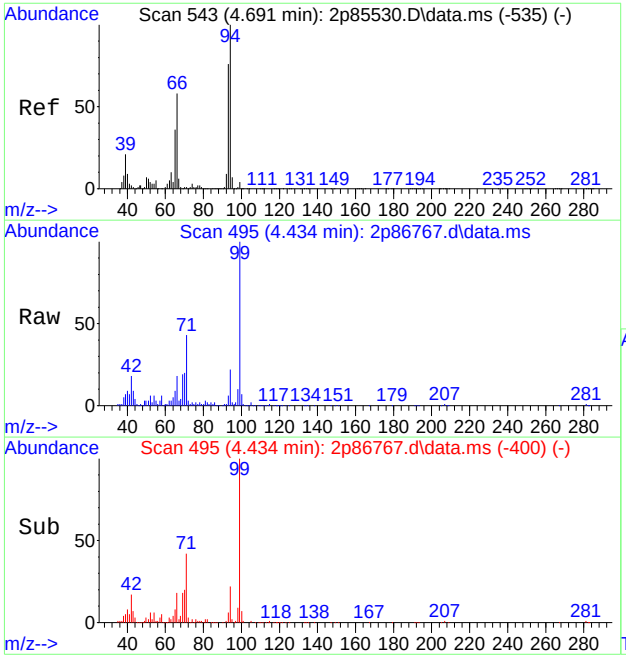
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86767.d
Acq On : 22 Apr 2019 6:07 pm
Operator : yujiac
Sample : jc86406-1 Inst : MS2P
Misc : op19810,e2p3832,30.0,,,1,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:31:17 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

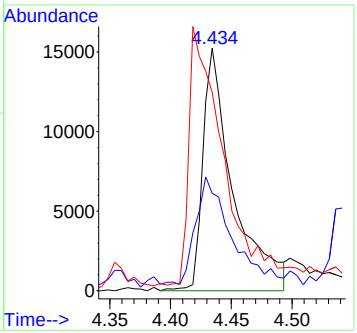


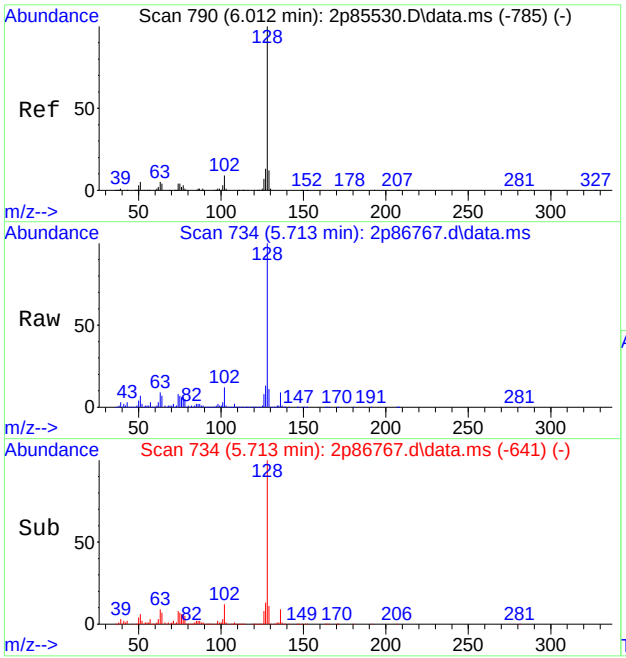


#9
Phenol
Concen: 0.58 ppm
RT: 4.434 min Scan# 495
Delta R.T. 0.011 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion: 94 Resp: 26411

Ion	Ratio	Lower	Upper
94	100		
65	38.5	4.7	64.7
66	80.2	19.9	79.9#

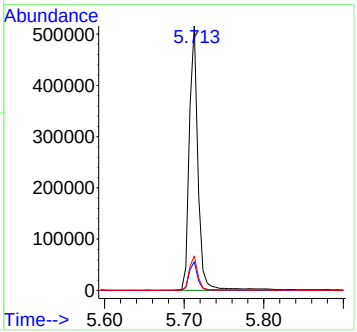


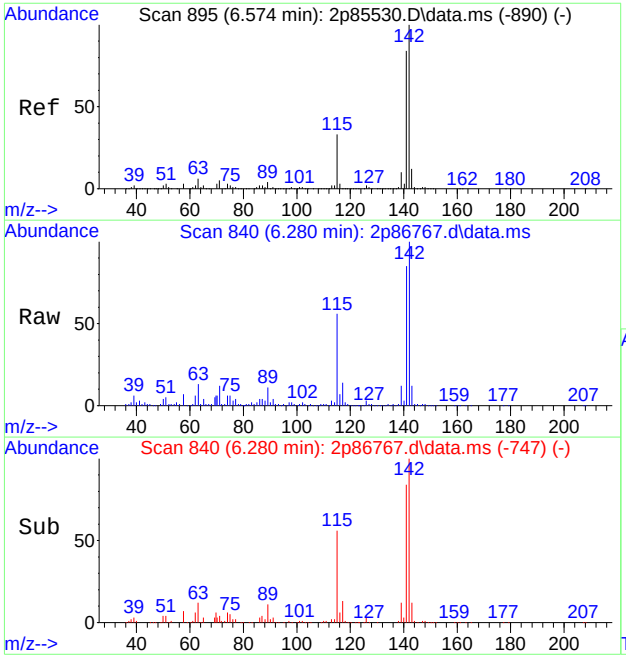


#38
Naphthalene
Concen: 6.50 ppm
RT: 5.713 min Scan# 734
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:128 Resp: 390042

Ion	Ratio	Lower	Upper
128	100		
129	10.9	0.0	41.5
127	13.0	0.0	43.5

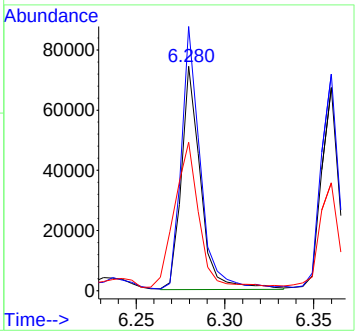


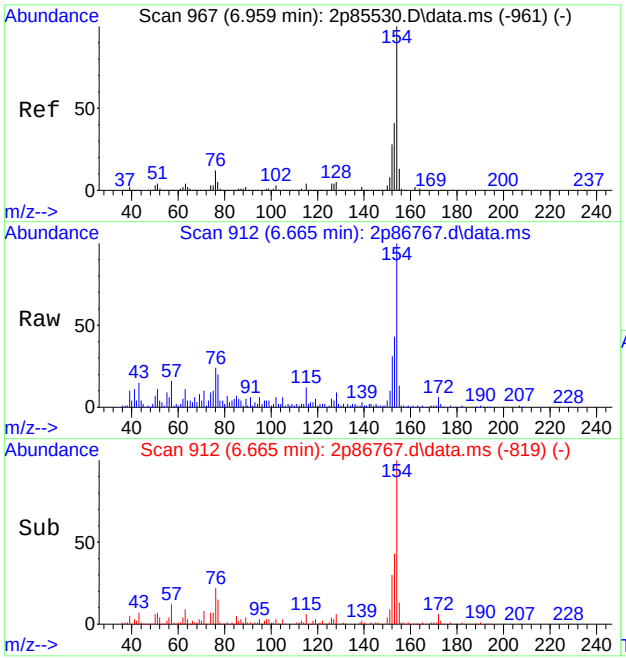


#44
2-Methylnaphthalene
Concen: 1.48 ppm
RT: 6.280 min Scan# 840
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:141 Resp: 56335

Ion	Ratio	Lower	Upper
141	100		
142	117.6	88.5	148.5
115	62.8	20.8	80.8

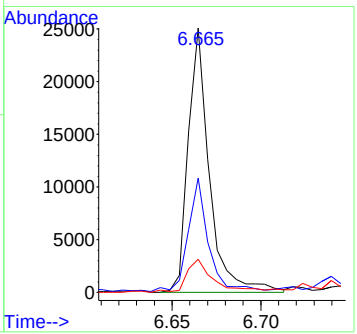


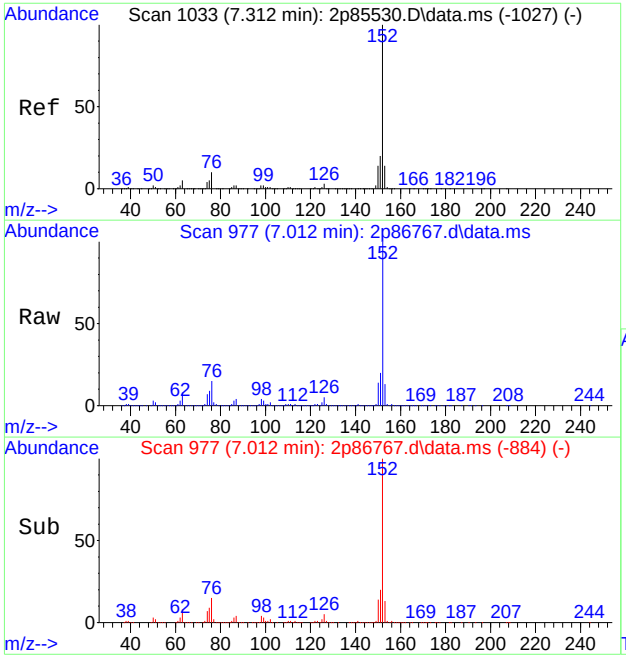


#53
Biphenyl
Concen: 0.46 ppm
RT: 6.665 min Scan# 912
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:154 Resp: 20918

Ion	Ratio	Lower	Upper
154	100		
153	41.7	10.3	70.3
155	11.7	0.0	43.1

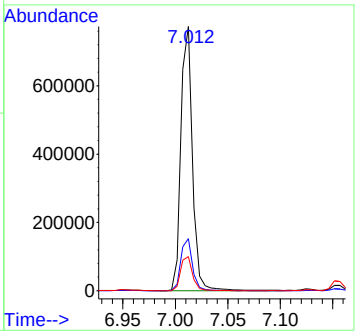


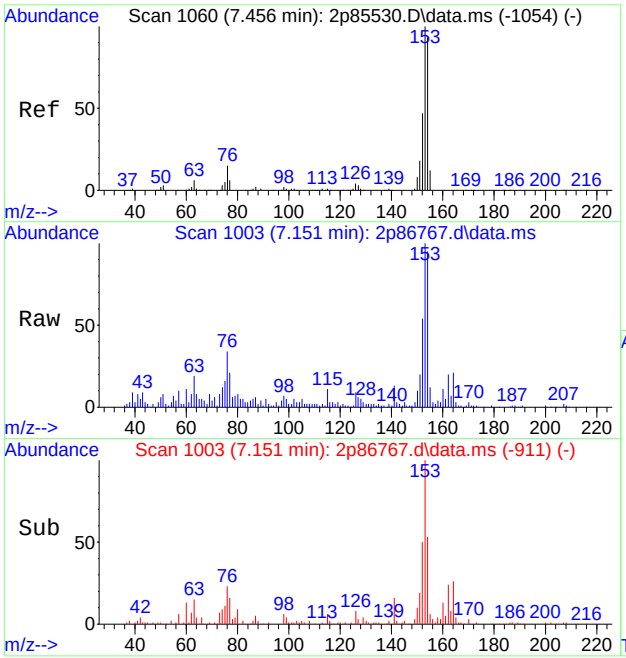


#56
Acenaphthylene
Concen: 10.66 ppm
RT: 7.012 min Scan# 977
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:152 Resp: 594232

Ion	Ratio	Lower	Upper
152	100		
151	19.8	0.0	50.2
153	13.0	0.0	43.6

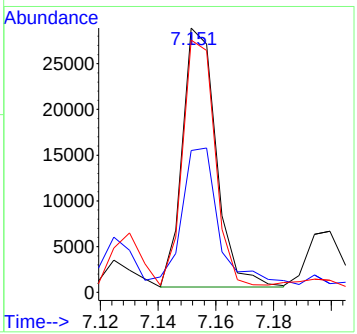


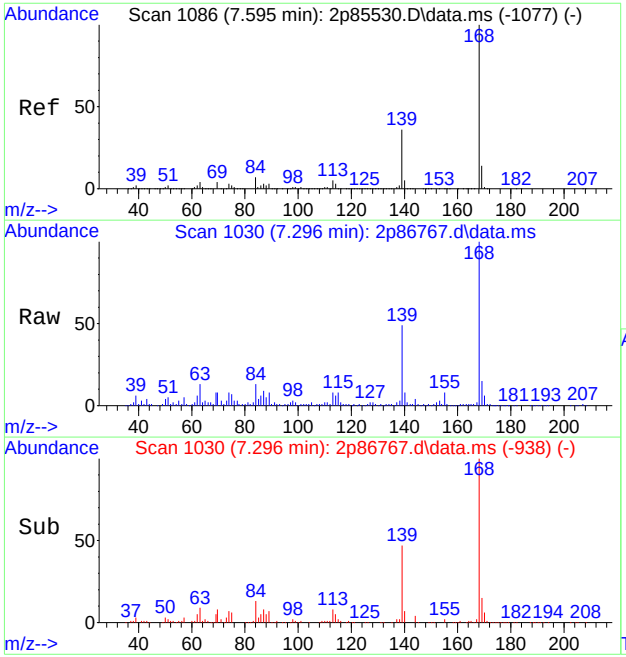


#59
Acenaphthene
Concen: 0.71 ppm
RT: 7.151 min Scan# 1003
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:153 Resp: 23114

Ion	Ratio	Lower	Upper
153	100		
152	49.7	18.5	78.5
154	94.4	56.7	116.7

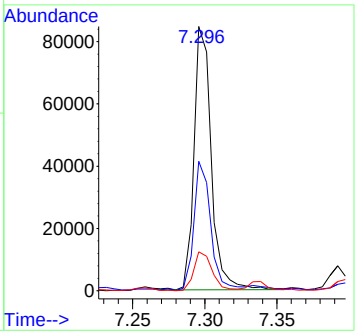


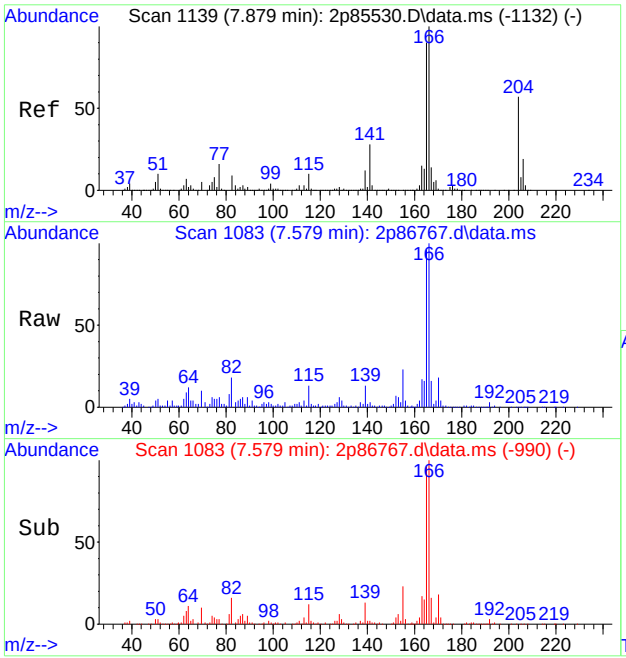


#62
Dibenzofuran
Concen: 1.57 ppm
RT: 7.296 min Scan# 1030
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:168 Resp: 70635

Ion	Ratio	Lower	Upper
168	100		
139	48.8	14.0	74.0
169	14.6	0.0	43.3

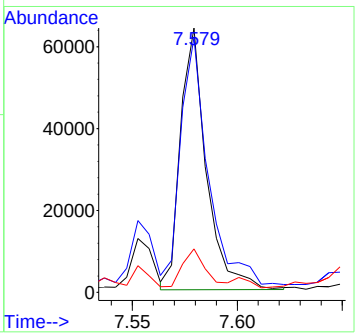


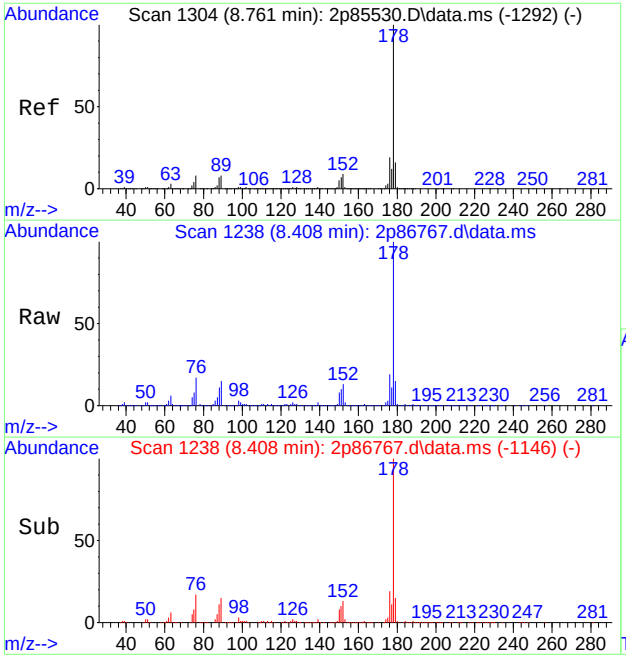


#66
Fluorene
Concen: 1.43 ppm
RT: 7.579 min Scan# 1083
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:166 Resp: 55166

Ion	Ratio	Lower	Upper
166	100		
165	94.5	60.3	120.3
167	14.6	0.0	43.9

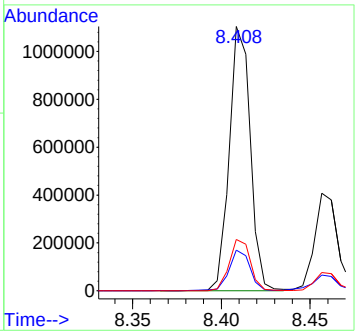


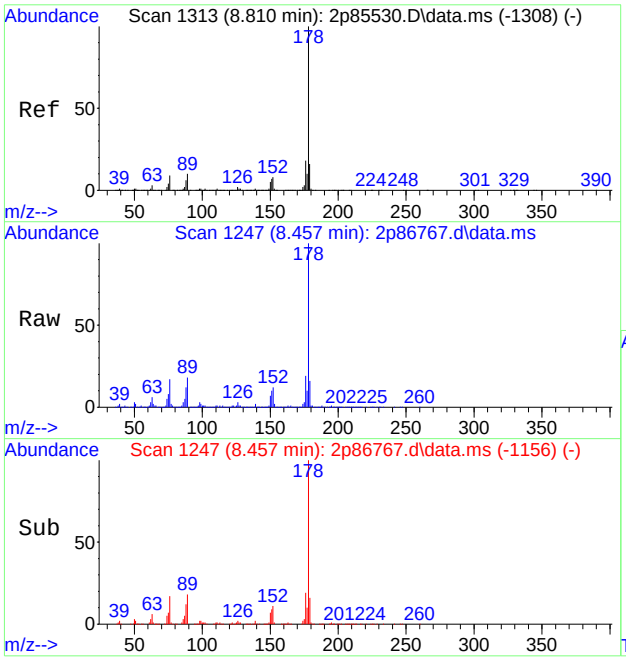


#77
Phenanthrene
Concen: 18.54 ppm
RT: 8.408 min Scan# 1238
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:178 Resp: 908307

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.8
176	19.4	0.0	49.9

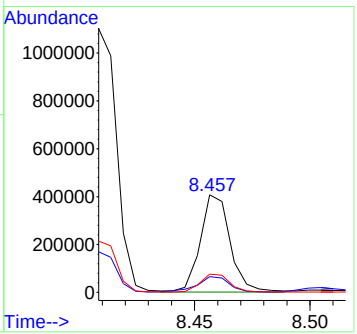


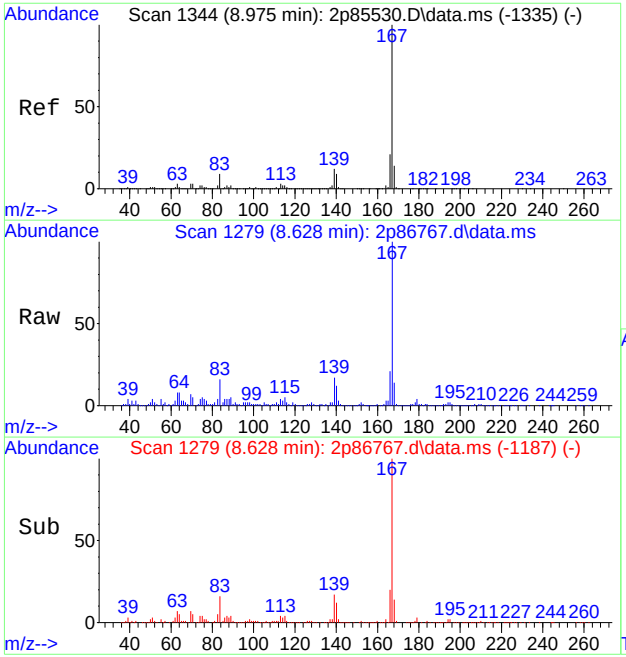


#78
Anthracene
Concen: 7.38 ppm
RT: 8.457 min Scan# 1247
Delta R.T. -0.011 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:178 Resp: 367892

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	45.3
176	18.8	0.0	49.1

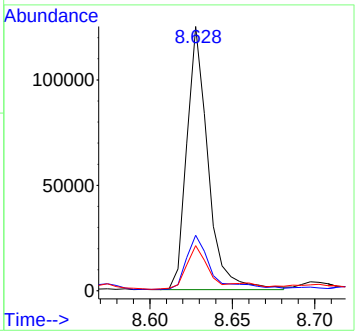


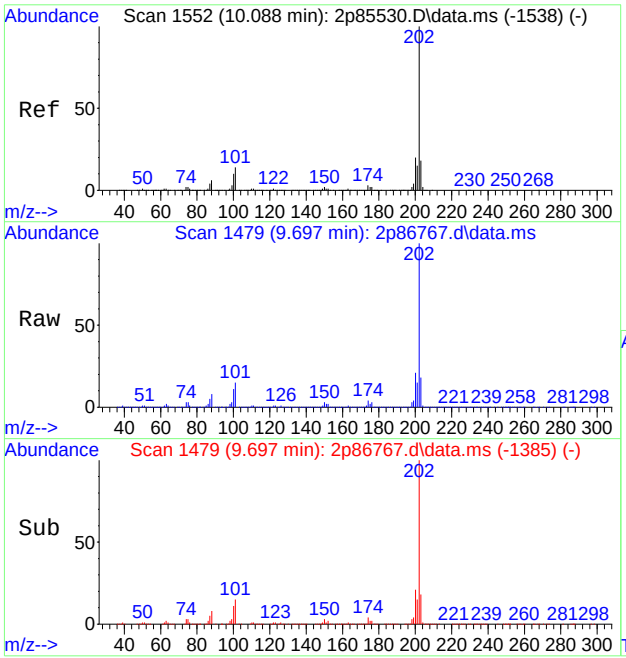


#79
Carbazole
Concen: 2.17 ppm
RT: 8.628 min Scan# 1279
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:167 Resp: 111827

Ion	Ratio	Lower	Upper
167	100		
166	20.5	0.0	51.0
139	16.1	0.0	45.1

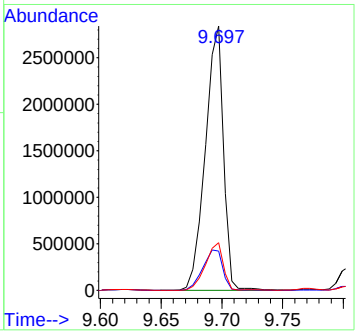


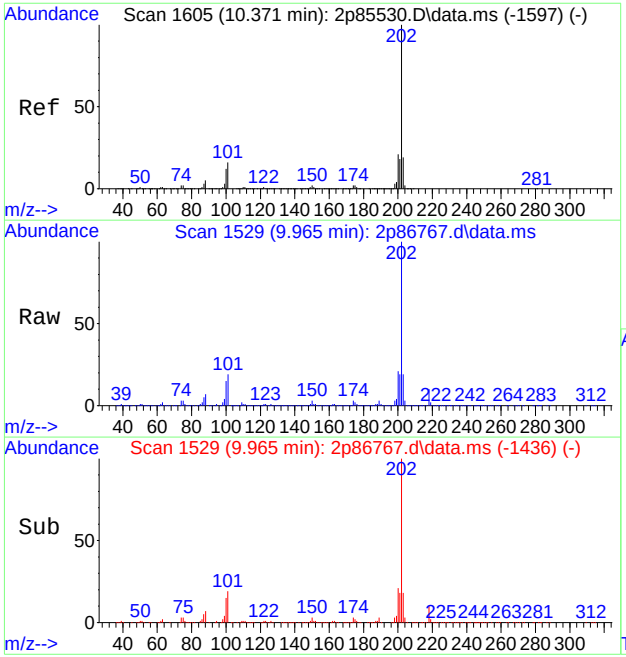


#81
Fluoranthene
Concen: 42.22 ppm
RT: 9.697 min Scan# 1479
Delta R.T. 0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:202 Resp: 2940387

Ion	Ratio	Lower	Upper
202	100		
101	14.8	0.0	45.0
203	17.9	0.0	48.2

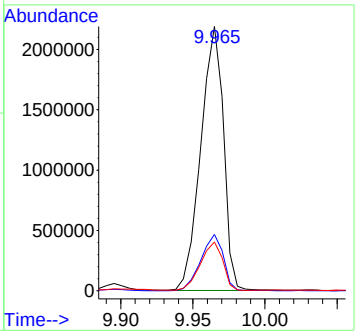


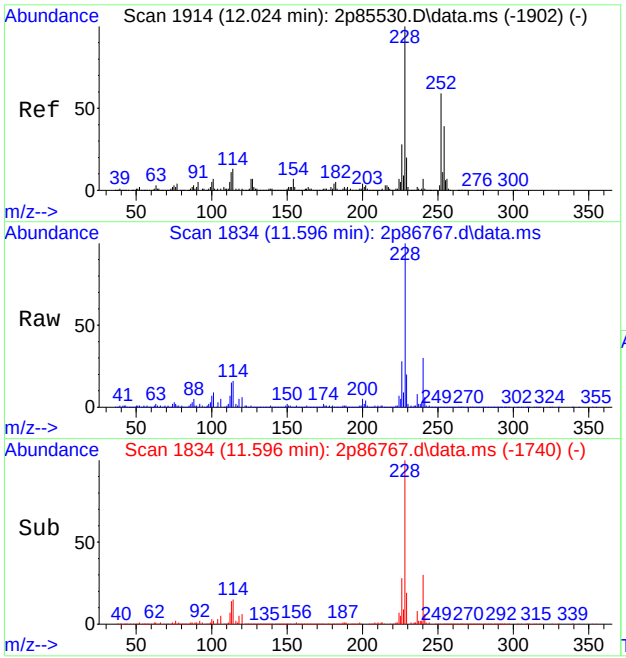


#84
Pyrene
Concen: 41.70 ppm
RT: 9.965 min Scan# 1529
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:202 Resp: 2395894

Ion	Ratio	Lower	Upper
202	100		
200	21.3	0.0	51.2
203	18.3	0.0	48.2

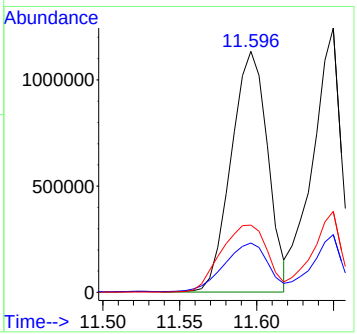


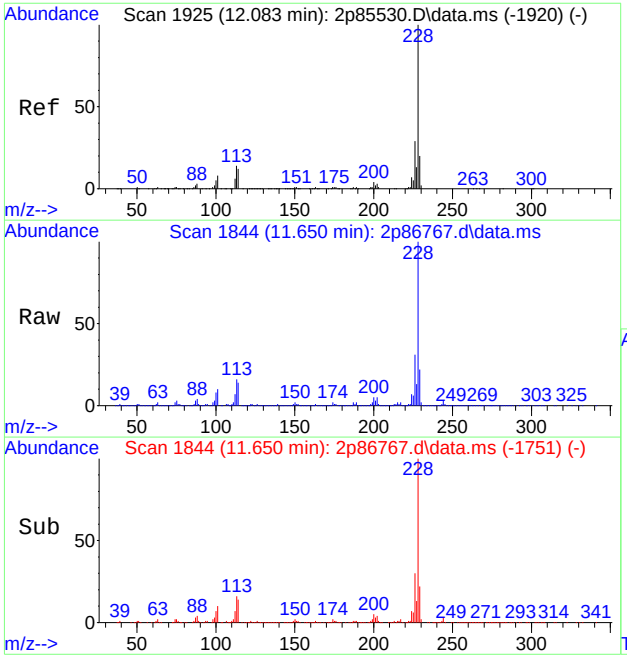


#87
Benzo[a]anthracene
Concen: 33.75 ppm
RT: 11.596 min Scan# 1834
Delta R.T. 0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:228 Resp: 1872323

Ion	Ratio	Lower	Upper
228	100		
229	19.7	0.0	49.9
226	27.6	0.0	57.1

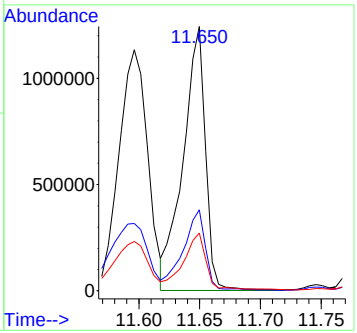


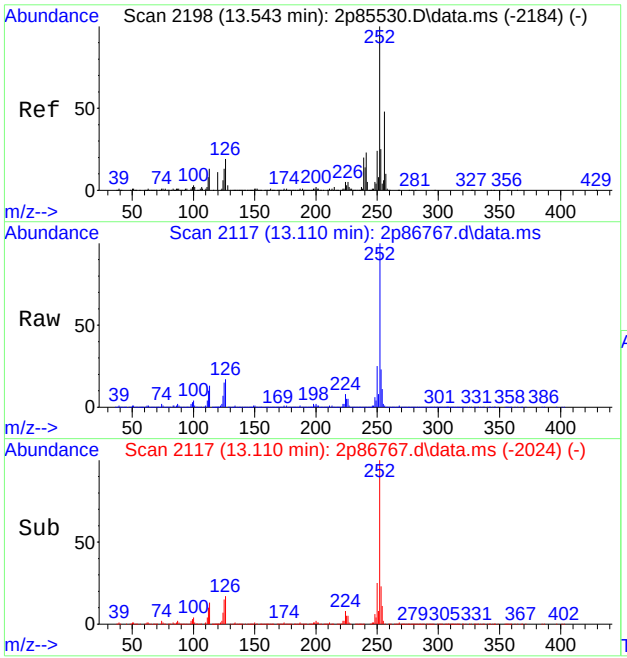


#89
Chrysene
Concen: 40.58 ppm
RT: 11.650 min Scan# 1844
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:228 Resp: 1596830

Ion	Ratio	Lower	Upper
228	100		
226	30.5	0.0	59.7
229	21.2	0.0	49.5

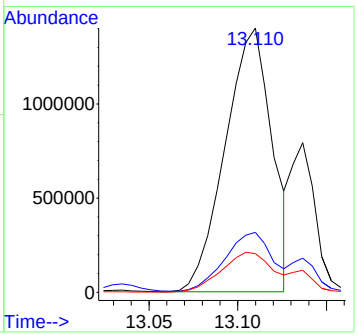


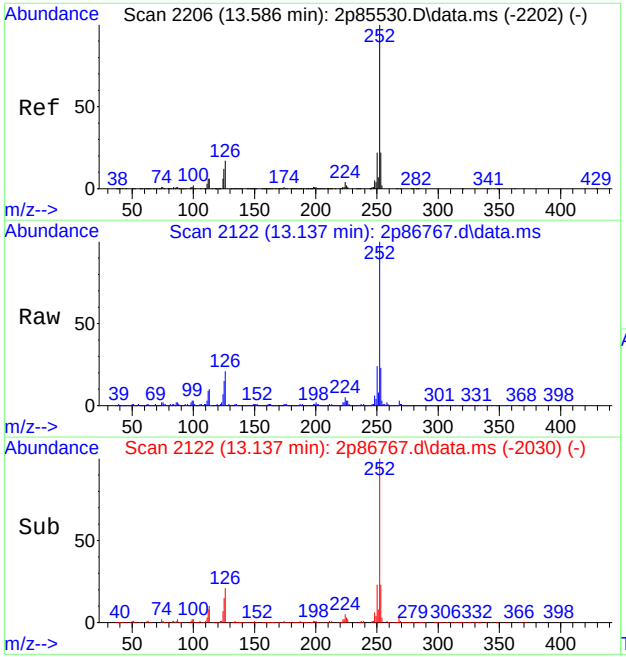


#93
Benzo[b]fluoranthene
Concen: 50.86 ppm
RT: 13.110 min Scan# 2117
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:252 Resp: 2573144

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.8
125	14.0	0.0	42.6

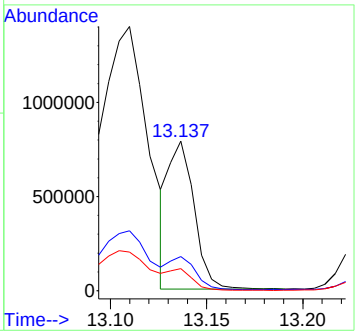


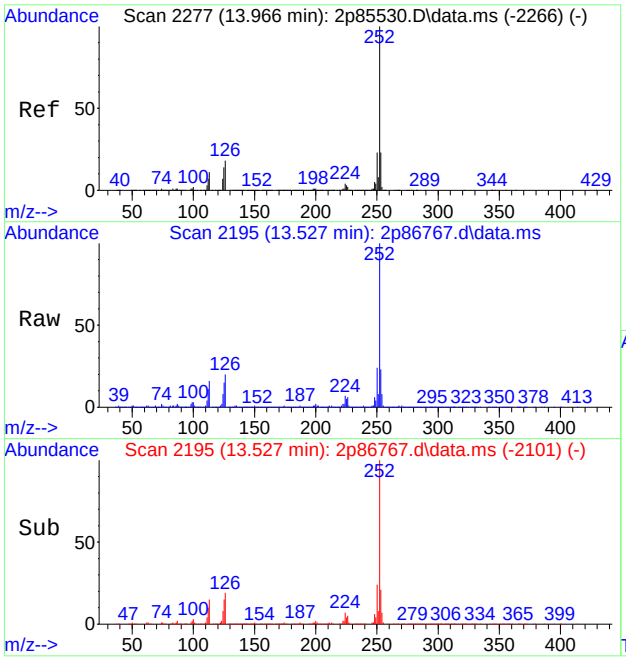


#94
Benzo[k]fluoranthene
Concen: 17.72 ppm
RT: 13.137 min Scan# 2122
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:252 Resp: 732899

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.1
125	13.4	0.0	42.9

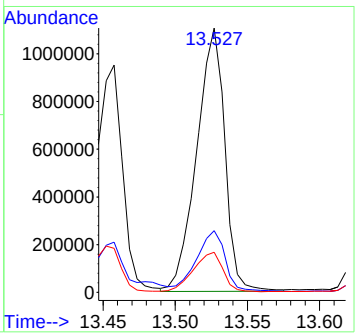


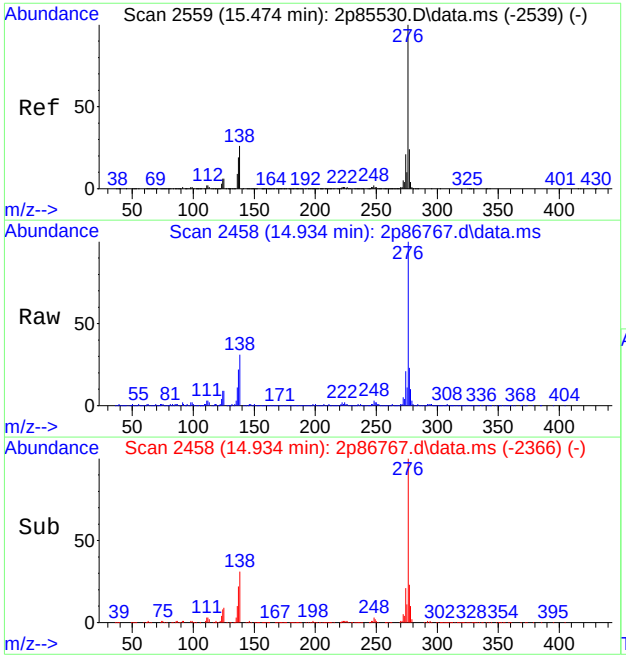


#95
Benzo[a]pyrene
Concen: 35.23 ppm
RT: 13.527 min Scan# 2195
Delta R.T. 0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:252 Resp: 1497810

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	53.0
125	15.0	0.0	44.7

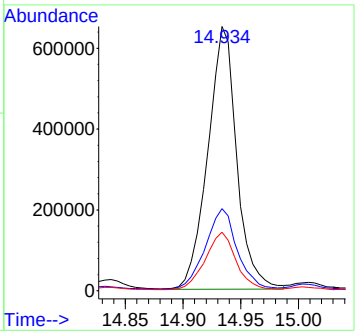


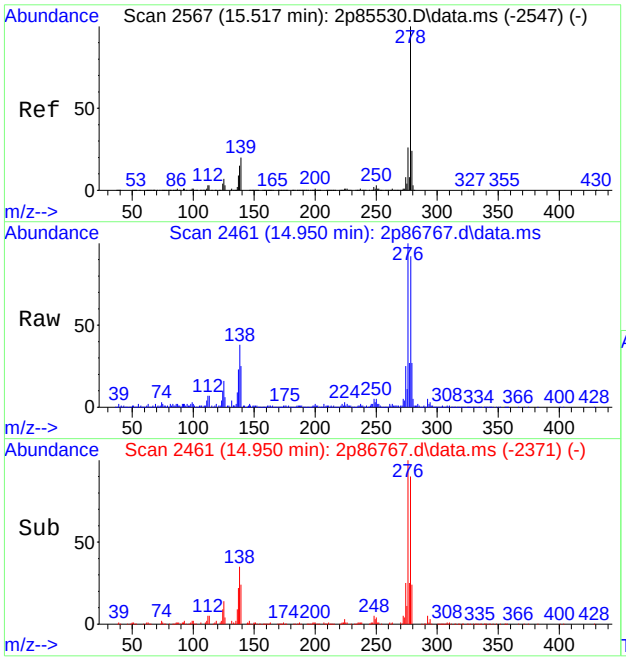


#96
Indeno[1,2,3-cd]pyrene
Concen: 23.41 ppm
RT: 14.934 min Scan# 2458
Delta R.T. -0.005 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:276 Resp: 1134627

Ion	Ratio	Lower	Upper
276	100		
138	30.6	0.0	58.1
137	21.9	0.0	48.2

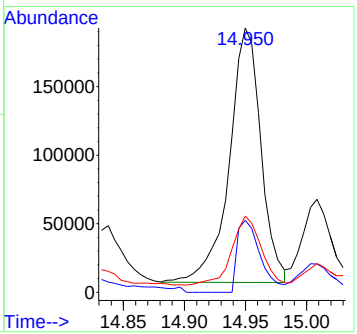


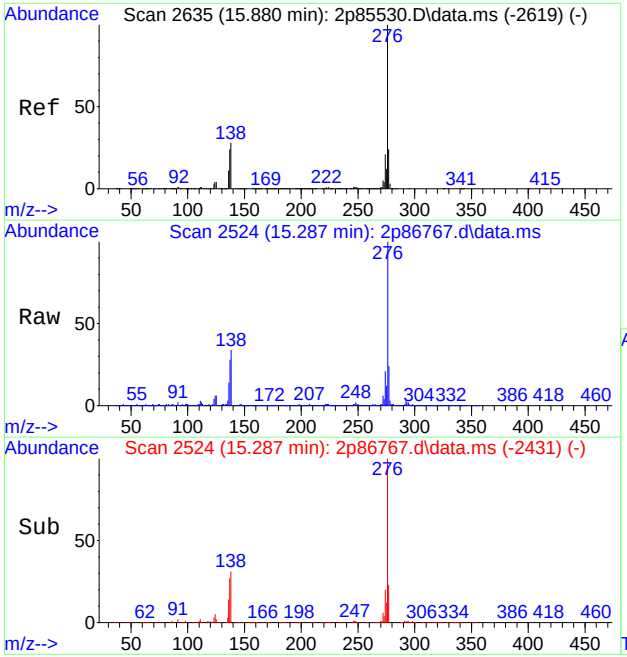


#98
Dibenz[a,h]anthracene
Concen: 8.86 ppm m
RT: 14.950 min Scan# 2461
Delta R.T. -0.016 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:278 Resp: 334400

Ion	Ratio	Lower	Upper
278	100		
139	27.3	0.0	51.1
279	28.9	0.0	54.6

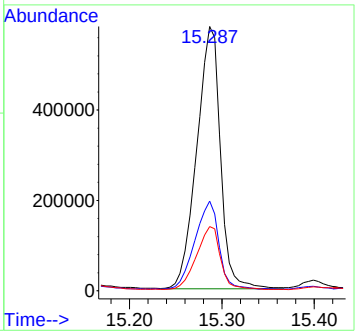




#100
Benzo[g,h,i]perylene
Concen: 27.00 ppm
RT: 15.287 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 2p86767.d
Acq: 22 Apr 2019 6:07 pm

Tgt Ion:276 Resp: 1035559

Ion	Ratio	Lower	Upper
276	100		
138	33.6	0.0	59.8
277	24.0	0.0	53.4



Manual Integration Approval Summary

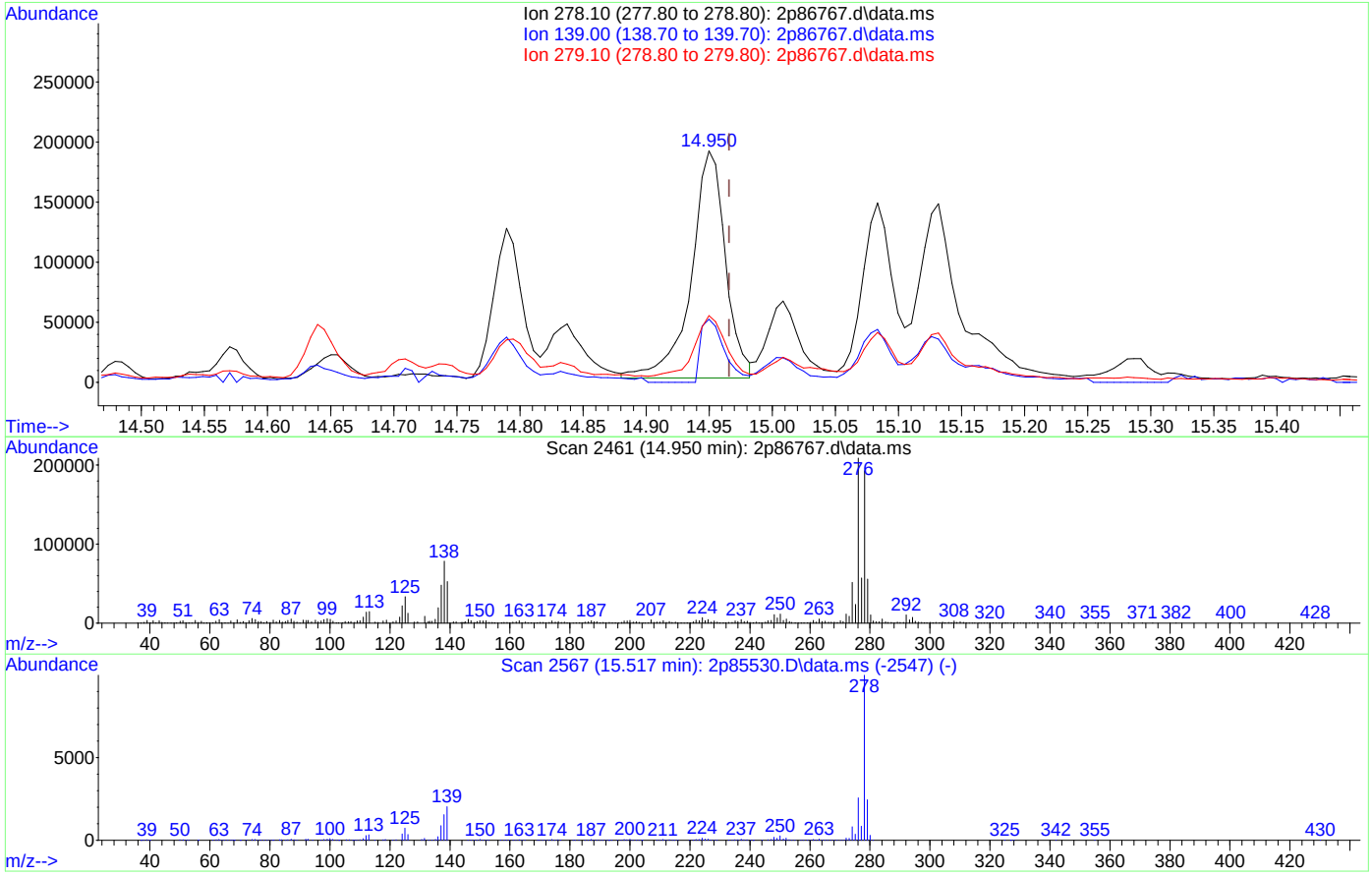
Sample Number: JC86406-1
Lab FileID: 2P86767.D
Injection Time: 04/22/19 18:07
Method: SW846 8270D
Analyst approved: 04/23/19 06:13 Michelle Co
Supervisor approved: 04/24/19 10:50 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		14.95	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86767.d
Acq On : 22 Apr 2019 6:07 pm
Operator : yujiac
Sample : jc86406-1 Inst : MS2P
Misc : op19810,e2p3832,30.0,,,1,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:28:15 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86767.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.950min (-0.016) 9.42ppm

response 355551

Ion	Exp%	Act%
278.10	100	100
139.00	21.10	26.55
279.10	24.60	27.07
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/19/19 14:21

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86739.D
Acq On : 19 Apr 2019 2:38 am
Operator : carolb
Sample : jc86406-2
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 19 12:39:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	712267	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2348435	40.00	ppm	-0.17
47) Acenaphthene-d10	7.135	164	1058891	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	1585031	40.00	ppm	-0.21
83) Chrysene-d12	11.623	240	1389191	40.00	ppm	-0.27
91) Perylene-d12	13.607	264	1477220	40.00	ppm	-0.29
101) 1,4-Dichlorobenzene-d4a	4.670	152	712267	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2348435	40.00	ppm	#-0.17
105) Acenaphthene-d10a	7.135	164	1058891	40.00	ppm	-0.18
108) Chrysene-d12a	11.623	240	1389191	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	1585031	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	914867	25.52	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 51.04%			
8) Phenol-d5	4.429	99	1252522	31.88	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 63.76%#			
25) Nitrobenzene-d5	5.124	82	1023542	32.43	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 64.86%#			
51) 2-Fluorobiphenyl	6.590	172	1348784	36.80	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 73.60%#			
73) 2,4,6-Tribromophenol	7.788	330	166794	30.00	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 60.00%			
85) Terphenyl-d14	10.211	244	1117766	32.33	ppm	-0.25
Spiked Amount 50.000	Range 16 - 65		Recovery = 64.66%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.440	94	1416879	34.56	ppm	96
19) 2-Methylphenol	4.916	108	102348	4.89	ppm	97
21) 3&4-Methylphenol	5.044	108	504869	23.82	ppm	83
30) 2,4-Dimethylphenol	5.461	107	68123	3.05	ppm	95
38) Naphthalene	5.723	128	5411036	96.32	ppm	99
44) 2-Methylnaphthalene	6.285	141	265786	7.44	ppm	96
53) Biphenyl	6.665	154	100438	2.37	ppm	98
56) Acenaphthylene	7.018	152	241560	4.66	ppm	99
59) Acenaphthene	7.162	153	797686	26.24	ppm	97
62) Dibenzofuran	7.301	168	377605	9.01	ppm	92
66) Fluorene	7.585	166	534271	14.86	ppm	96
77) Phenanthrene	8.419	178	573826	14.53	ppm	98
78) Anthracene	8.467	178	580209	14.45	ppm	99
79) Carbazole	8.638	167	702620	16.92	ppm	98
81) Fluoranthene	9.719	202	585743	10.44	ppm	95
84) Pyrene	9.976	202	608726	11.26	ppm	95
87) Benzo[a]anthracene	11.607	228	220478	4.23	ppm	98
89) Chrysene	11.650	228	185945	5.02	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86739.D
Acq On : 19 Apr 2019 2:38 am
Operator : carolb
Sample : jc86406-2
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 19 12:39:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

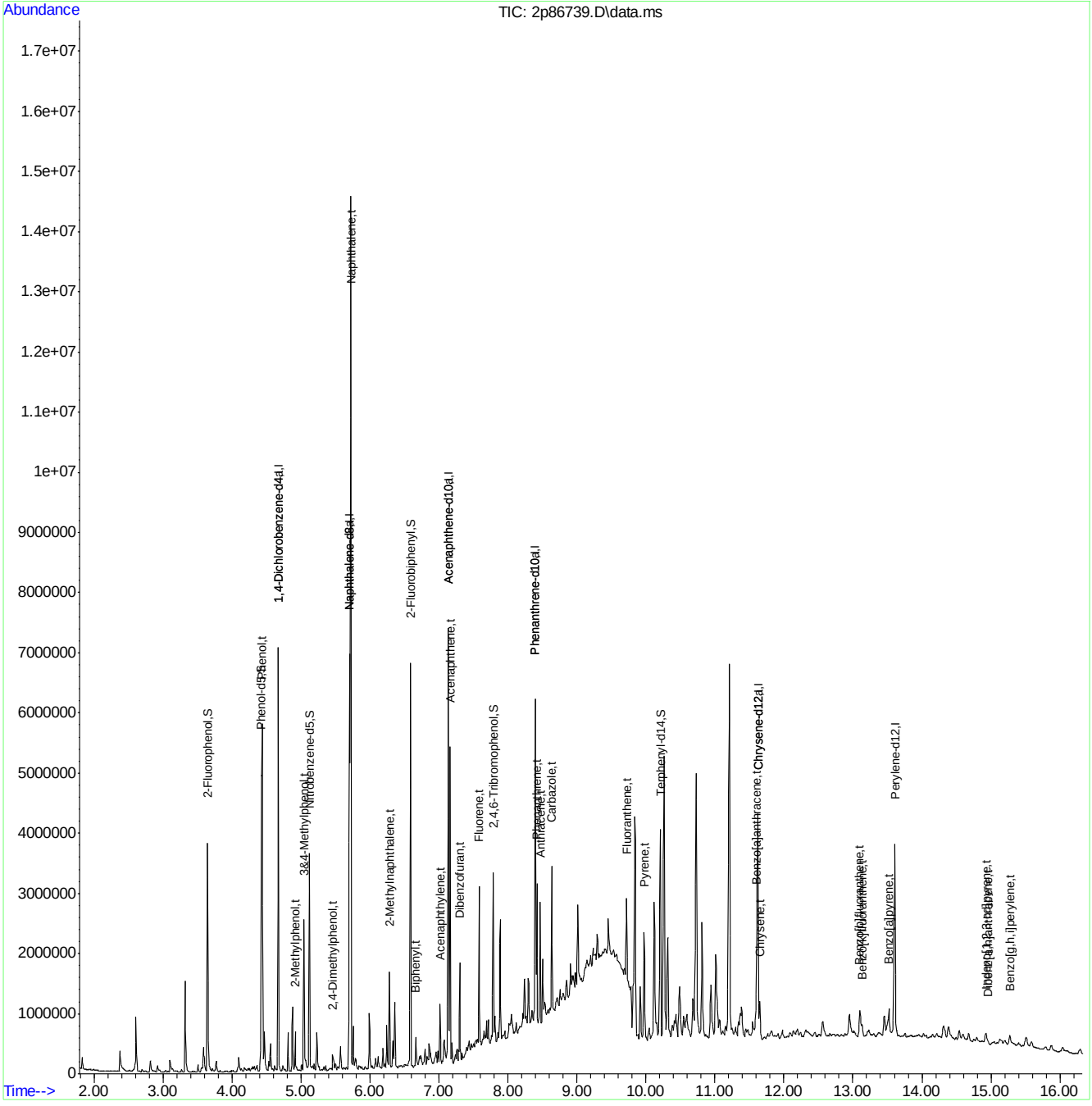
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	13.099	252	234348	4.84	ppm	93
94)	Benzo[k]fluoranthene	13.131	252	63025	1.59	ppm	92
95)	Benzo[a]pyrene	13.522	252	154986	3.81	ppm	94
96)	Indeno[1,2,3-cd]pyrene	14.928	276	98154	2.12	ppm	94
98)	Dibenz[a,h]anthracene	14.955	278	23182m	0.64	ppm	
100)	Benzo[g,h,i]perylene	15.276	276	96854	2.64	ppm	95

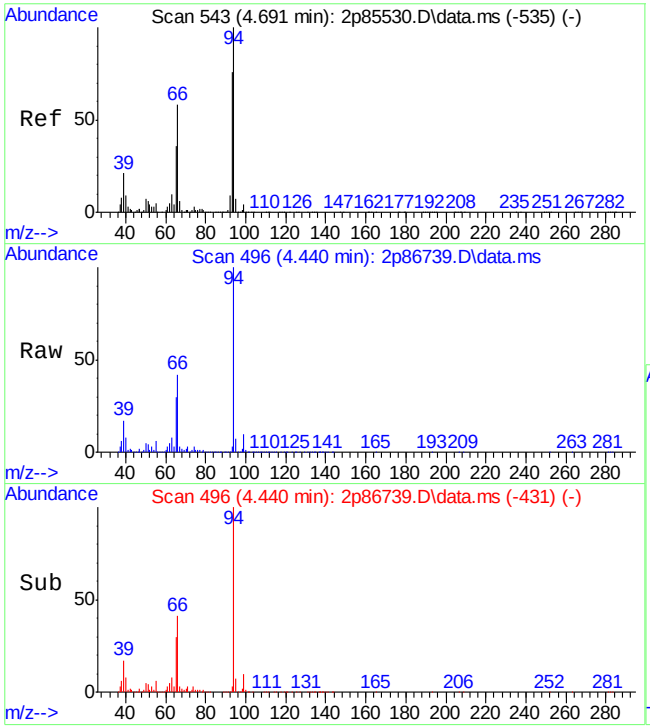
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86739.D
Acq On : 19 Apr 2019 2:38 am
Operator : carolb
Sample : jc86406-2
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 19 12:39:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

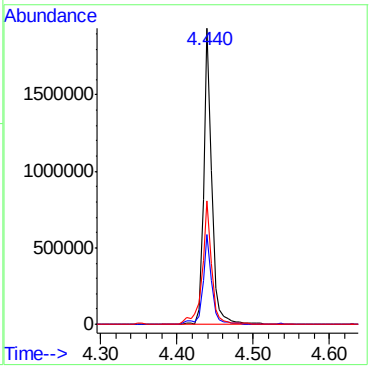


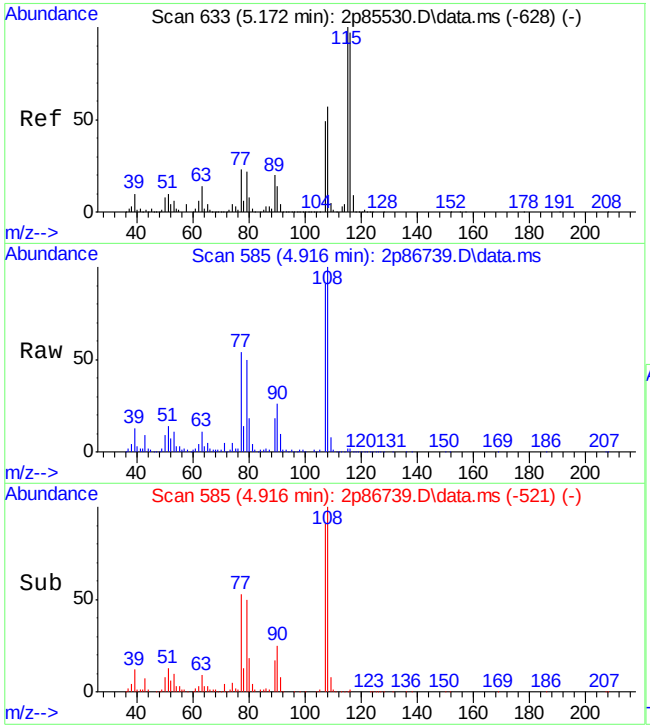


#9
Phenol
Concen: 34.56 ppm
RT: 4.440 min Scan# 496
Delta R.T. -0.150 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion: 94 Resp: 1416879

Ion	Ratio	Lower	Upper
94	100		
65	30.1	1.5	61.5
66	41.5	15.3	75.3

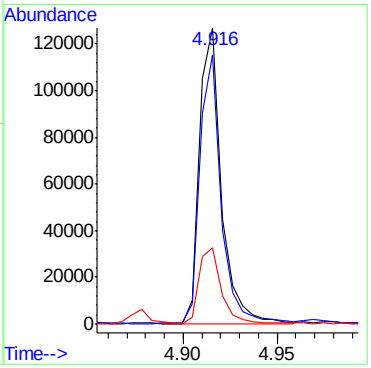


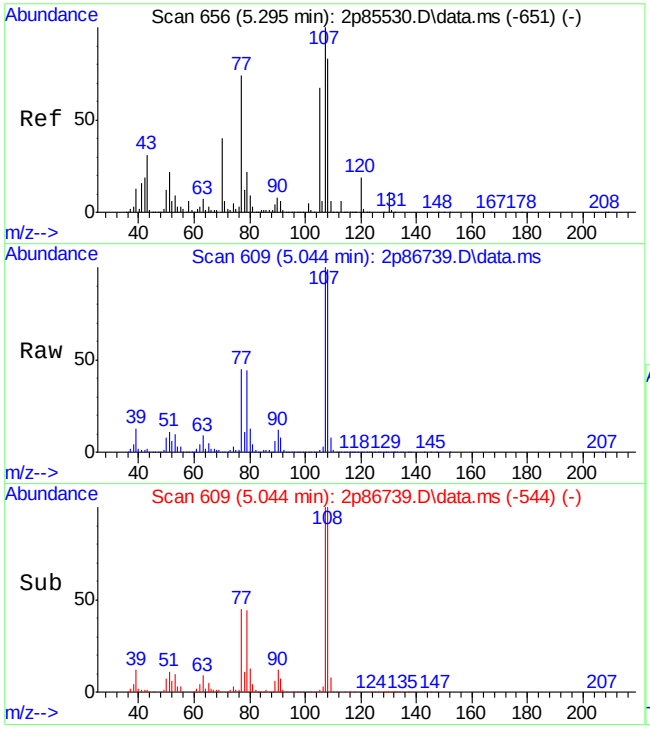


#19
2-Methylphenol
Concen: 4.89 ppm
RT: 4.916 min Scan# 585
Delta R.T. -0.155 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:108 Resp: 102348

Ion	Ratio	Lower	Upper
108	100		
107	90.8	58.4	118.4
90	25.5	0.0	53.9

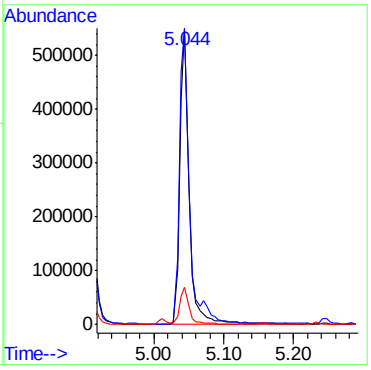


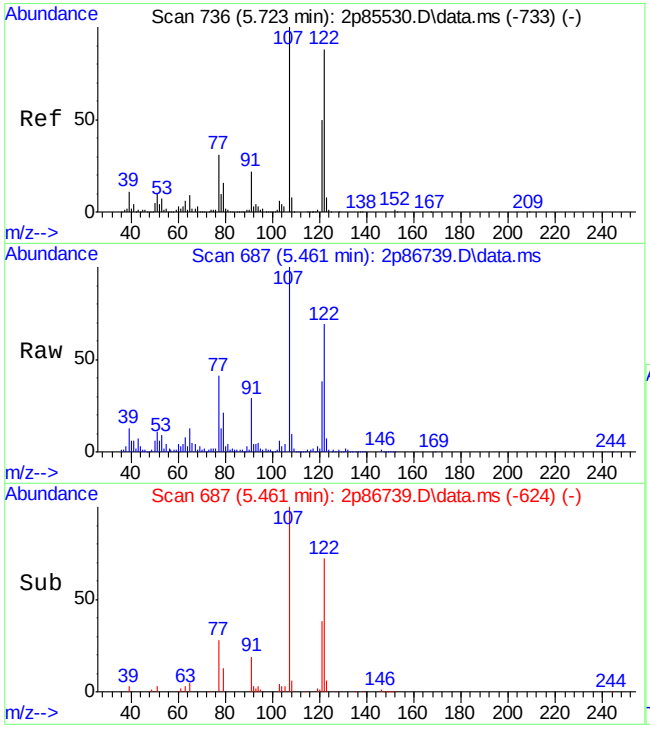


#21
3&4-Methylphenol
Concen: 23.82 ppm
RT: 5.044 min Scan# 609
Delta R.T. -0.155 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:108 Resp: 504869

Ion	Ratio	Lower	Upper
108	100		
107	100.5	90.6	150.6
90	11.5	0.0	39.9

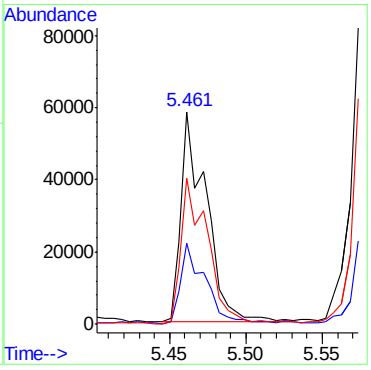


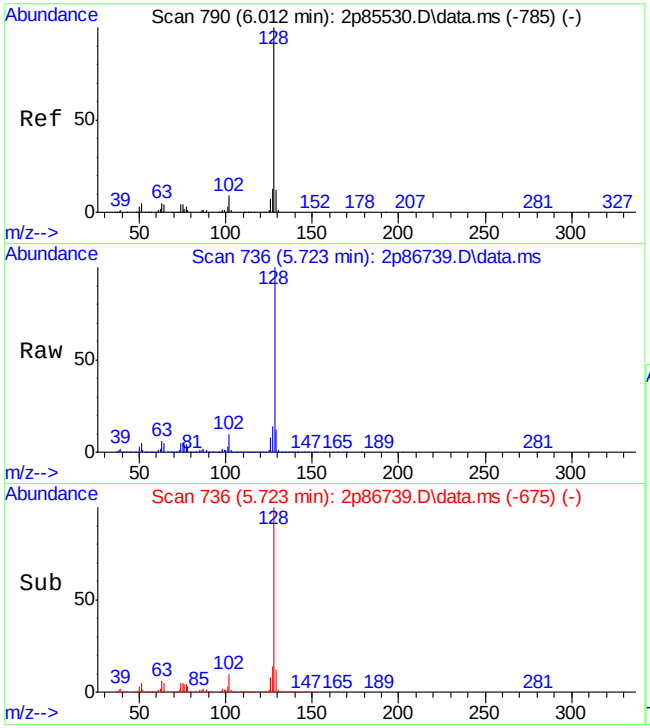


#30
2,4-Dimethylphenol
Concen: 3.05 ppm
RT: 5.461 min Scan# 687
Delta R.T. -0.161 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:107 Resp: 68123

Ion	Ratio	Lower	Upper
107	100		
121	38.1	13.3	73.3
122	69.2	41.5	101.5

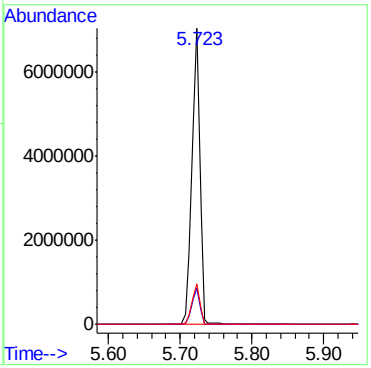


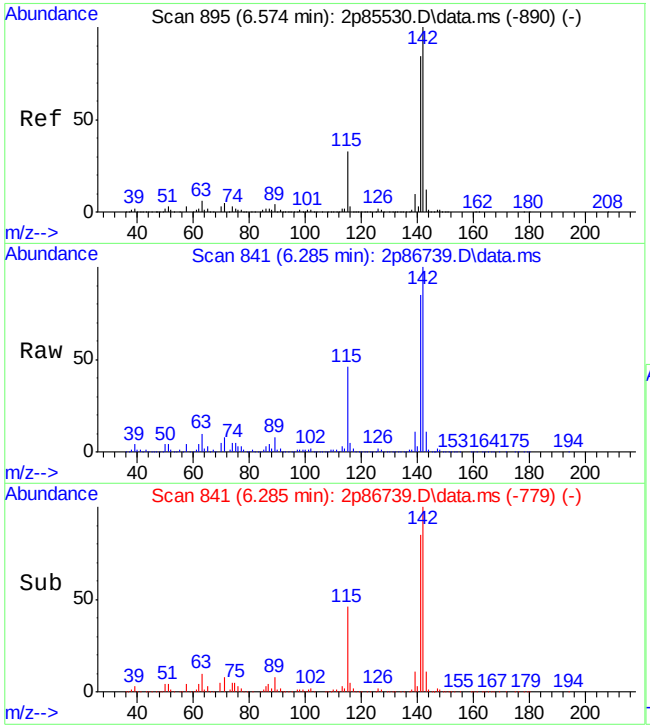


#38
Naphthalene
Concen: 96.32 ppm
RT: 5.723 min Scan# 736
Delta R.T. -0.172 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:128 Resp: 5411036

Ion	Ratio	Lower	Upper
128	100		
129	12.2	0.0	41.2
127	13.9	0.0	43.7

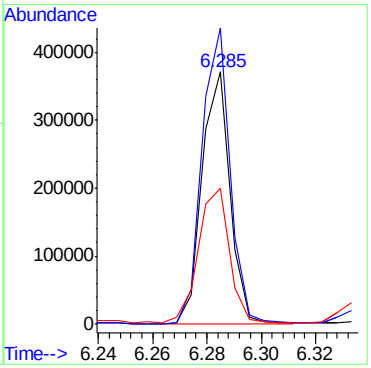


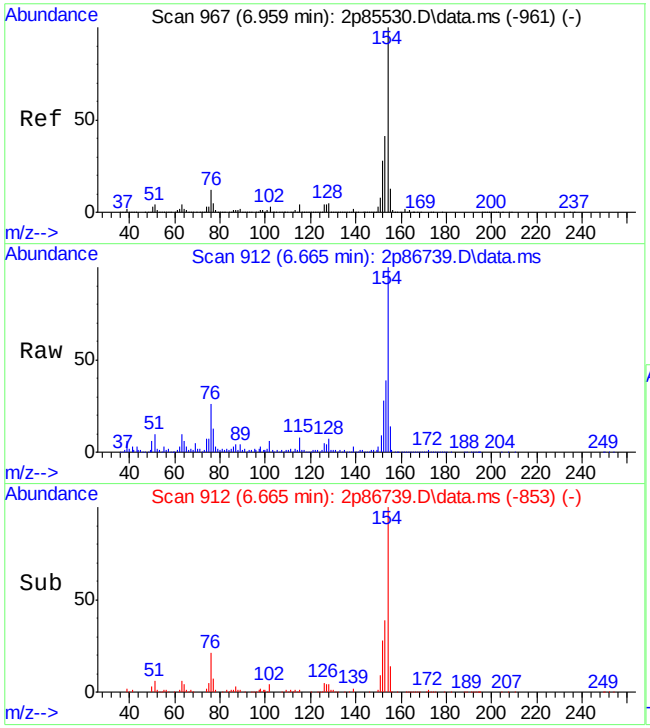


#44
2-Methylnaphthalene
Concen: 7.44 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:141 Resp: 265786

Ion	Ratio	Lower	Upper
141	100		
142	117.3	90.7	150.7
115	53.4	18.7	78.7

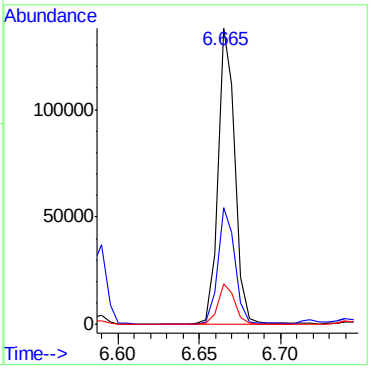


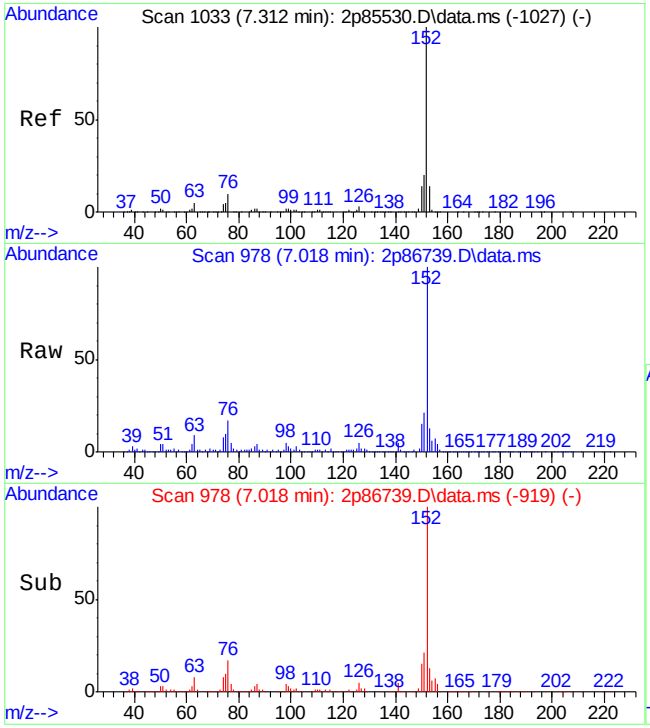


#53
Biphenyl
Concen: 2.37 ppm
RT: 6.665 min Scan# 912
Delta R.T. -0.182 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:154 Resp: 100438

Ion	Ratio	Lower	Upper
154	100		
153	39.1	11.1	71.1
155	13.5	0.0	43.4

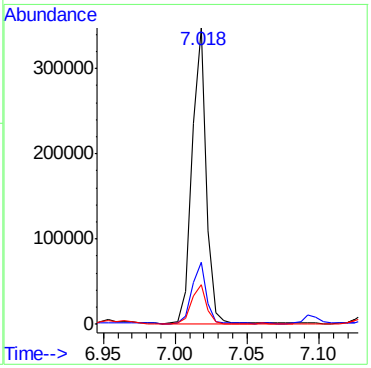


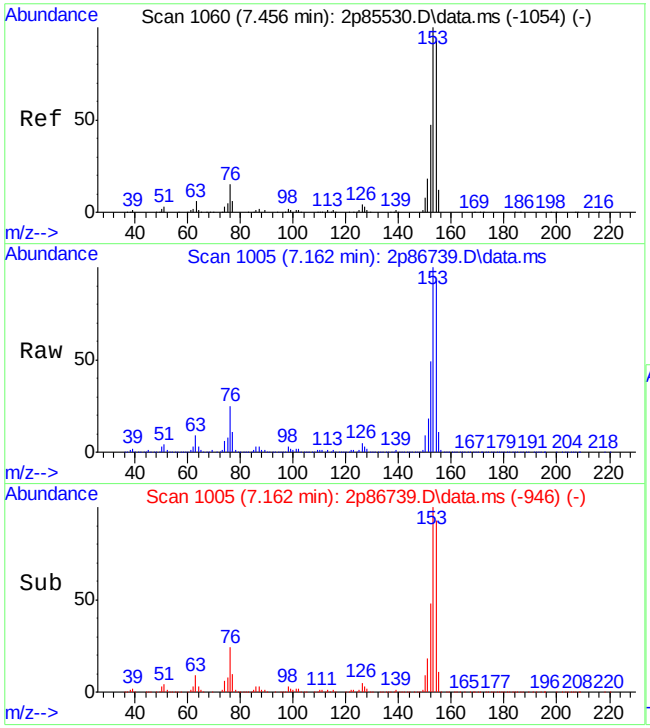


#56
Acenaphthylene
Concen: 4.66 ppm
RT: 7.018 min Scan# 978
Delta R.T. -0.182 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:152 Resp: 241560

Ion	Ratio	Lower	Upper
152	100		
151	20.5	0.0	50.3
153	13.3	0.0	43.6

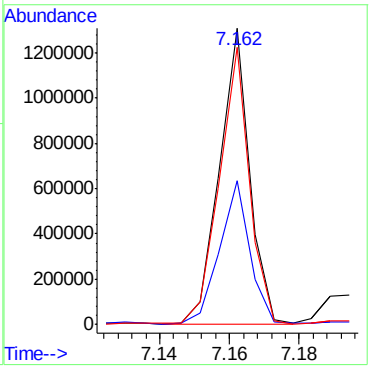


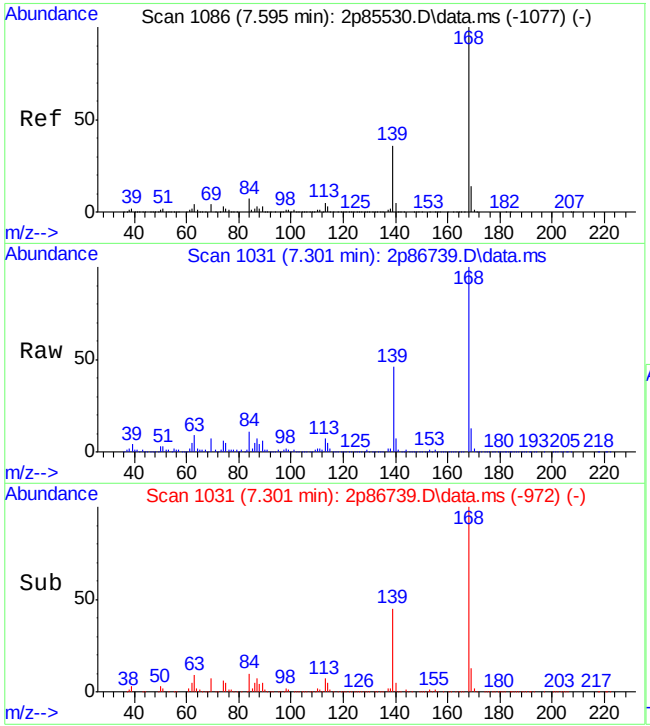


#59
Acenaphthene
Concen: 26.24 ppm
RT: 7.162 min Scan# 1005
Delta R.T. -0.182 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:153 Resp: 797686

Ion	Ratio	Lower	Upper
153	100		
152	48.4	17.8	77.8
154	93.4	59.8	119.8

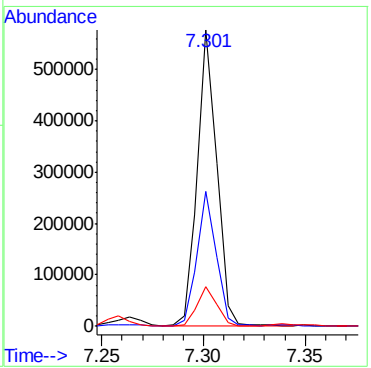


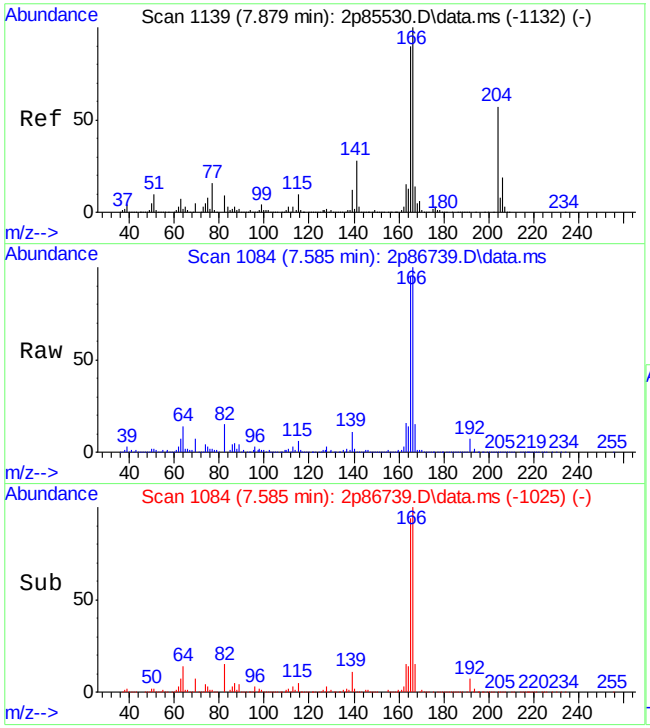


#62
Dibenzofuran
Concen: 9.01 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:168 Resp: 377605

Ion	Ratio	Lower	Upper
168	100		
139	45.5	9.2	69.2
169	13.1	0.0	44.1

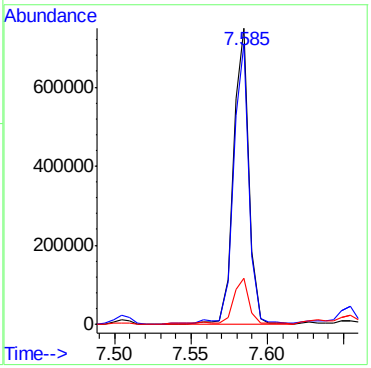


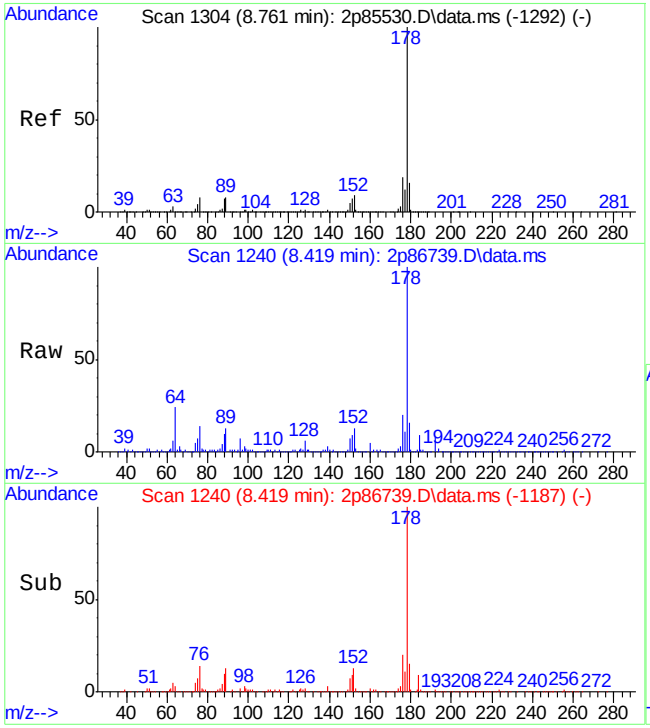


#66
Fluorene
Concen: 14.86 ppm
RT: 7.585 min Scan# 1084
Delta R.T. -0.182 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:166 Resp: 534271

Ion	Ratio	Lower	Upper
166	100		
165	94.5	60.6	120.6
167	15.3	0.0	44.1

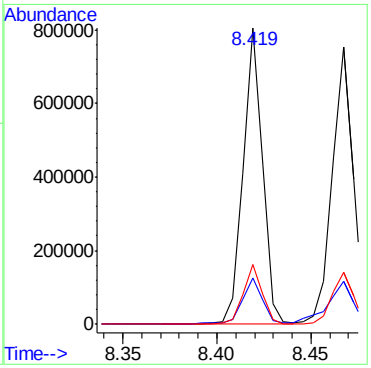


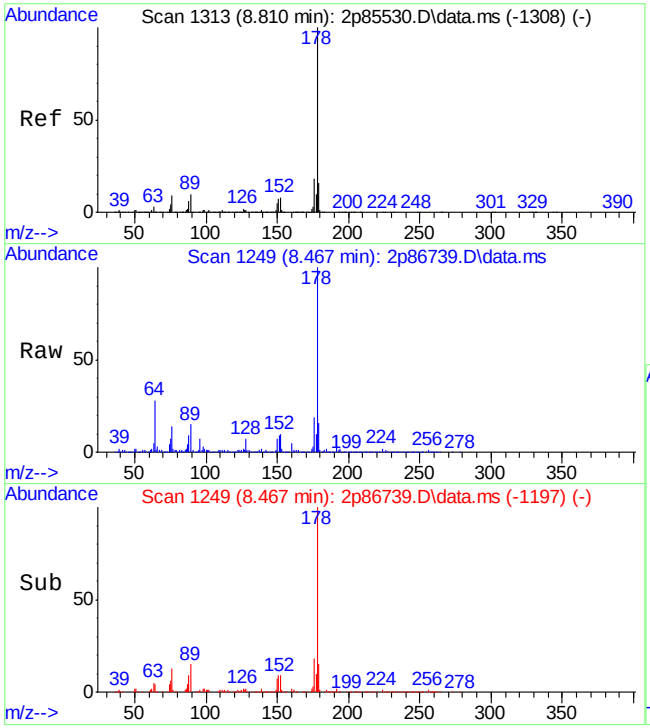


#77
Phenanthrene
Concen: 14.53 ppm
RT: 8.419 min Scan# 1240
Delta R.T. -0.214 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:178 Resp: 573826

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	46.0
176	19.9	0.0	49.2

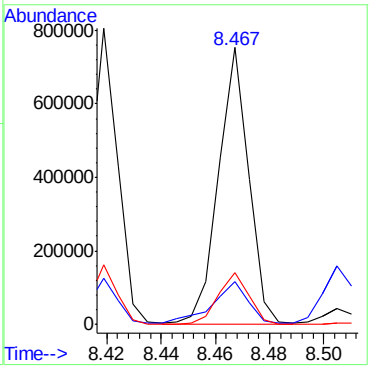


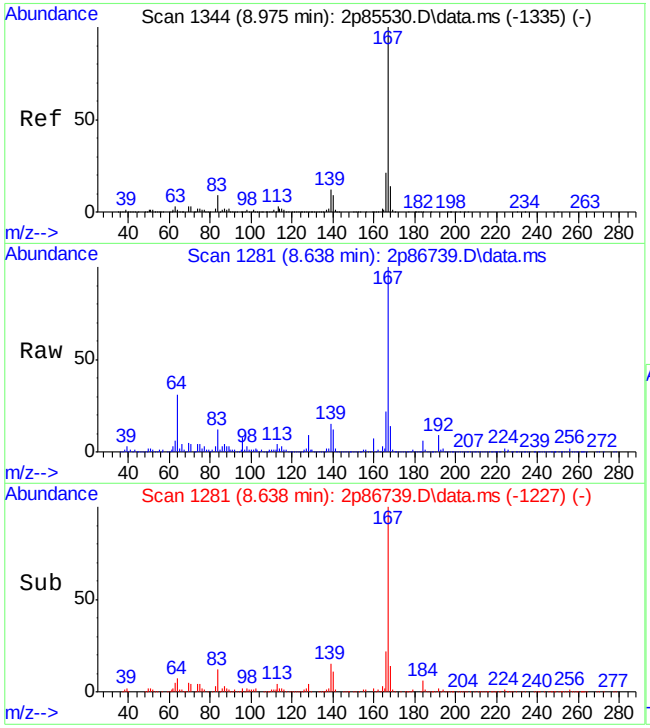


#78
Anthracene
Concen: 14.45 ppm
RT: 8.467 min Scan# 1249
Delta R.T. -0.220 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:178 Resp: 580209

Ion	Ratio	Lower	Upper
178	100		
179	15.0	0.0	45.7
176	18.5	0.0	48.6

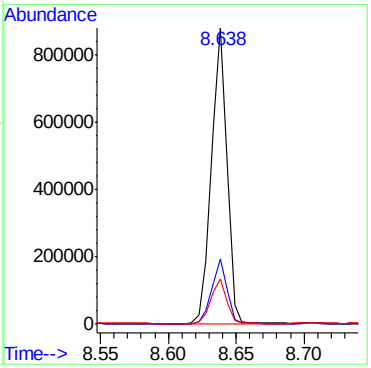


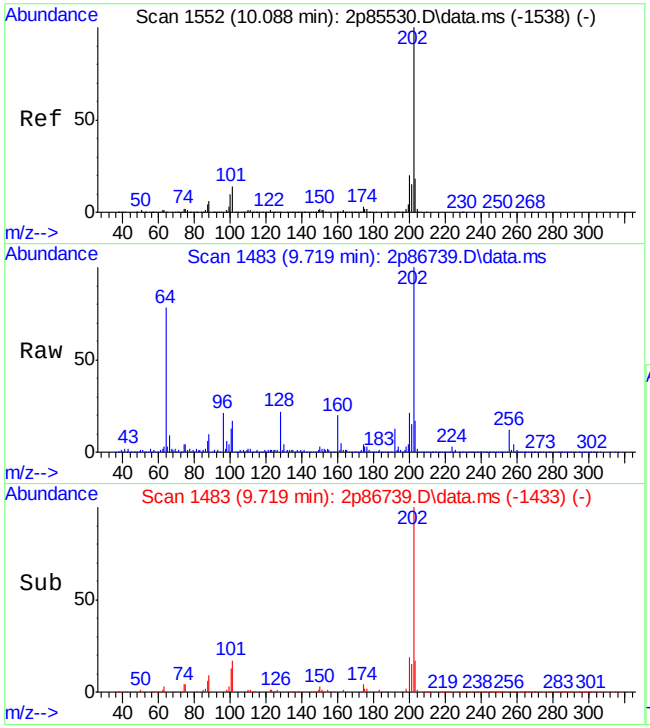


#79
Carbazole
Concen: 16.92 ppm
RT: 8.638 min Scan# 1281
Delta R.T. -0.214 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:167 Resp: 702620

Ion	Ratio	Lower	Upper
167	100		
166	21.7	0.0	50.8
139	15.1	0.0	44.2

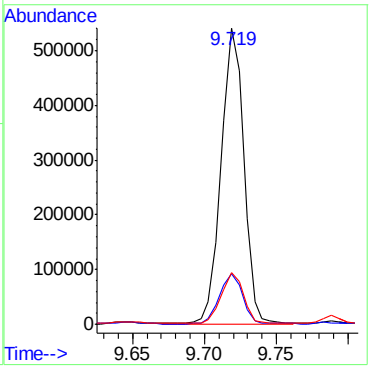


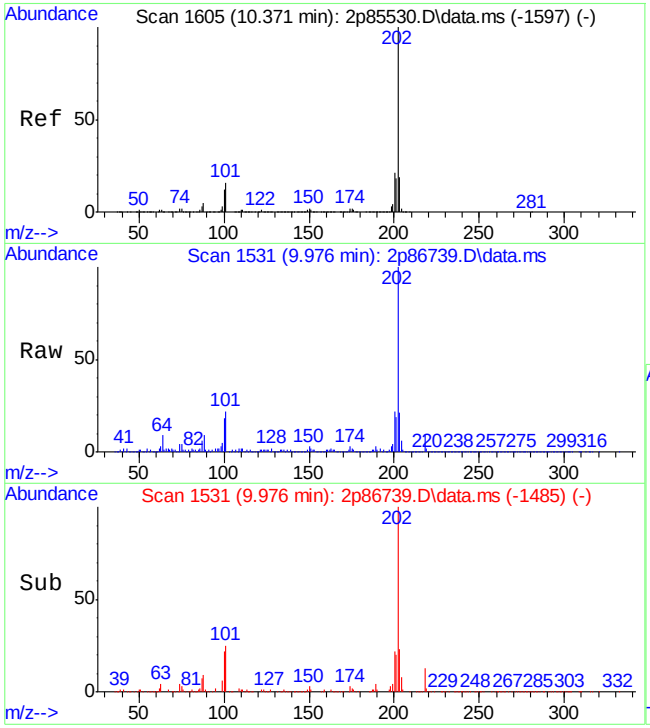


#81
Fluoranthene
Concen: 10.44 ppm
RT: 9.719 min Scan# 1483
Delta R.T. -0.230 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:202 Resp: 585743

Ion	Ratio	Lower	Upper
202	100		
101	17.0	0.0	43.7
203	17.0	0.0	48.6

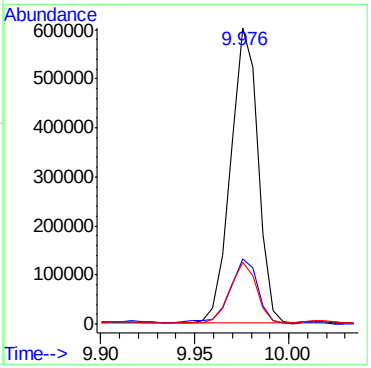


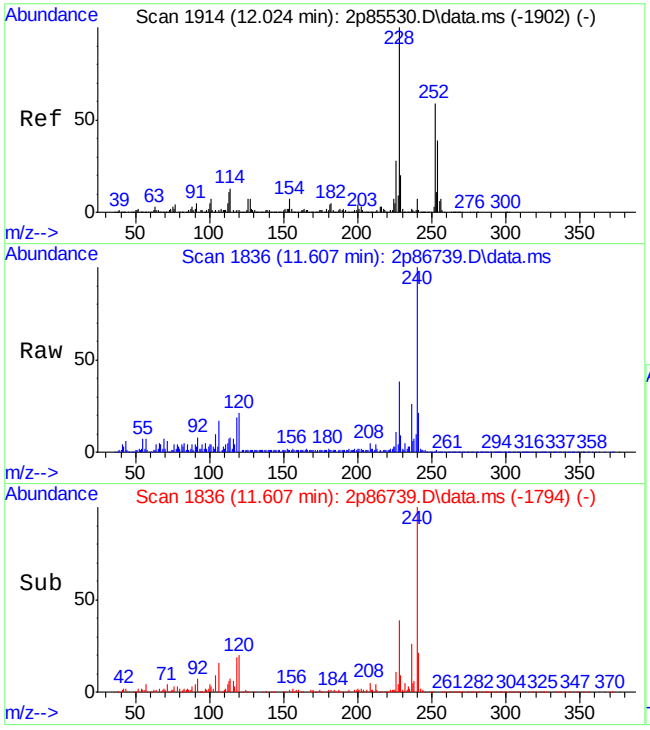


#84
Pyrene
Concen: 11.26 ppm
RT: 9.976 min Scan# 1531
Delta R.T. -0.256 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:202 Resp: 608726

Ion	Ratio	Lower	Upper
202	100		
200	21.6	0.0	50.1
203	20.6	0.0	47.4

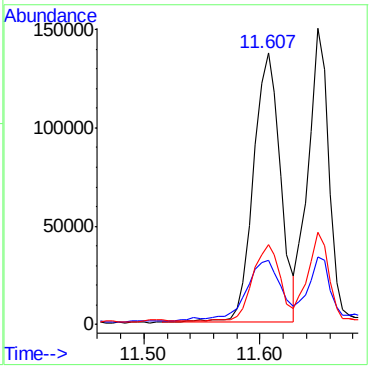


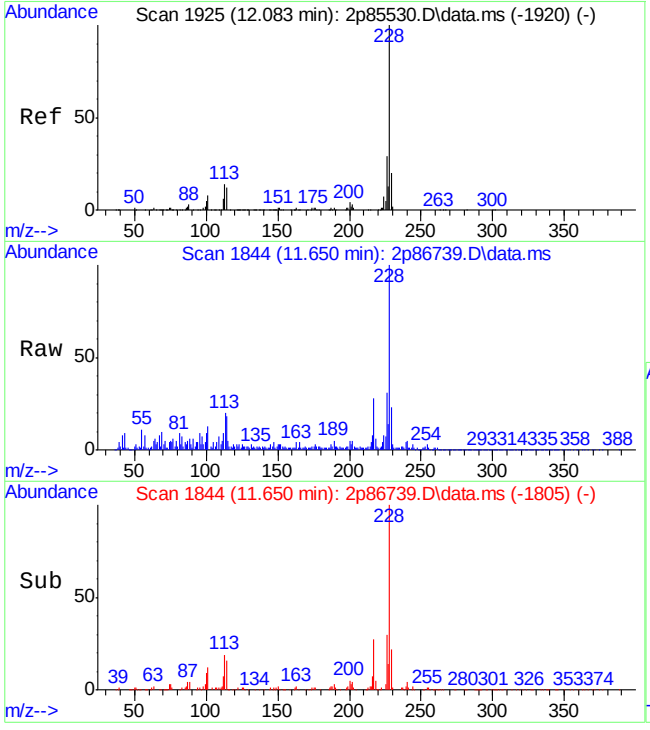


#87
Benzo[a]anthracene
Concen: 4.23 ppm
RT: 11.607 min Scan# 1836
Delta R.T. -0.273 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:228 Resp: 220478

Ion	Ratio	Lower	Upper
228	100		
229	21.6	0.0	50.3
226	28.6	0.0	57.9

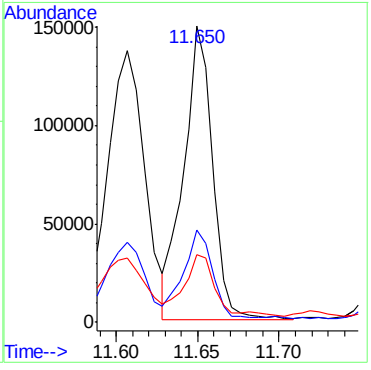


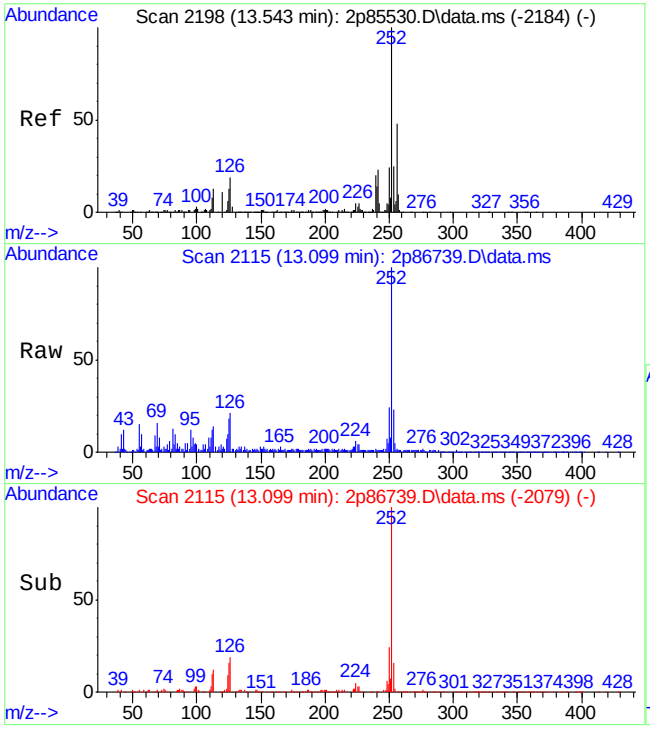


#89
Chrysene
Concen: 5.02 ppm
RT: 11.650 min Scan# 1844
Delta R.T. -0.289 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:228 Resp: 185945

Ion	Ratio	Lower	Upper
228	100		
226	30.7	0.0	59.2
229	20.4	0.0	50.2

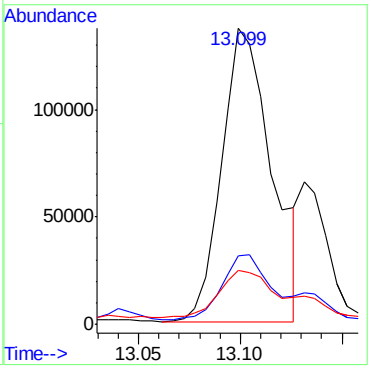


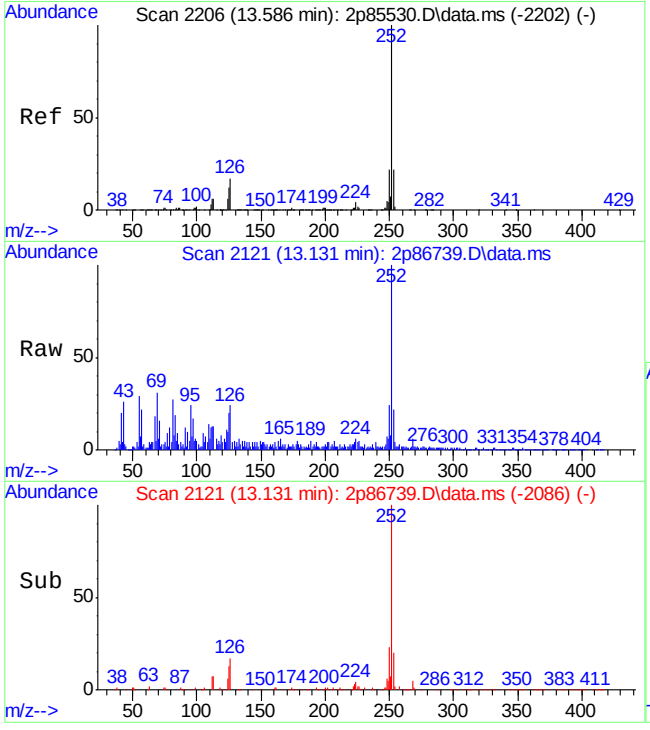


#93
Benzo[b]fluoranthene
Concen: 4.84 ppm
RT: 13.099 min Scan# 2115
Delta R.T. -0.305 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:252 Resp: 234348

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	54.9
125	16.0	0.0	42.5

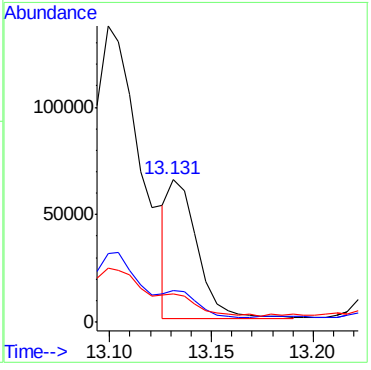


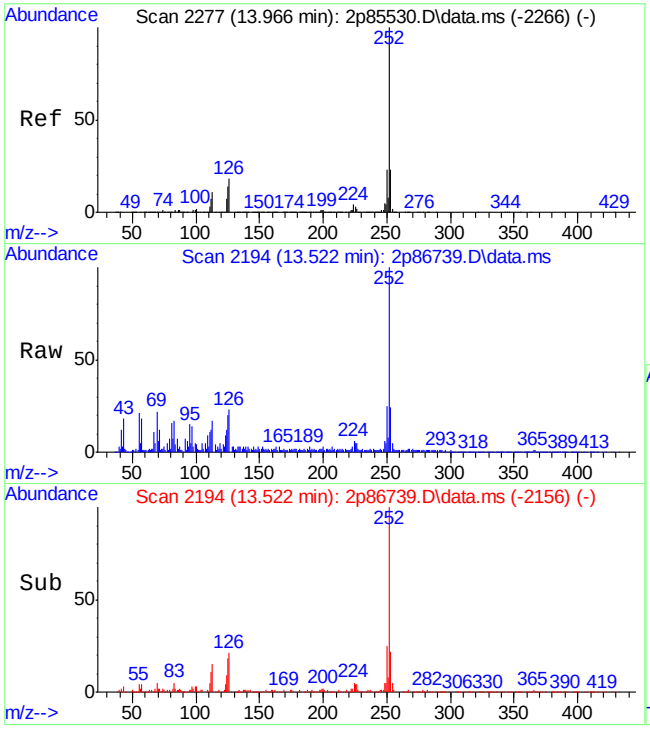


#94
Benzo[k]fluoranthene
Concen: 1.59 ppm
RT: 13.131 min Scan# 2121
Delta R.T. -0.311 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:252 Resp: 63025

Ion	Ratio	Lower	Upper
252	100		
253	18.0	0.0	52.4
125	13.4	0.0	40.8

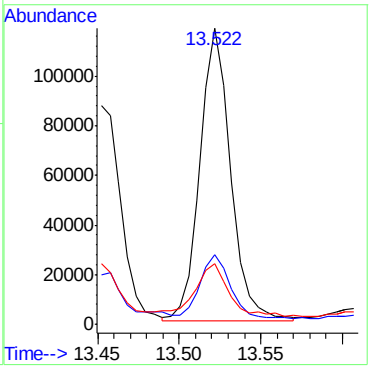


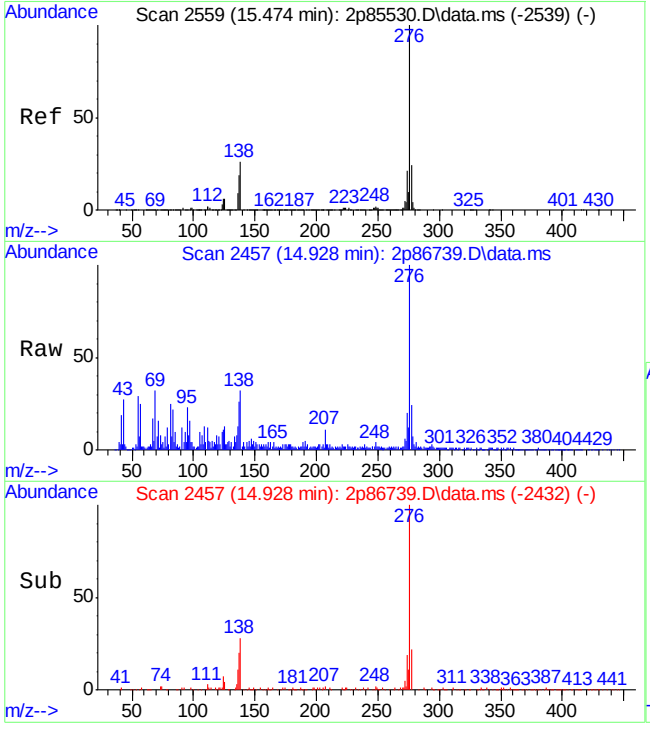


#95
Benzo[a]pyrene
Concen: 3.81 ppm
RT: 13.522 min Scan# 2194
Delta R.T. -0.299 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:252 Resp: 154986

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	52.1
125	16.9	0.0	42.5

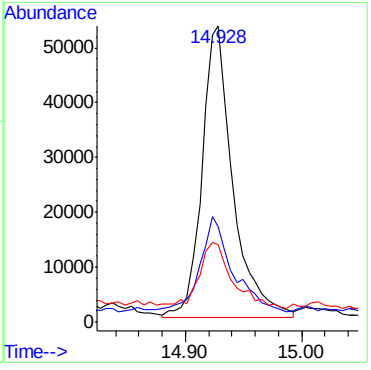


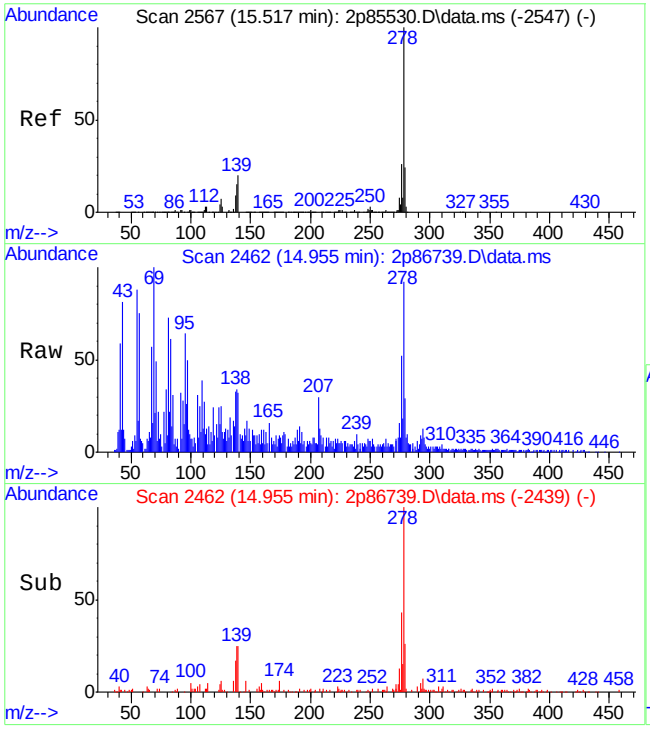


#96
Indeno[1,2,3-cd]pyrene
Concen: 2.12 ppm
RT: 14.928 min Scan# 2457
Delta R.T. -0.364 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:276 Resp: 98154

Ion	Ratio	Lower	Upper
276	100		
138	29.0	0.0	55.3
137	20.6	0.0	48.5

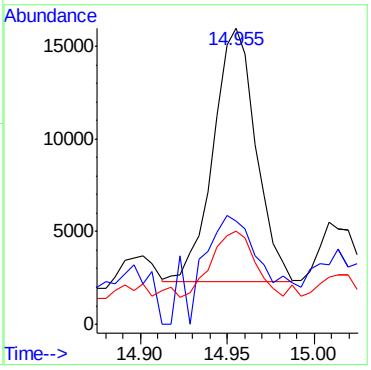


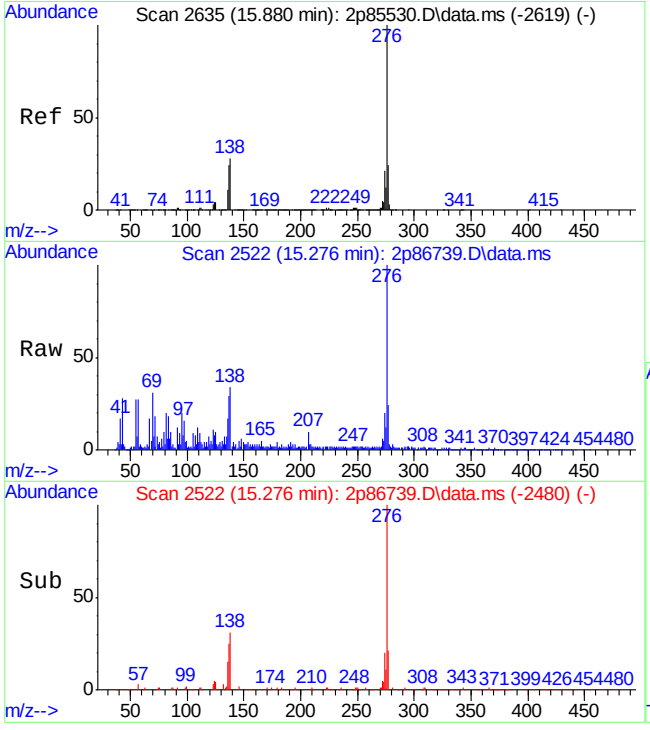


#98
Dibenz[a,h]anthracene
Concen: 0.64 ppm m
RT: 14.955 min Scan# 2462
Delta R.T. -0.375 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:278 Resp: 23182

Ion	Ratio	Lower	Upper
278	100		
139	34.8	0.0	50.3
279	31.6	0.0	54.3

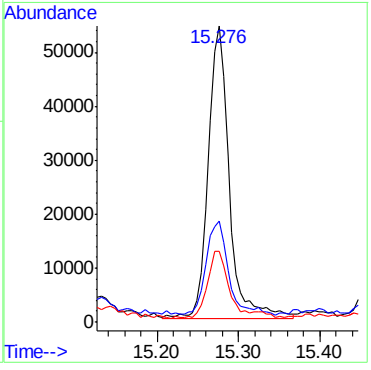




#100
Benzo[g,h,i]perylene
Concen: 2.64 ppm
RT: 15.276 min Scan# 2522
Delta R.T. -0.274 min
Lab File: 2p86739.D
Acq: 19 Apr 2019 2:38 am

Tgt Ion:276 Resp: 96854

Ion	Ratio	Lower	Upper
276	100		
138	31.5	0.0	57.9
277	22.5	0.0	54.0



Manual Integration Approval Summary

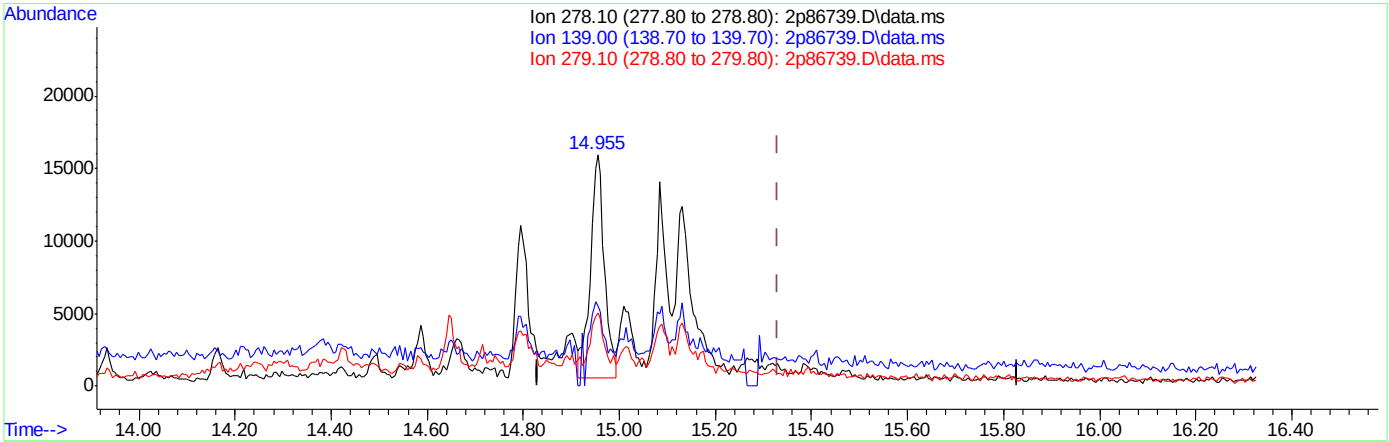
Sample Number: JC86406-2
Lab FileID: 2P86739.D
Injection Time: 04/19/19 02:38
Method: SW846 8270D
Analyst approved: 04/19/19 12:42 Dipa Patel
Supervisor approved: 04/19/19 14:21 Nancy Ma

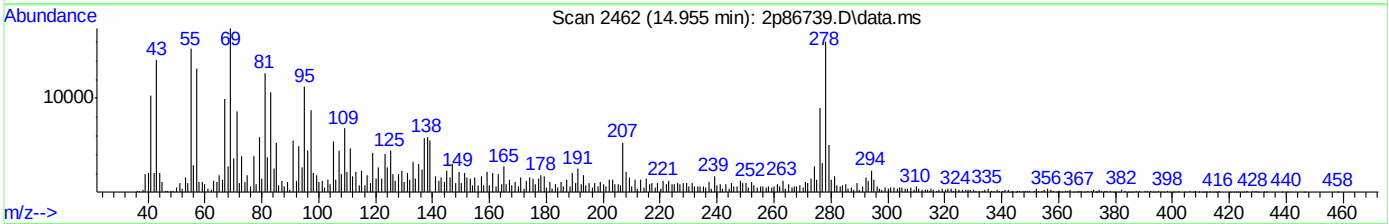
Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		14.96	Poor instrument integration

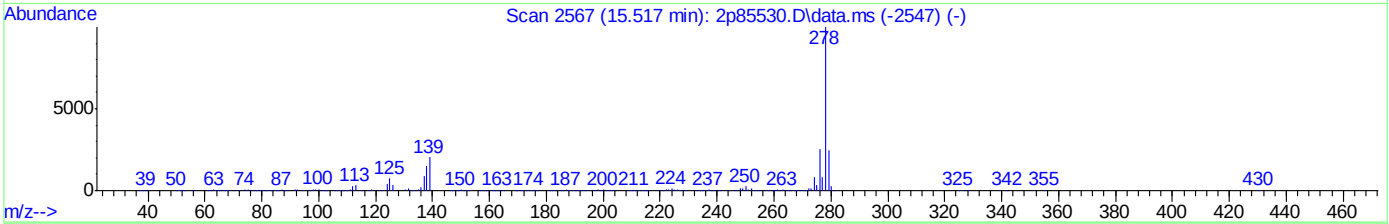
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86739.D
Acq On : 19 Apr 2019 2:38 am
Operator : carolb
Sample : jc86406-2
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 19 10:50:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86739.D\data.ms

(98) Dibenz[a,h]anthracene (t)

14.955min (-0.375) 0.87ppm

response 31469

Ion	Exp%	Act%
278.10	100	100
139.00	20.30	33.48
279.10	24.30	24.97
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/26/19 10:59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:36:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	595788	40.00	ppm	-0.16
24) Naphthalene-d8	5.724	136	852111	40.00	ppm	-0.15
47) Acenaphthene-d10	7.157	164	808405	40.00	ppm	-0.16
69) Phenanthrene-d10	8.446	188	989682	40.00	ppm	-0.16
83) Chrysene-d12	11.725	240	1563283	40.00	ppm	-0.17
91) Perylene-d12	13.693	264	1584667	40.00	ppm	-0.20
101) 1,4-Dichlorobenzene-d4a	4.675	152	595788	40.00	ppm	-0.16
103) Naphthalene-d8a	5.724	136	853651	40.00	ppm	-0.15
105) Acenaphthene-d10a	7.157	164	808236	40.00	ppm	-0.15
108) Chrysene-d12a	11.725	240	1563283	40.00	ppm	0.11
110) Phenanthrene-d10a	8.446	188	989682	40.00	ppm	#-0.16
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	754946	25.18	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 50.36%			
8) Phenol-d5	4.440	99	783493	23.84	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 47.68%			
25) Nitrobenzene-d5	5.130	82	597209	52.14	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 104.28%#			
51) 2-Fluorobiphenyl	6.601	172	966356	34.53	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 69.06%#			
73) 2,4,6-Tribromophenol	7.831	330	146894	42.32	ppm	-0.14
Spiked Amount 50.000	Range 12 - 68		Recovery = 84.64%#			
85) Terphenyl-d14	10.265	244	1154101	29.66	ppm	-0.19
Spiked Amount 50.000	Range 16 - 65		Recovery = 59.32%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.451	94	78932	2.30	ppm	96
19) 2-Methylphenol	4.921	108	11401	0.65	ppm	78
21) 3&4-Methylphenol	5.050	108	105240m	5.94	ppm	
38) Naphthalene	5.740	128	39497135m	1937.72	ppm	
44) 2-Methylnaphthalene	6.312	141	14277973	1101.39	ppm	94
53) Biphenyl	6.692	154	6608928	204.00	ppm	97
56) Acenaphthylene	7.045	152	1334952	33.76	ppm	87
59) Acenaphthene	7.200	153	12919777	556.68	ppm	94
62) Dibenzofuran	7.360	168	11678994	364.88	ppm	96
66) Fluorene	7.628	166	13092723	476.95	ppm	100
77) Phenanthrene	8.489	178	36725907	1489.66	ppm	96
78) Anthracene	8.574	178	11481186m	457.99	ppm	
79) Carbazole	8.697	167	5416605	208.96	ppm	97
81) Fluoranthene	9.821	202	24400592	696.41	ppm	99
84) Pyrene	10.115	202	23725048m	390.04	ppm	
87) Benzo[a]anthracene	11.709	228	11057515	188.31	ppm	93
89) Chrysene	11.773	228	8353769	200.55	ppm	92
93) Benzo[b]fluoranthene	13.212	252	8644411m	166.48	ppm	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:36:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

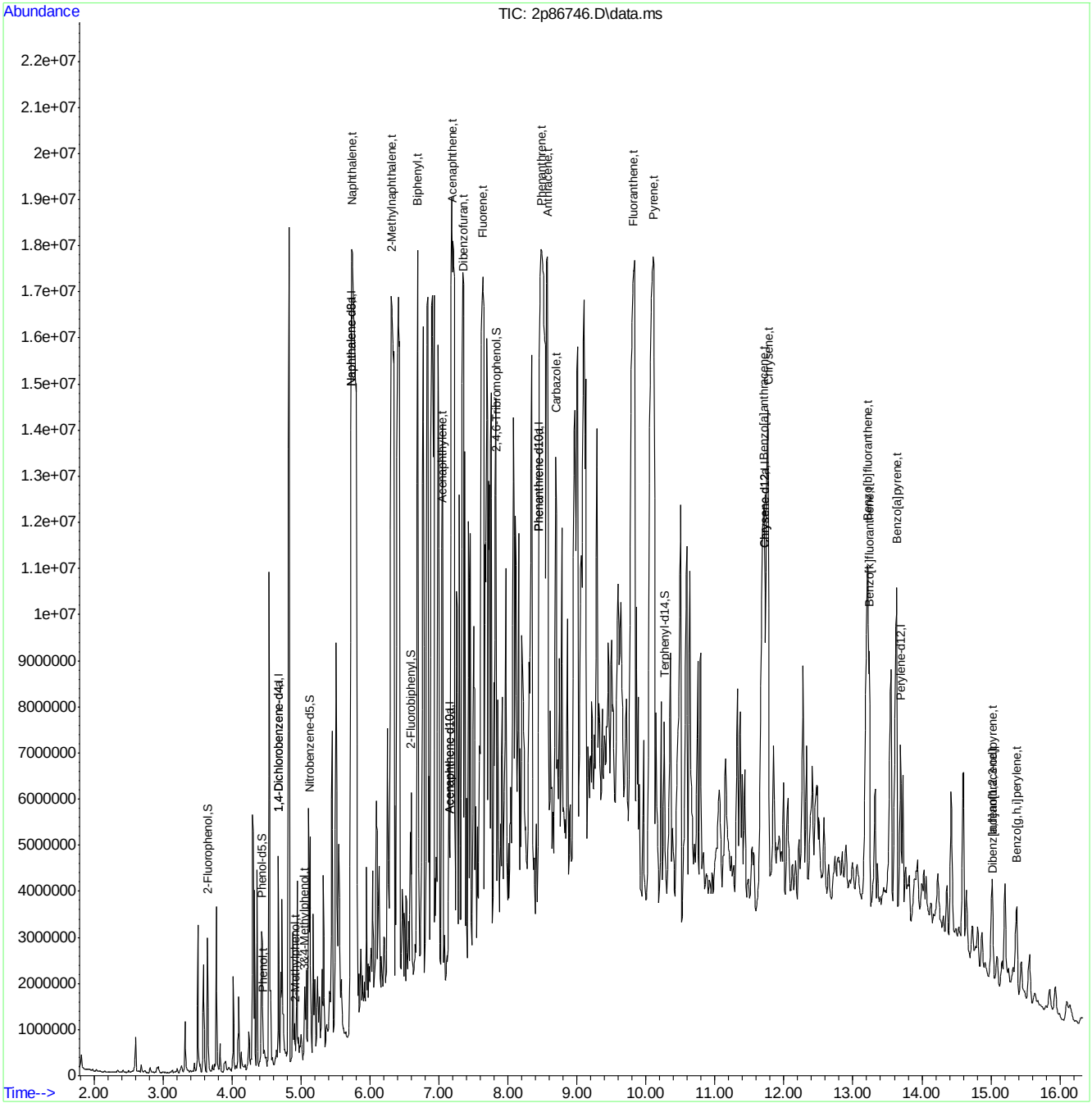
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94) Benzo[k]fluoranthene	13.238	252	1265795m	29.81	ppm	
95) Benzo[a]pyrene	13.634	252	5716401	131.00	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.019	276	1236767	24.87	ppm	98
98) Dibenz[a,h]anthracene	15.030	278	373992	9.65	ppm	96
100) Benzo[g,h,i]perylene	15.378	276	1051863	26.72	ppm	97

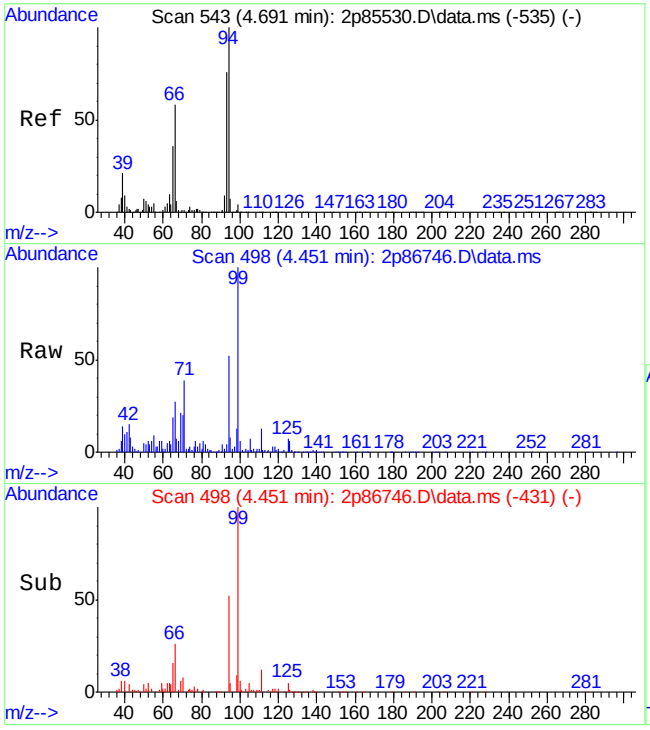
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:36:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

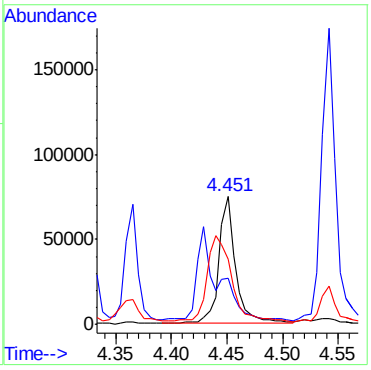


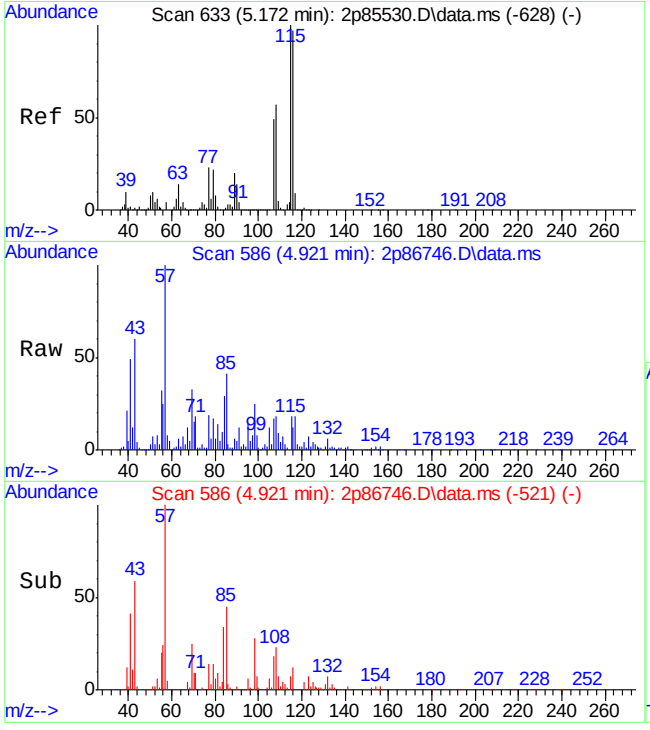


#9
Phenol
Concen: 2.30 ppm
RT: 4.451 min Scan# 498
Delta R.T. -0.139 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion: 94 Resp: 78932

Ion	Ratio	Lower	Upper
94	100		
65	33.3	1.5	61.5
66	48.8	15.3	75.3

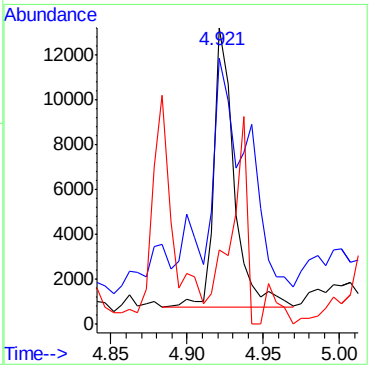


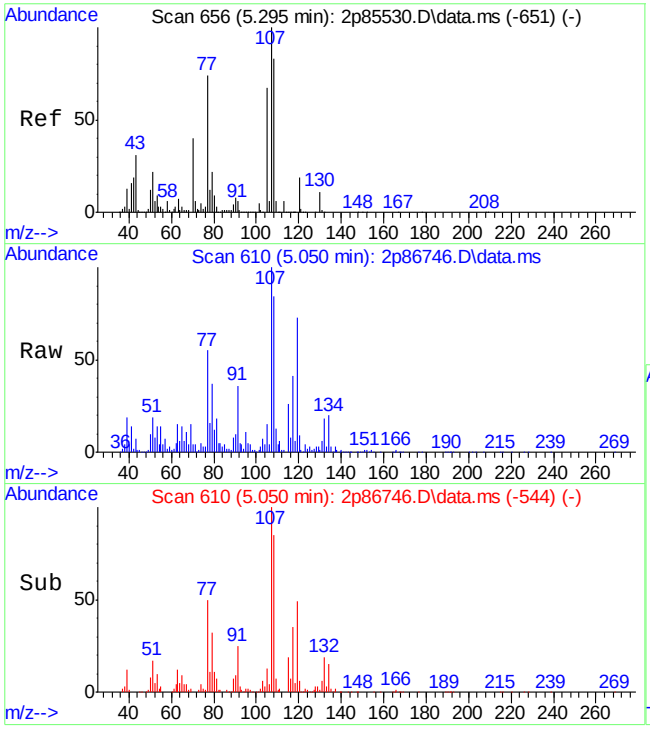


#19
2-Methylphenol
Concen: 0.65 ppm
RT: 4.921 min Scan# 586
Delta R.T. -0.150 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:108 Resp: 11401

Ion	Ratio	Lower	Upper
108	100		
107	74.7	58.4	118.4
90	0.0	0.0	53.9

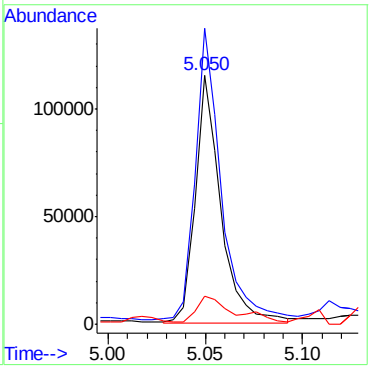


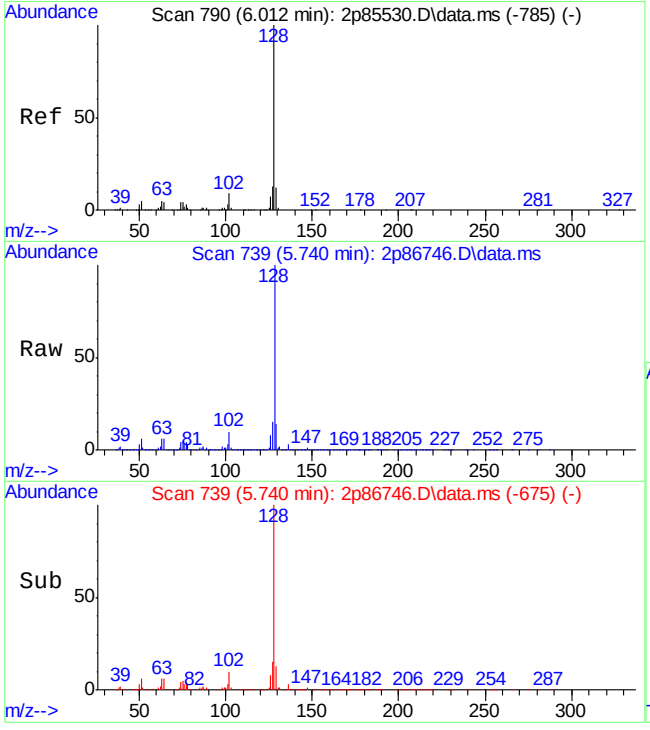


#21
3&4-Methylphenol
Concen: 5.94 ppm m
RT: 5.050 min Scan# 610
Delta R.T. -0.149 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:108 Resp: 105240

Ion	Ratio	Lower	Upper
108	100		
107	118.7	90.6	150.6
90	11.4	0.0	39.9

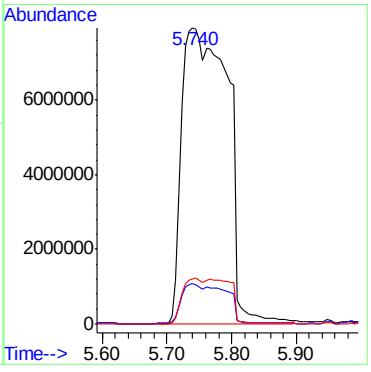


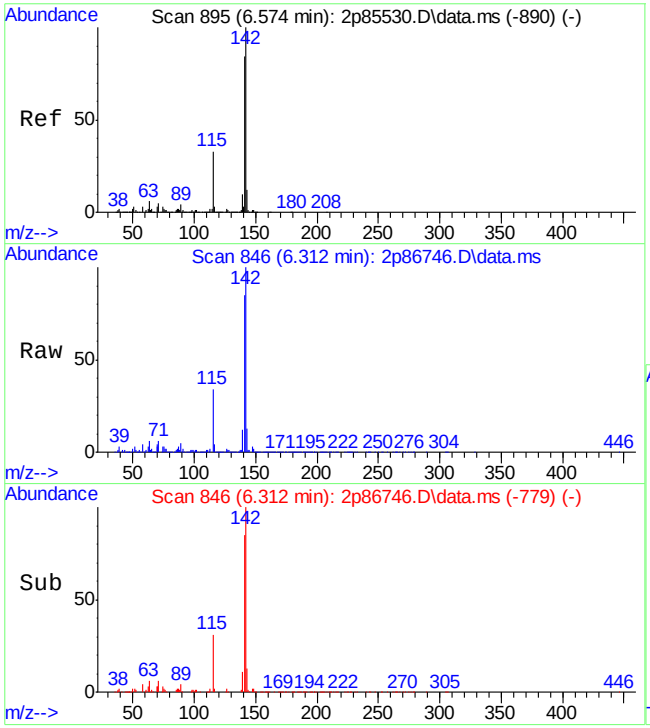


#38
Naphthalene
Concen: 1937.72 ppm m
RT: 5.740 min Scan# 739
Delta R.T. -0.155 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:128 Resp:39497135

Ion	Ratio	Lower	Upper
128	100		
129	13.5	0.0	41.2
127	15.1	0.0	43.7

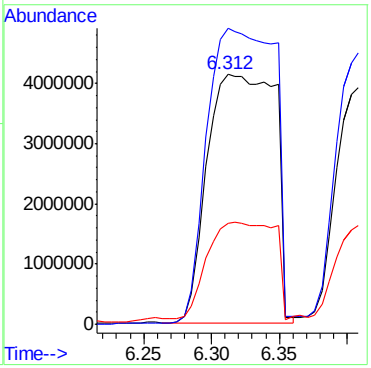


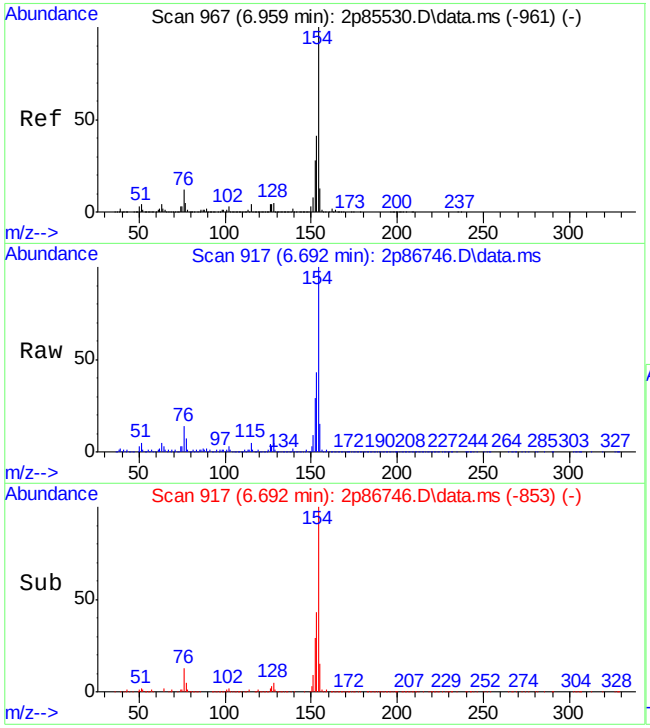


#44
2-Methylnaphthalene
Concen: 1101.39 ppm
RT: 6.312 min Scan# 846
Delta R.T. -0.144 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:141 Resp:14277973

Ion	Ratio	Lower	Upper
141	100		
142	118.4	90.7	150.7
115	38.2	18.7	78.7

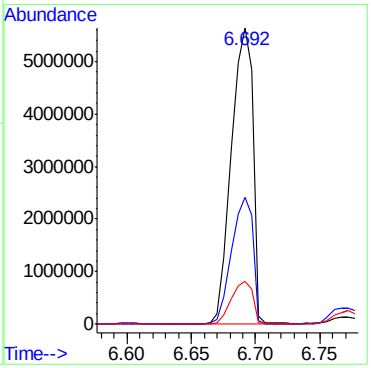


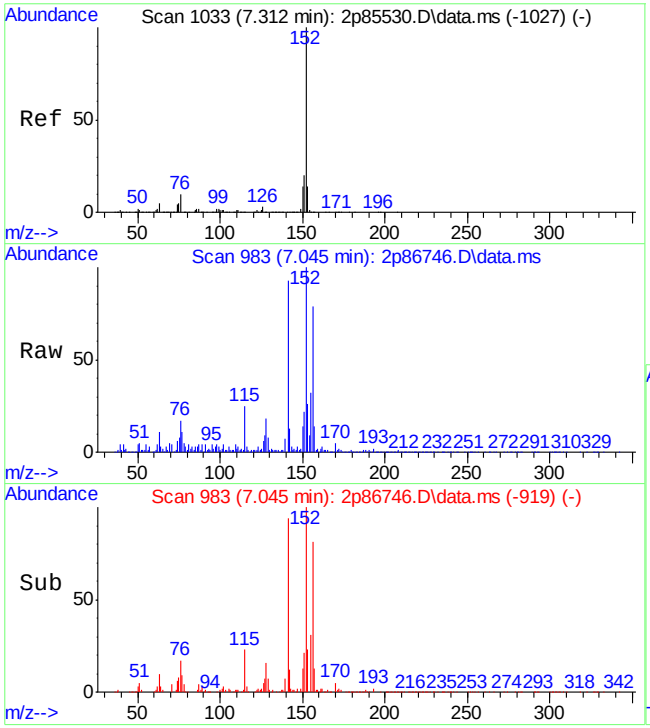


#53
Biphenyl
Concen: 204.00 ppm
RT: 6.692 min Scan# 917
Delta R.T. -0.155 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:154 Resp: 6608928

Ion	Ratio	Lower	Upper
154	100		
153	42.7	11.1	71.1
155	14.6	0.0	43.4

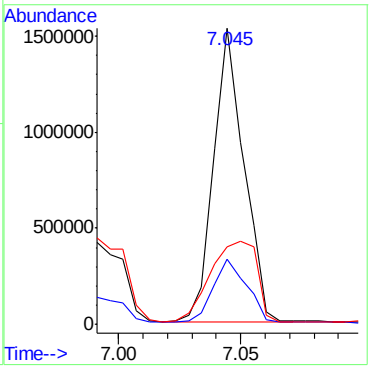


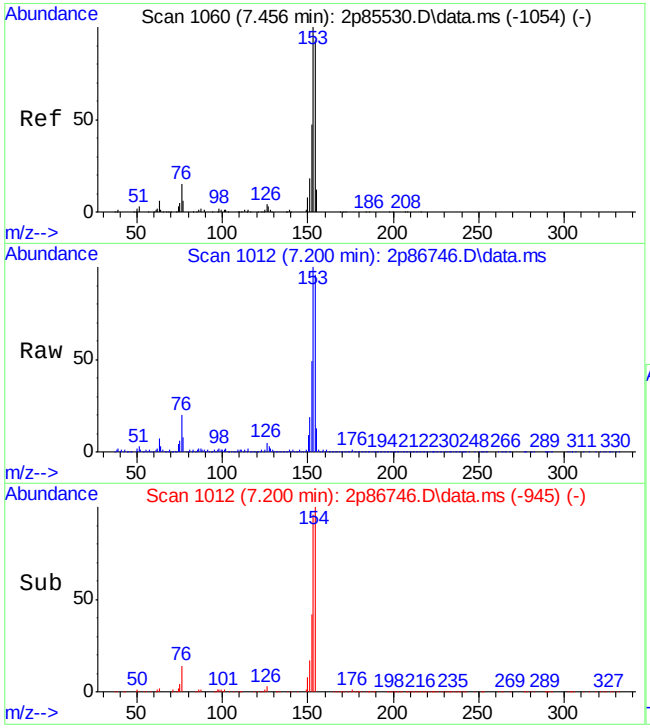


#56
Acenaphthylene
Concen: 33.76 ppm
RT: 7.045 min Scan# 983
Delta R.T. -0.155 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:152 Resp: 1334952

Ion	Ratio	Lower	Upper
152	100		
151	21.5	0.0	50.3
153	25.5	0.0	43.6

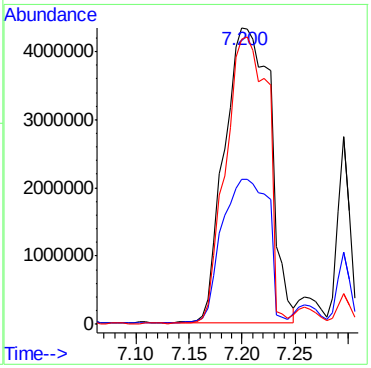


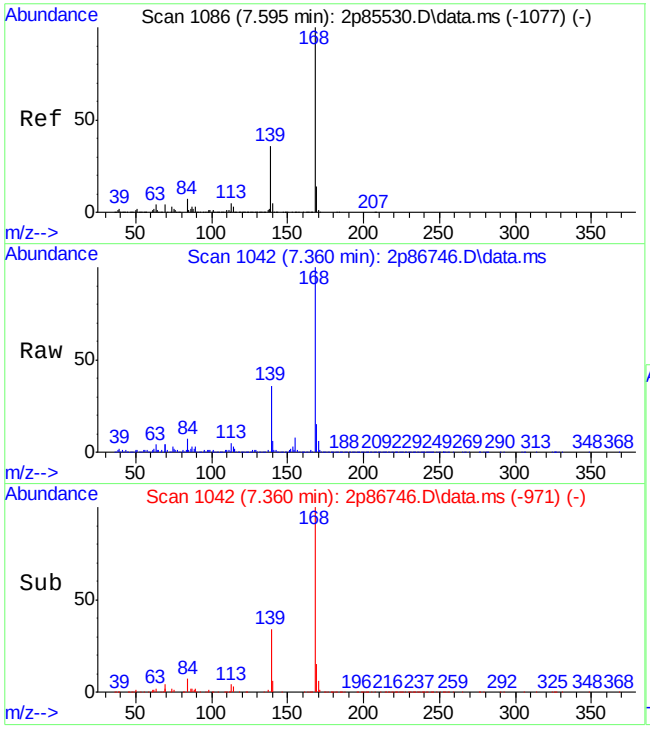


#59
Acenaphthene
Concen: 556.68 ppm
RT: 7.200 min Scan# 1012
Delta R.T. -0.144 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:153 Resp:12919777

Ion	Ratio	Lower	Upper
153	100		
152	48.5	17.8	77.8
154	97.5	59.8	119.8

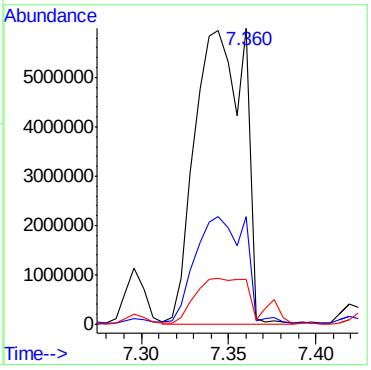


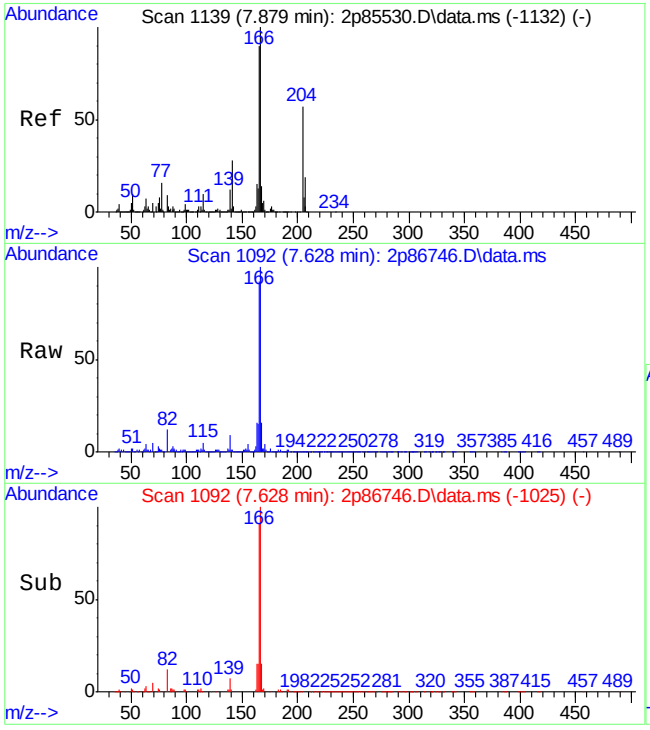


#62
Dibenzofuran
Concen: 364.88 ppm
RT: 7.360 min Scan# 1042
Delta R.T. -0.123 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:168 Resp:11678994

Ion	Ratio	Lower	Upper
168	100		
139	36.3	9.2	69.2
169	14.9	0.0	44.1

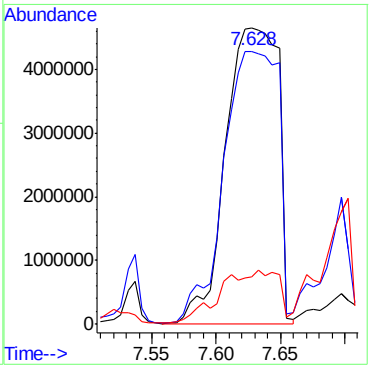


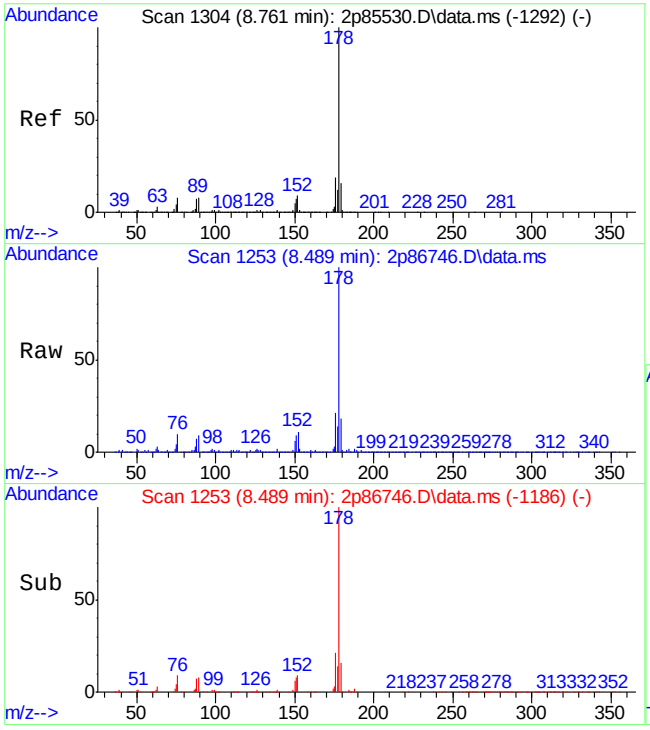


#66
Fluorene
Concen: 476.95 ppm
RT: 7.628 min Scan# 1092
Delta R.T. -0.139 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:166 Resp:13092723

Ion	Ratio	Lower	Upper
166	100		
165	90.5	60.6	120.6
167	14.1	0.0	44.1

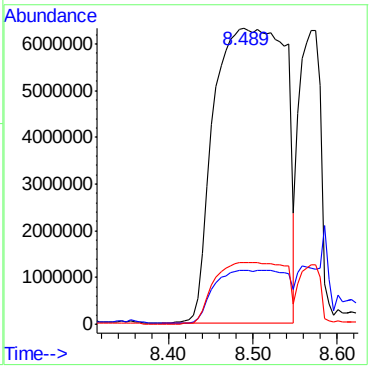


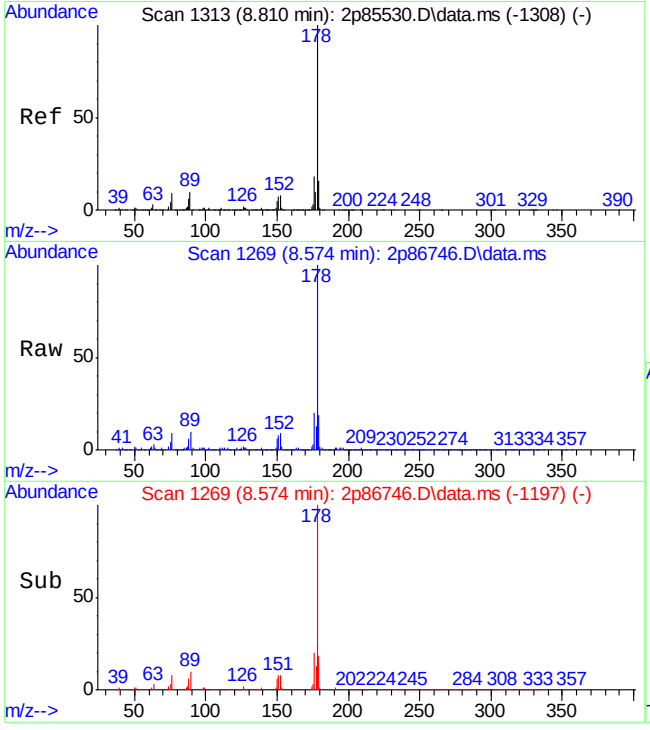


#77
Phenanthrene
Concen: 1489.66 ppm
RT: 8.489 min Scan# 1253
Delta R.T. -0.144 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:178 Resp:36725907

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	46.0
176	21.6	0.0	49.2

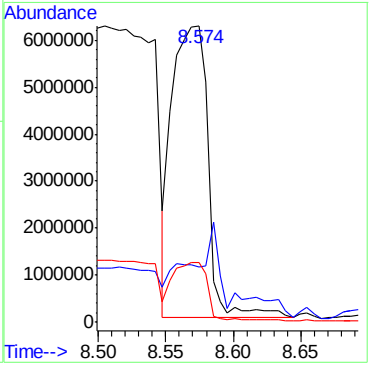


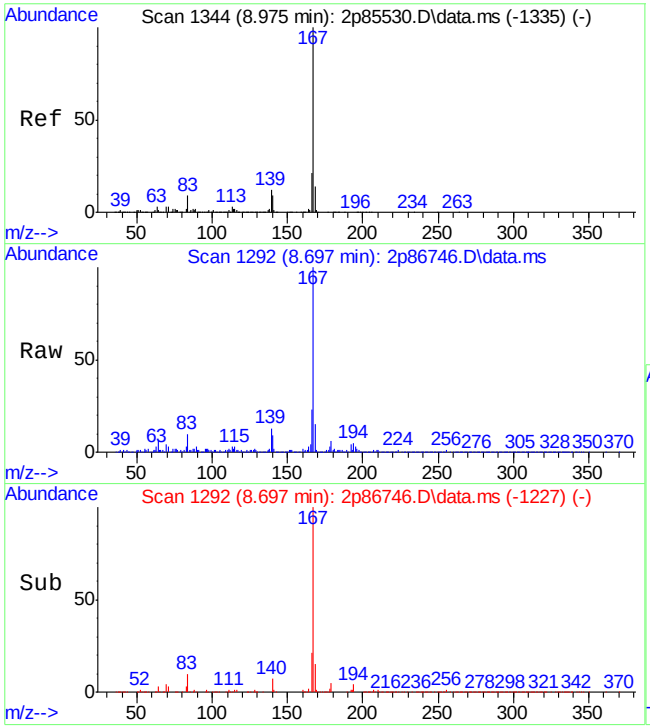


#78
Anthracene
Concen: 457.99 ppm m
RT: 8.574 min Scan# 1269
Delta R.T. -0.113 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:178 Resp:11481186

Ion	Ratio	Lower	Upper
178	100		
179	18.6	0.0	45.7
176	20.3	0.0	48.6

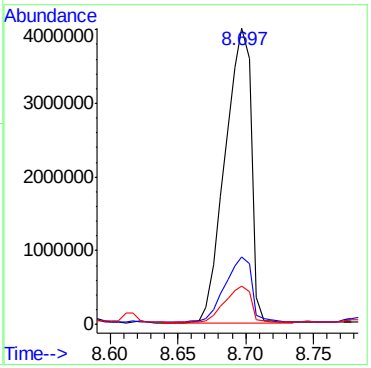


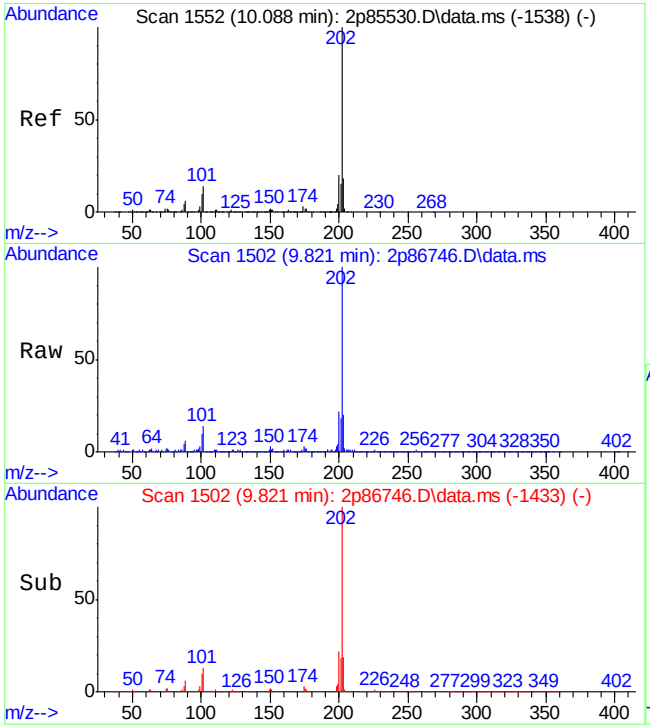


#79
Carbazole
Concen: 208.96 ppm
RT: 8.697 min Scan# 1292
Delta R.T. -0.155 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:167 Resp: 5416605

Ion	Ratio	Lower	Upper
167	100		
166	22.0	0.0	50.8
139	12.2	0.0	44.2

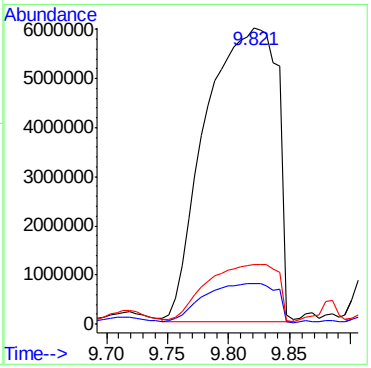


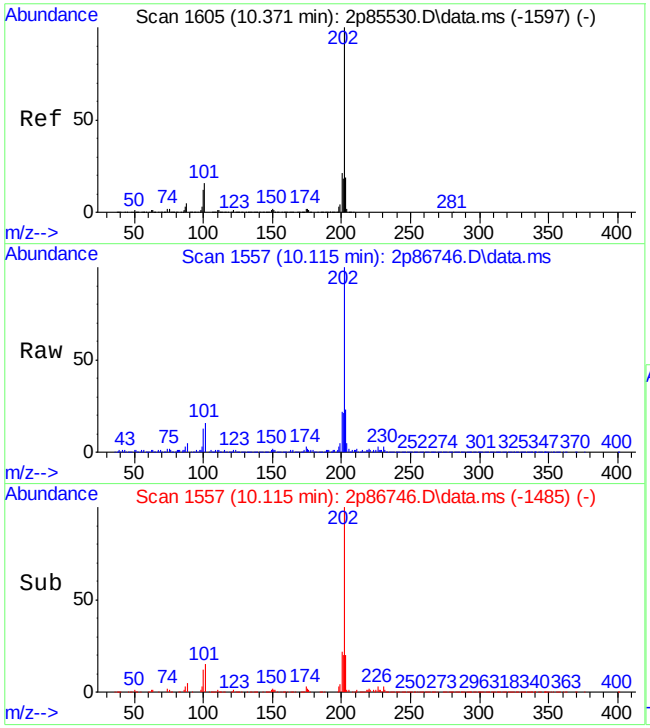


#81
Fluoranthene
Concen: 696.41 ppm
RT: 9.821 min Scan# 1502
Delta R.T. -0.128 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:202 Resp:24400592

Ion	Ratio	Lower	Upper
202	100		
101	13.3	0.0	43.7
203	19.1	0.0	48.6

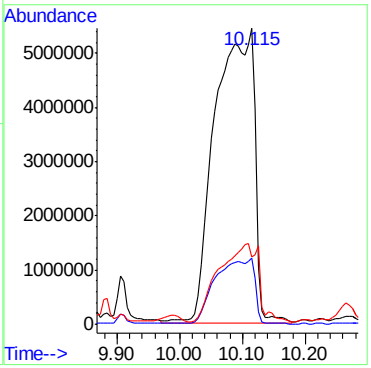


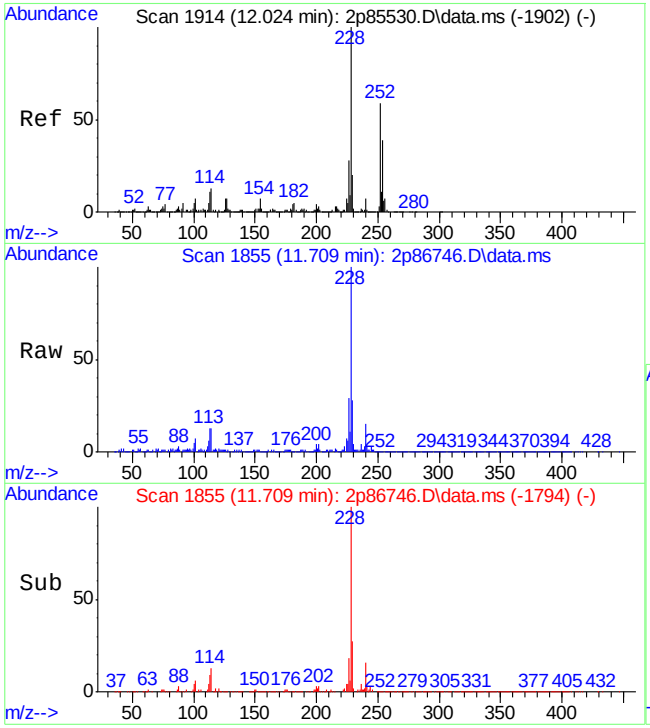


#84
Pyrene
Concen: 390.04 ppm m
RT: 10.115 min Scan# 1557
Delta R.T. -0.117 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:202 Resp:23725048

Ion	Ratio	Lower	Upper
202	100		
200	22.5	0.0	50.1
203	22.8	0.0	47.4

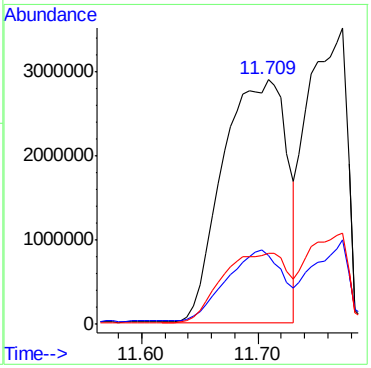


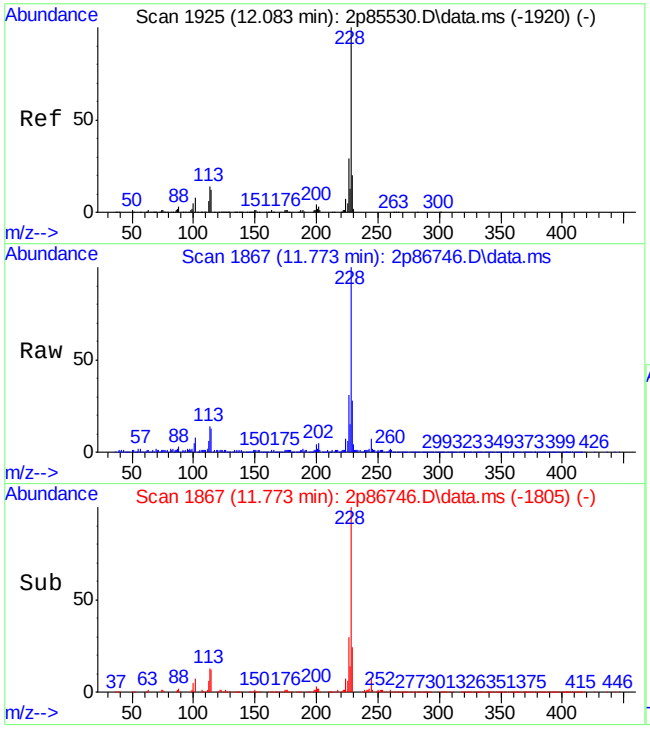


#87
Benzo[a]anthracene
Concen: 188.31 ppm
RT: 11.709 min Scan# 1855
Delta R.T. -0.171 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:228 Resp:11057515

Ion	Ratio	Lower	Upper
228	100		
229	28.4	0.0	50.3
226	27.8	0.0	57.9

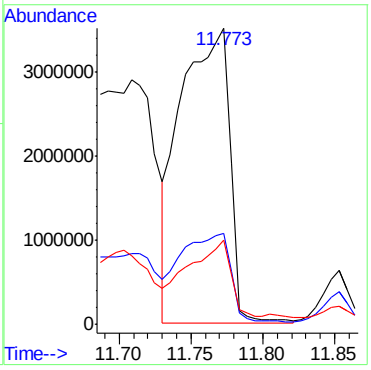


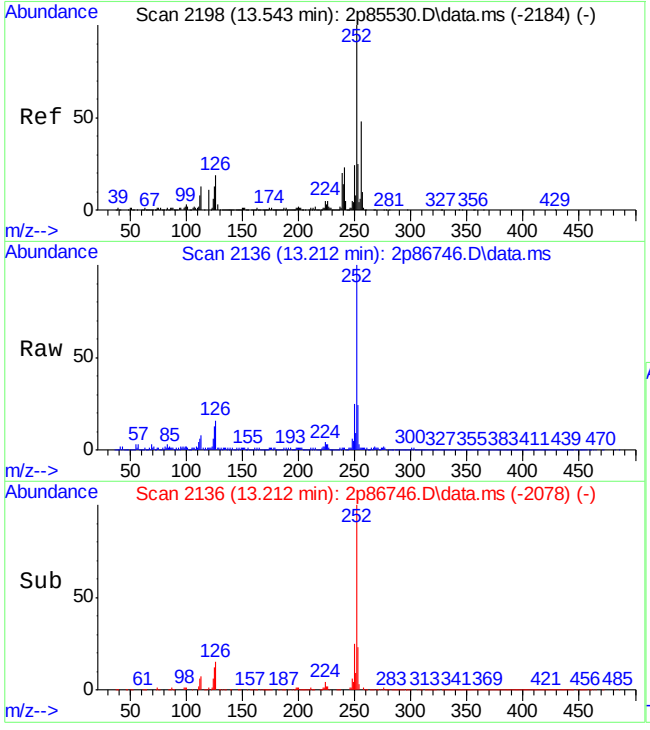


#89
Chrysene
Concen: 200.55 ppm
RT: 11.773 min Scan# 1867
Delta R.T. -0.166 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:228 Resp: 8353769

Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.0	59.2
229	28.0	0.0	50.2

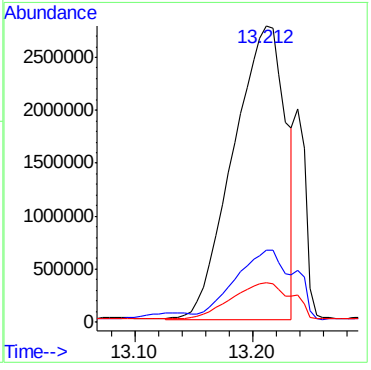


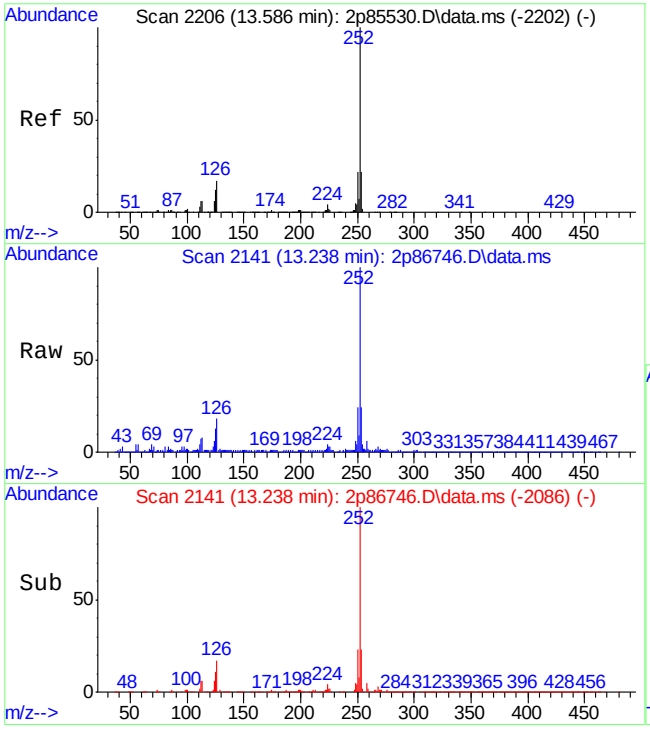


#93
Benzo[b]fluoranthene
Concen: 166.48 ppm m
RT: 13.212 min Scan# 2136
Delta R.T. -0.192 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:252 Resp: 8644411

Ion	Ratio	Lower	Upper
252	100		
253	24.2	0.0	54.9
125	13.3	0.0	42.5

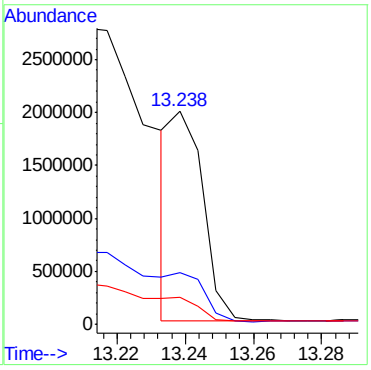


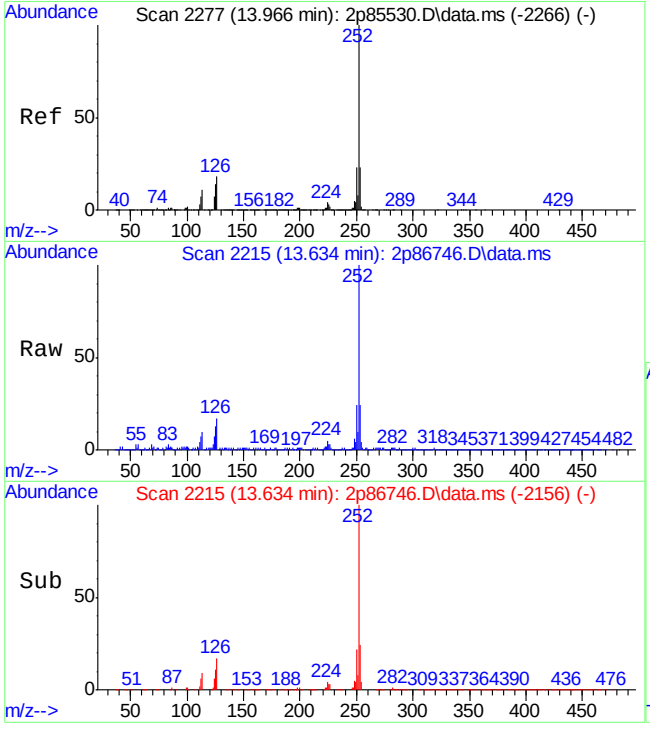


#94
Benzo[k]fluoranthene
Concen: 29.81 ppm m
RT: 13.238 min Scan# 2141
Delta R.T. -0.204 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:252 Resp: 1265795

Ion	Ratio	Lower	Upper
252	100		
253	24.2	0.0	52.4
125	12.6	0.0	40.8

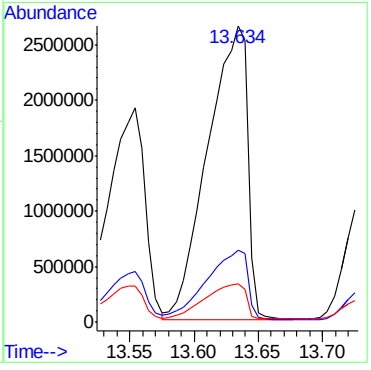


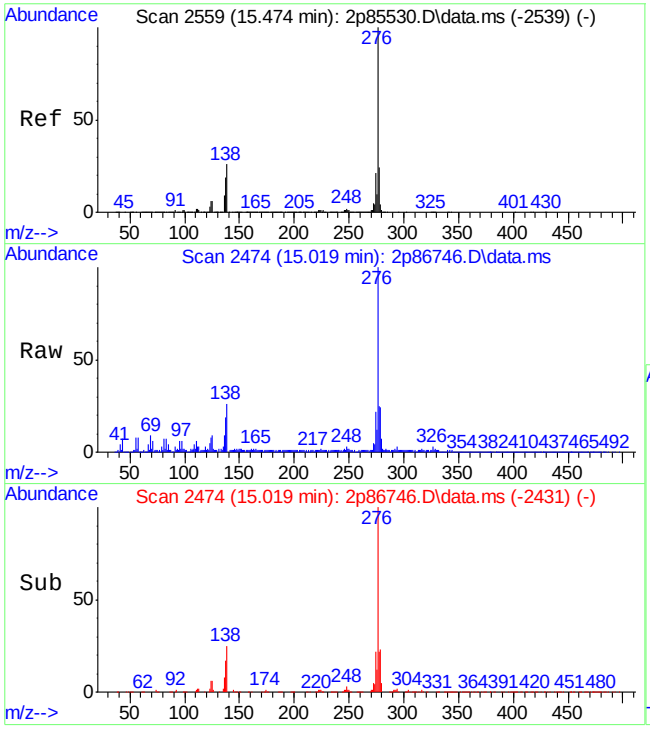


#95
Benzo[a]pyrene
Concen: 131.00 ppm
RT: 13.634 min Scan# 2215
Delta R.T. -0.187 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:252 Resp: 5716401

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	52.1
125	12.1	0.0	42.5

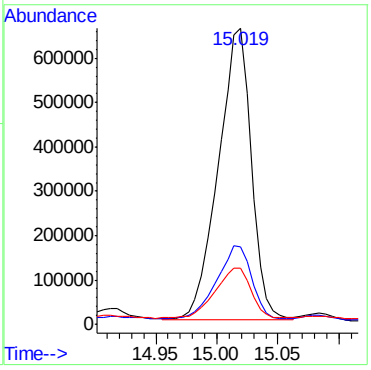


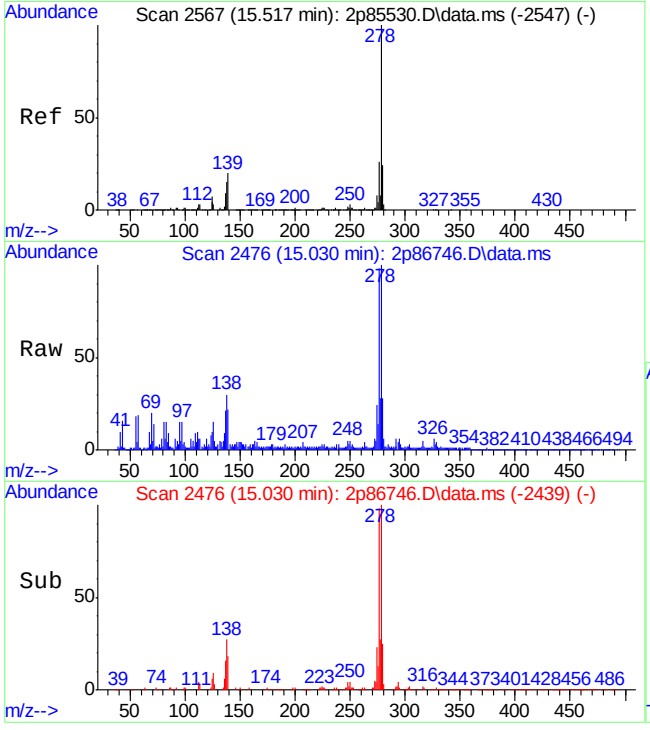


#96
Indeno[1,2,3-cd]pyrene
Concen: 24.87 ppm
RT: 15.019 min Scan# 2474
Delta R.T. -0.273 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:276 Resp: 1236767

Ion	Ratio	Lower	Upper
276	100		
138	24.6	0.0	55.3
137	17.0	0.0	48.5

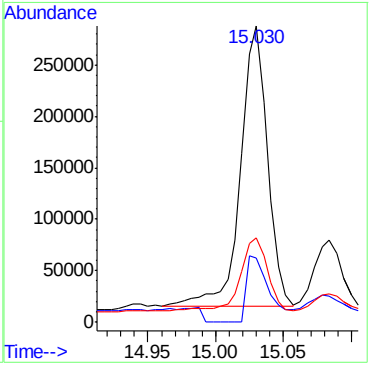


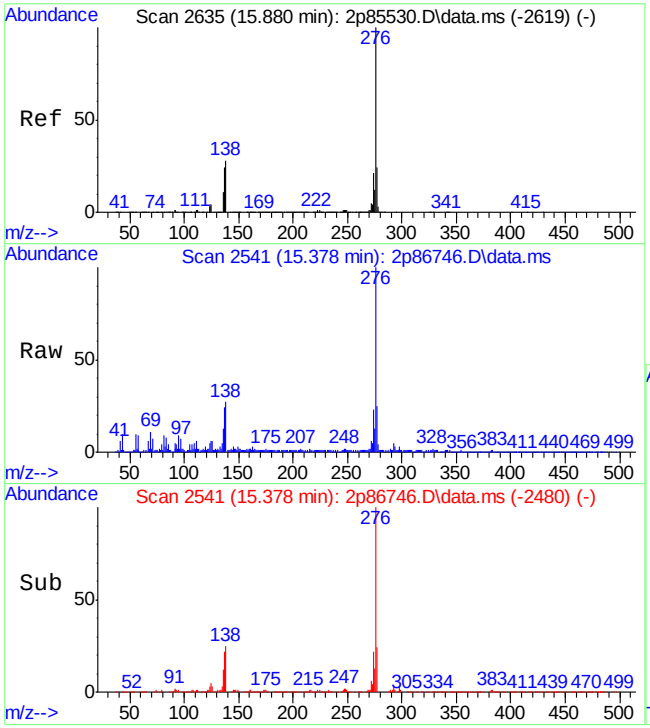


#98
Dibenz[a,h]anthracene
Concen: 9.65 ppm
RT: 15.030 min Scan# 2476
Delta R.T. -0.300 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:278 Resp: 373992

Ion	Ratio	Lower	Upper
278	100		
139	18.5	0.0	50.3
279	26.1	0.0	54.3

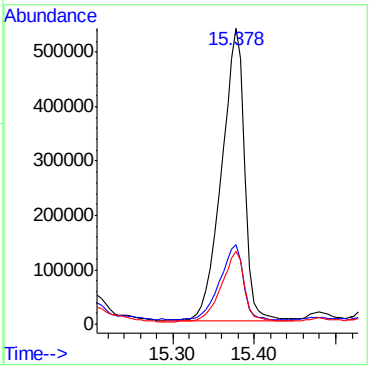




#100
Benzo[g,h,i]perylene
Concen: 26.72 ppm
RT: 15.378 min Scan# 2541
Delta R.T. -0.172 min
Lab File: 2p86746.D
Acq: 19 Apr 2019 5:11 am

Tgt Ion:276 Resp: 1051863

Ion	Ratio	Lower	Upper
276	100		
138	25.5	0.0	57.9
277	23.8	0.0	54.0



Manual Integration Approval Summary

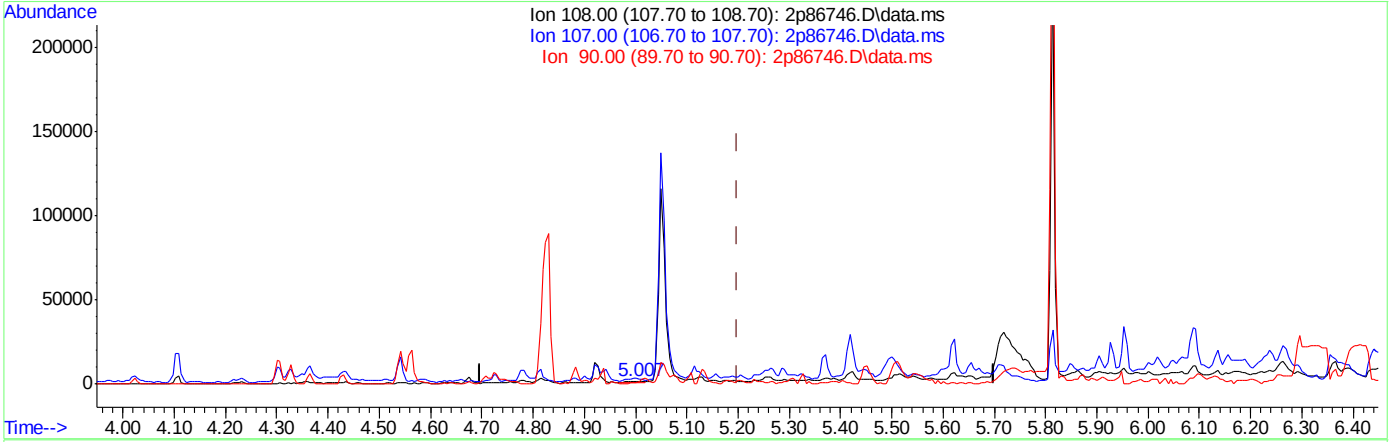
Sample Number: JC86406-3
Lab FileID: 2P86746.D
Injection Time: 04/19/19 05:11
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/26/19 10:59 Nancy Ma

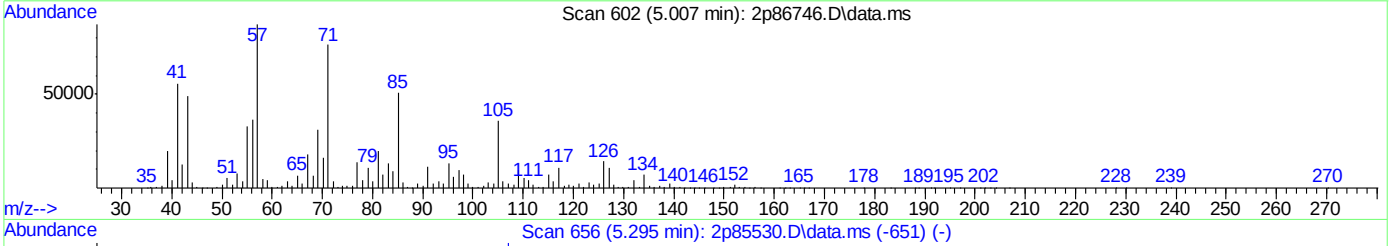
Parameter	CAS	Sig#	R.T. (min.)	Reason
3&4-Methylphenol			5.05	Poor instrument integration
Naphthalene	91-20-3		5.74	Poor instrument integration
Anthracene	120-12-7		8.57	Poor instrument integration
Pyrene	129-00-0		10.11	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.21	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.24	Overlapping peak

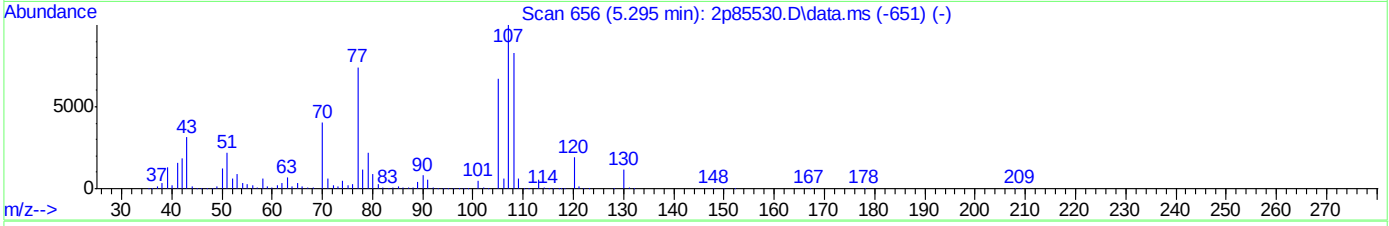
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:29:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86746.D\data.ms

(21) 3&4-Methylphenol (t)

5.007min (-0.192) 0.11ppm

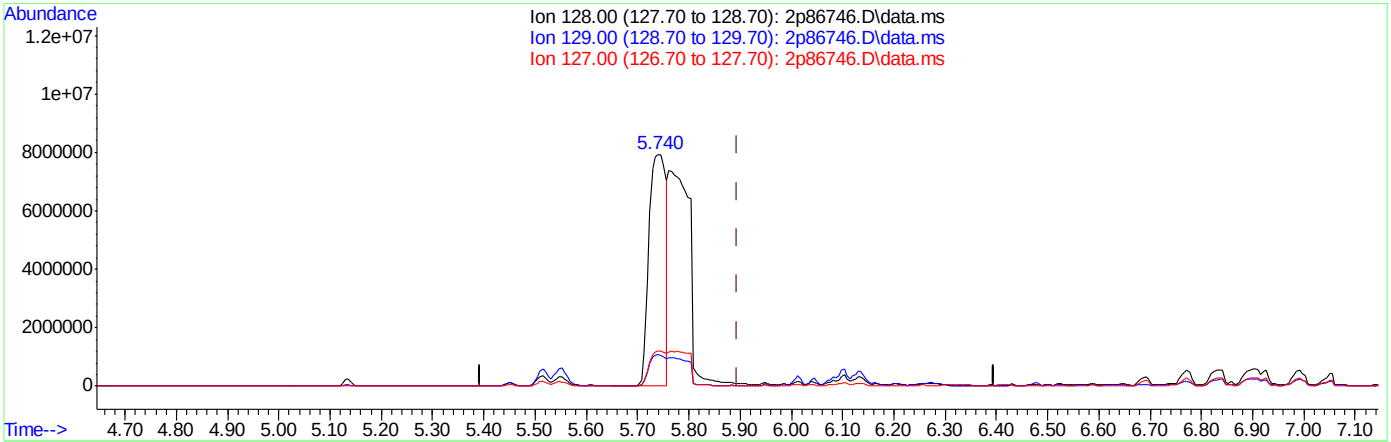
response 1921

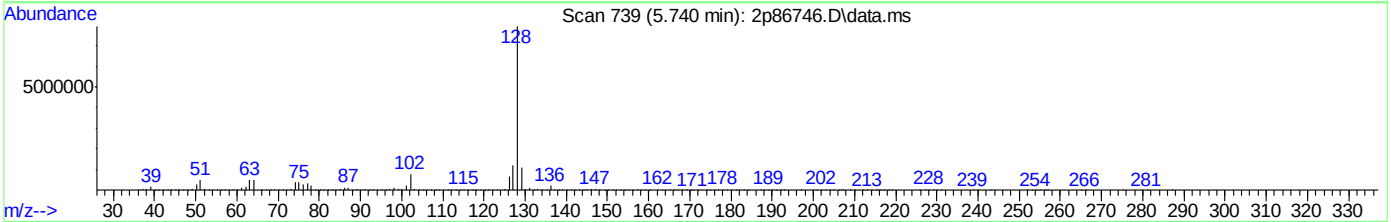
Ion	Exp%	Act%
108.00	100	100
107.00	120.60	96.19
90.00	9.90	0.00
0.00	0.00	0.00

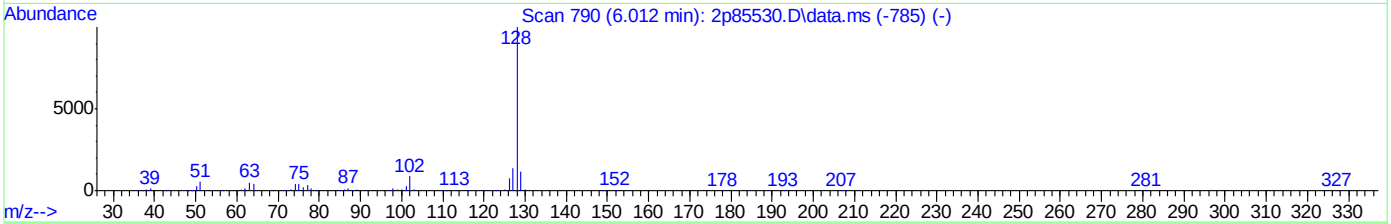
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:29:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86746.D\data.ms

(38) Naphthalene (t)

5.740min (-0.155) 892.30ppm

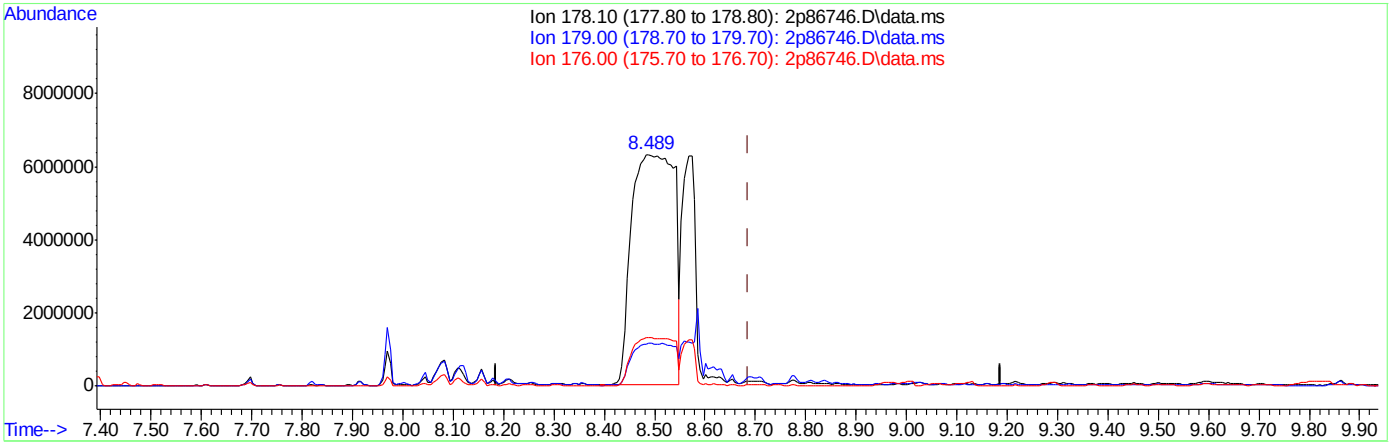
response 18188072

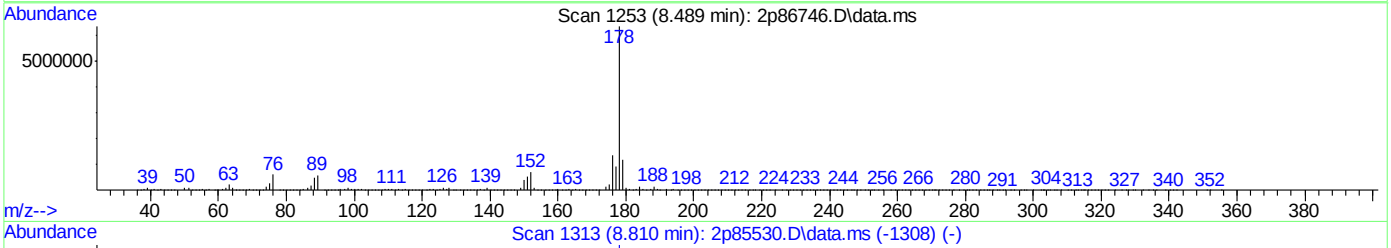
Ion	Exp%	Act%
128.00	100	100
129.00	11.20	13.80
127.00	13.70	14.55
0.00	0.00	0.00

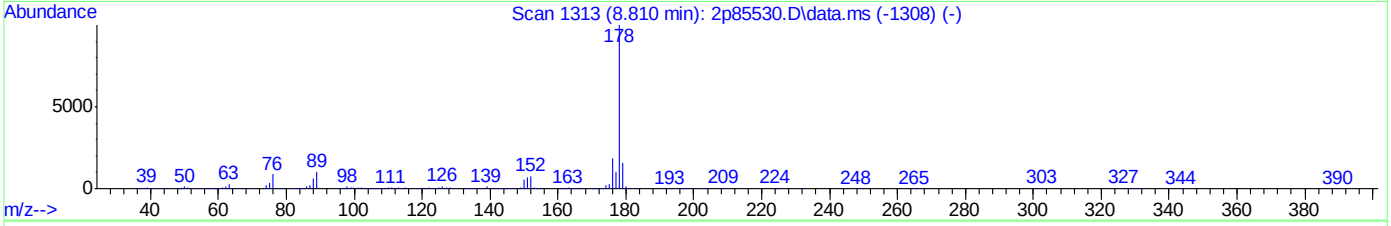
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86746.D\data.ms

(78) Anthracene (t)

8.489min (-0.198) 1465.01ppm

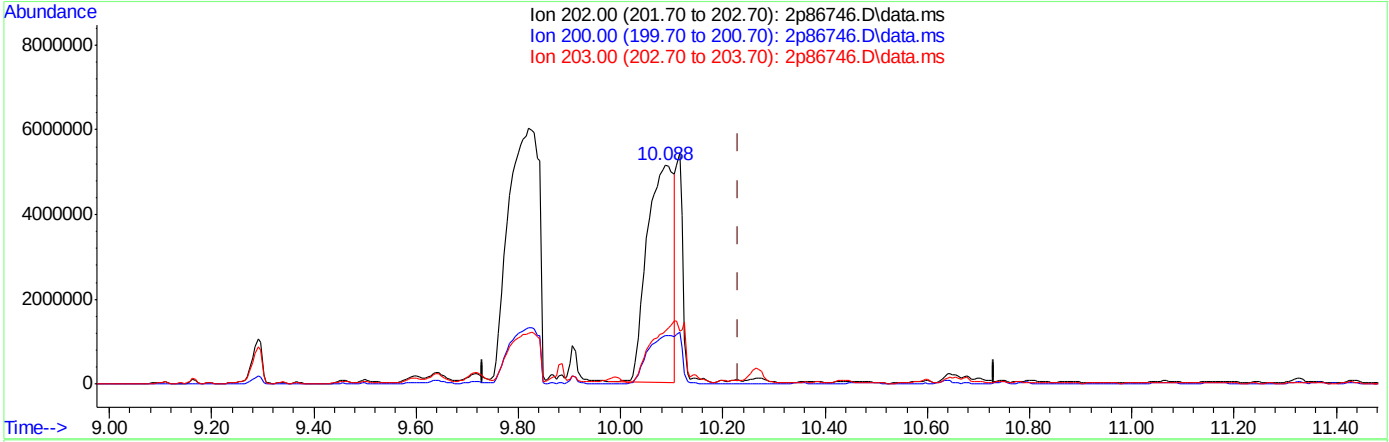
response 36725907

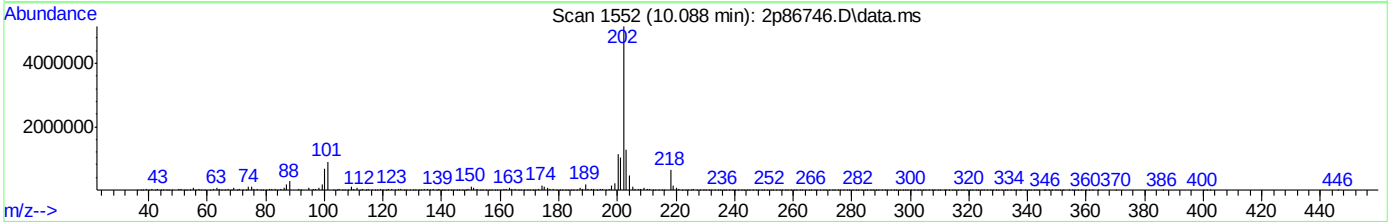
Ion	Exp%	Act%
178.10	100	100
179.00	15.70	15.15
176.00	18.60	21.56
0.00	0.00	0.00

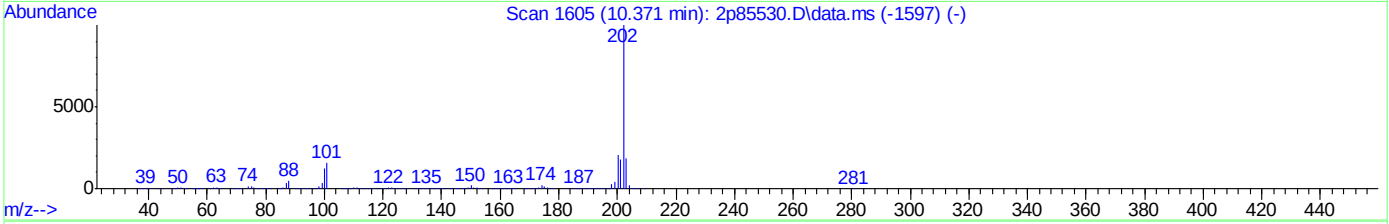
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86746.D\data.ms

(84) Pyrene (t)

10.088min (-0.144) 300.06ppm

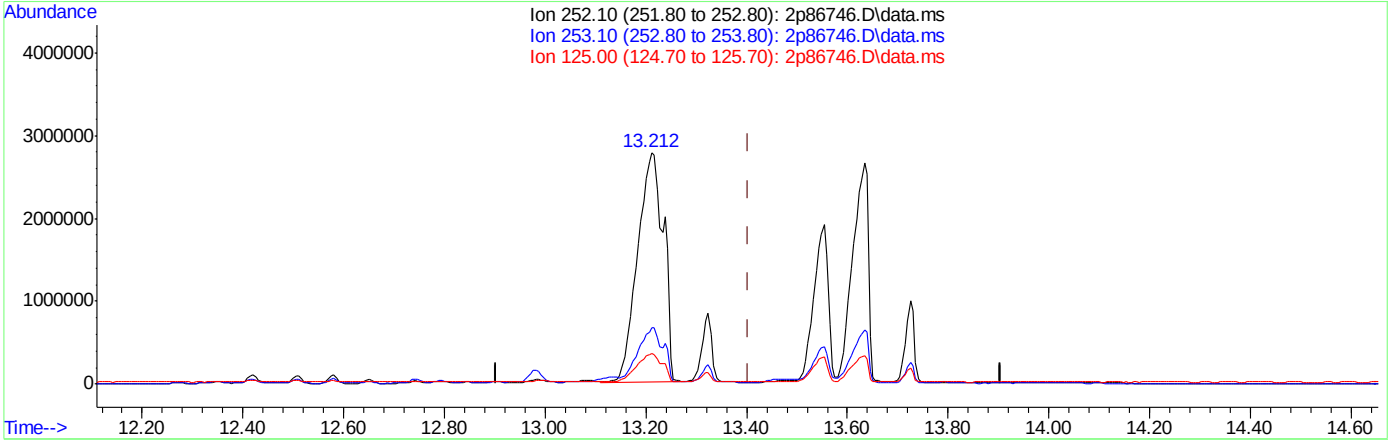
response 18251608

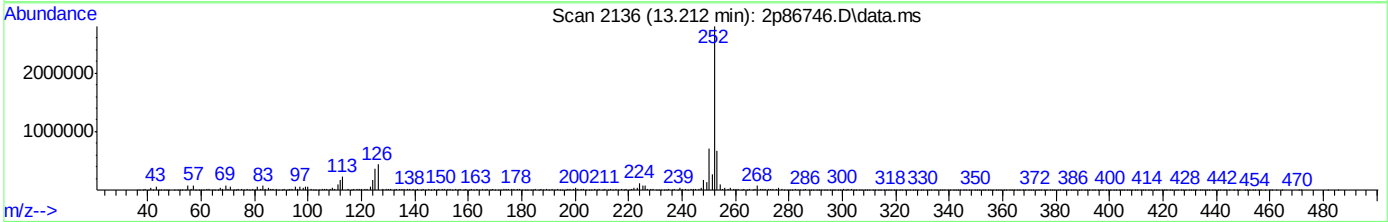
Ion	Exp%	Act%
202.00	100	100
200.00	20.10	21.88
203.00	17.40	17.56
0.00	0.00	0.00

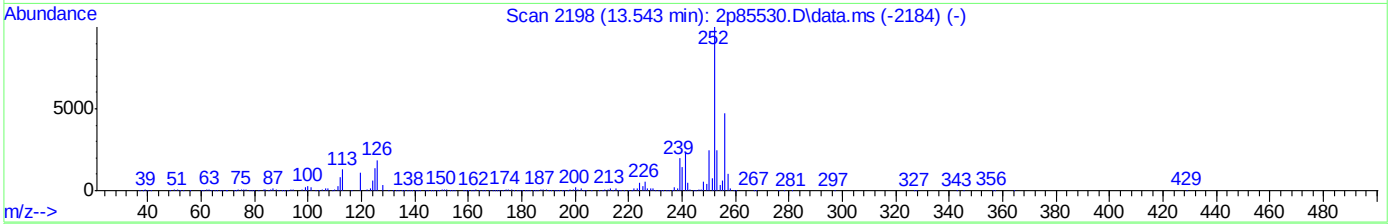
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86746.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.212min (-0.192) 190.71ppm

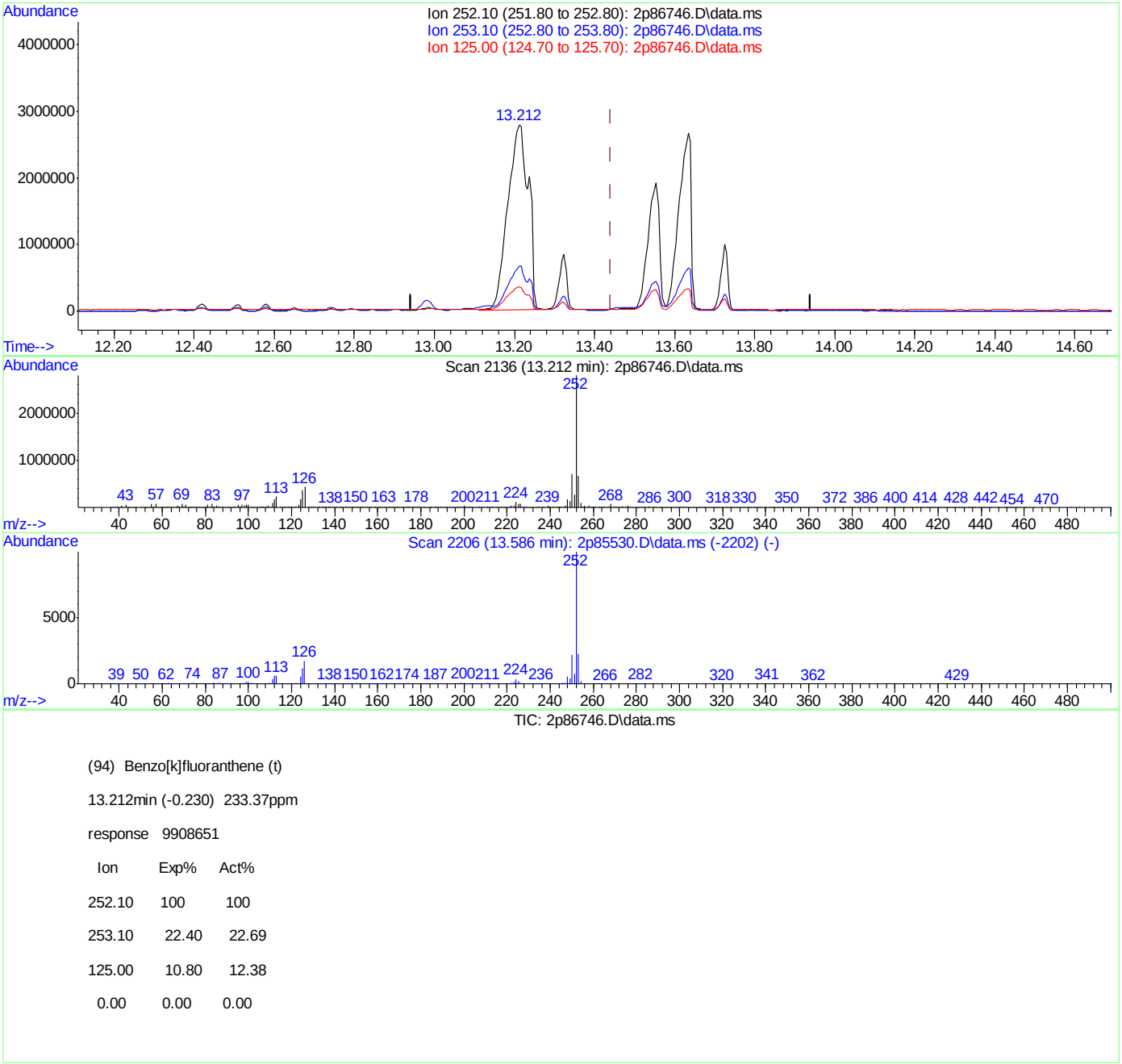
response 9902837

Ion	Exp%	Act%
252.10	100	100
253.10	24.90	22.69
125.00	12.50	12.38
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86746.D
Acq On : 19 Apr 2019 5:11 am
Operator : carolb
Sample : jc86406-3
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 19 11:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



TIC: 2p86746.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.212min (-0.230) 233.37ppm

response 9908651

Ion	Exp%	Act%
252.10	100	100
253.10	22.40	22.69
125.00	10.80	12.38
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137269.d
Acq On : 25 Apr 2019 10:03 pm
Operator : angelar
Sample : jc86406-3 Inst : GCMSZ
Misc : op19810,ez6762,30.8,,,1,100
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:36:47 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

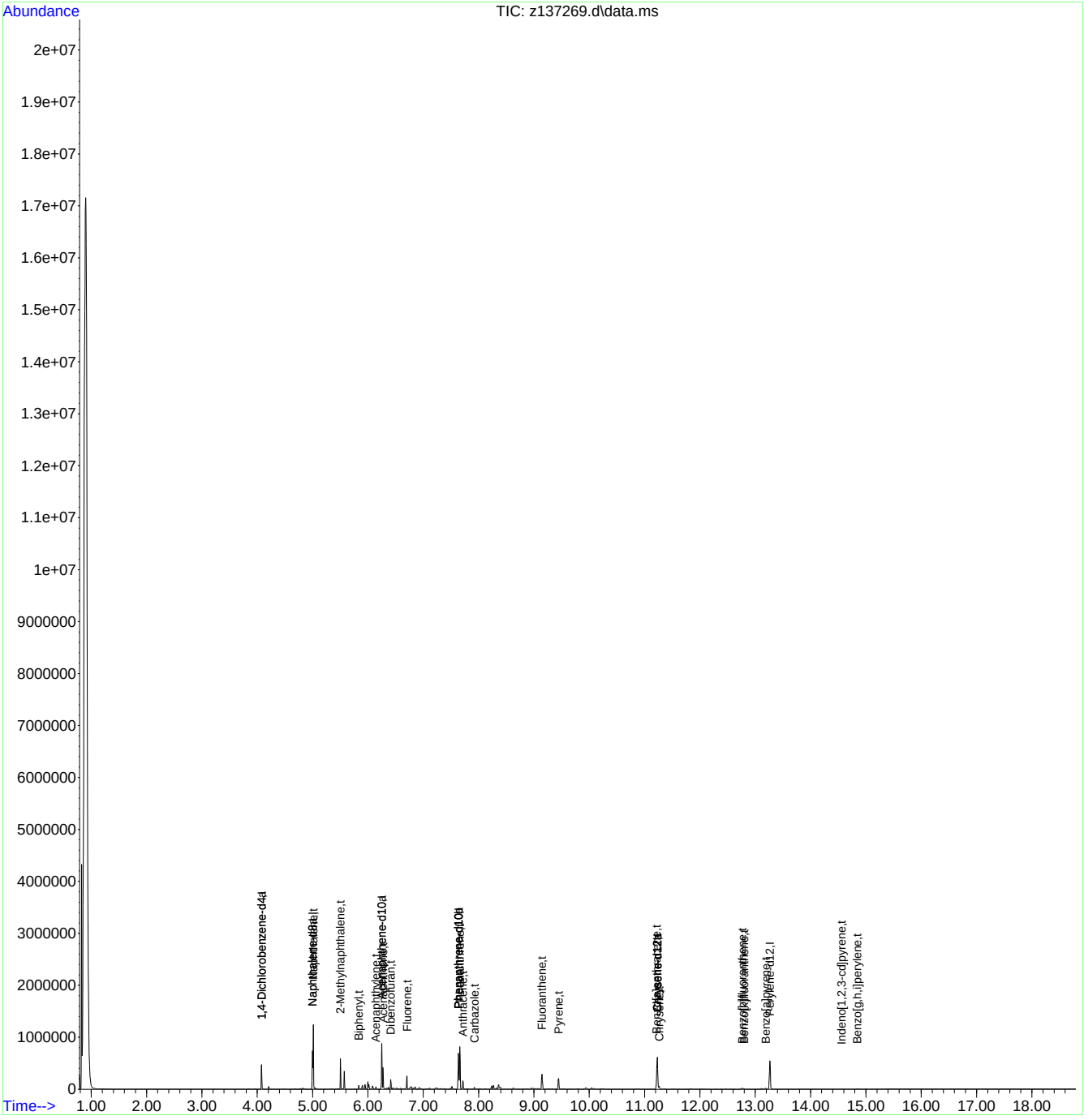
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	60352	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	245128	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	131560	40.00	ppm	0.00
69) Phenanthrene-d10	7.636	188	248130	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	256511	40.00	ppm	0.00
91) Perylene-d12	13.267	264	247184	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	60352	40.00	ppm	0.00
103) Phenanthrene-d10a	7.636	188	248130	40.00	ppm	0.00
107) Chrysene-d12a	11.231	240	256511	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	131560	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	245128	40.00	ppm	0.00
113) Phenanthrene-d10b	7.636	188	248130	40.00	ppm	0.00
115) Chrysene-d12b	11.231	240	256511	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.013	128	363627	56.88	ppm	99
44) 2-Methylnaphthalene	5.504	141	86959	24.46	ppm	98
53) Biphenyl	5.835	154	16876	3.34	ppm	99
56) Acenaphthylene	6.145	152	2887	0.46	ppm #	69
59) Acenaphthene	6.274	153	68838	16.36	ppm	95
62) Dibenzofuran	6.412	168	50819	9.27	ppm	99
66) Fluorene	6.706	166	64875	14.21	ppm	100
77) Phenanthrene	7.663	178	274985	39.05	ppm	99
78) Anthracene	7.716	178	60880	8.67	ppm	97
79) Carbazole	7.924	167	14811	2.11	ppm	96
81) Fluoranthene	9.142	202	103566	13.51	ppm	99
84) Pyrene	9.447	202	91603	10.69	ppm	97
87) Benzo[a]anthracene	11.215	228	25678	3.22	ppm	94
89) Chrysene	11.263	228	26354	3.39	ppm	97
93) Benzo[b]fluoranthene	12.764	252	14874	1.90	ppm	93
94) Benzo[k]fluoranthene	12.796	252	5464	0.78	ppm	92
95) Benzo[a]pyrene	13.186	252	12128	1.89	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.559	276	4438	0.74	ppm	95
100) Benzo[g,h,i]perylene	14.842	276	4771	0.84	ppm	89

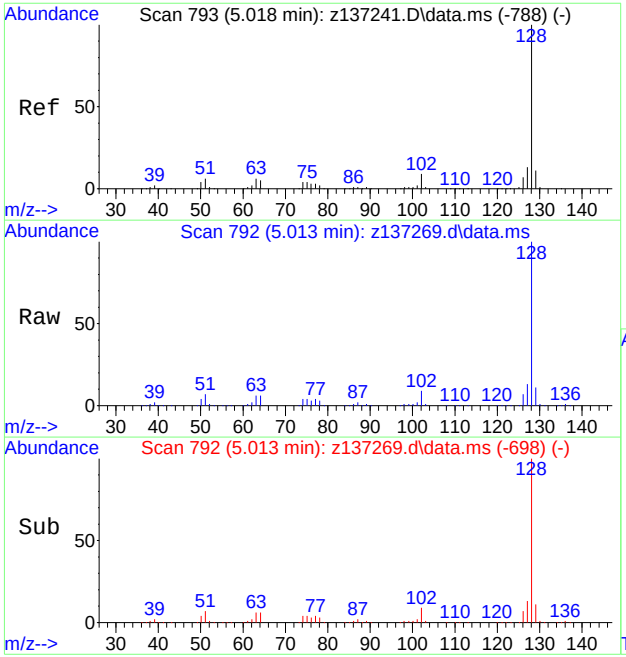
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137269.d
Acq On : 25 Apr 2019 10:03 pm
Operator : angelar
Sample : jc86406-3 Inst : GCMSZ
Misc : op19810,ez6762,30.8,,,1,100
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:36:47 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

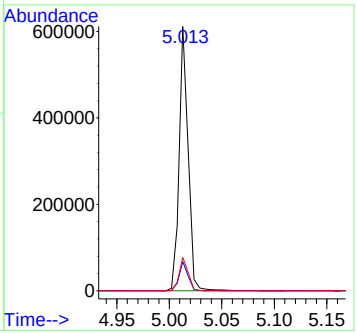


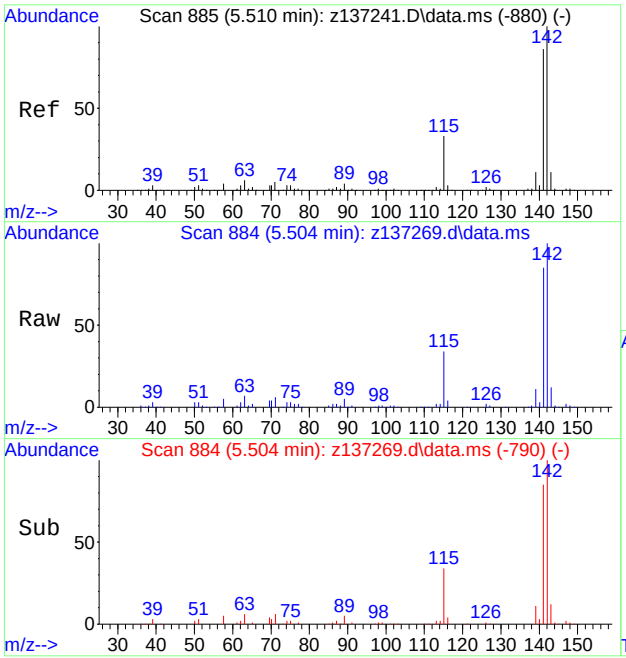


#38
Naphthalene
Concen: 56.88 ppm
RT: 5.013 min Scan# 792
Delta R.T. 0.000 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:128 Resp: 363627

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	41.4
127	12.6	0.0	42.7

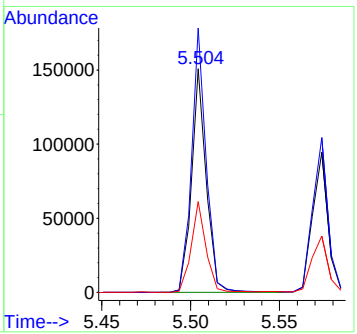


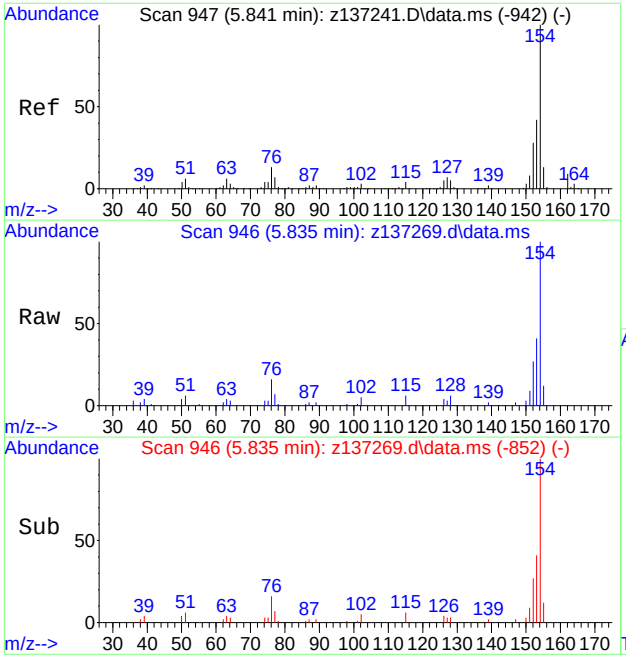


#44
2-Methylnaphthalene
Concen: 24.46 ppm
RT: 5.504 min Scan# 884
Delta R.T. 0.000 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:141 Resp: 86959

Ion	Ratio	Lower	Upper
141	100		
142	118.3	85.9	145.9
115	40.6	12.3	72.3

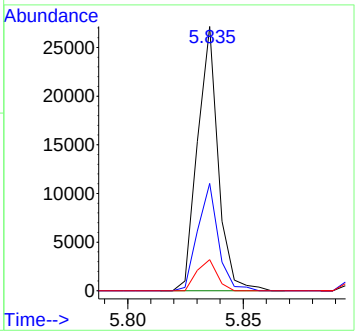


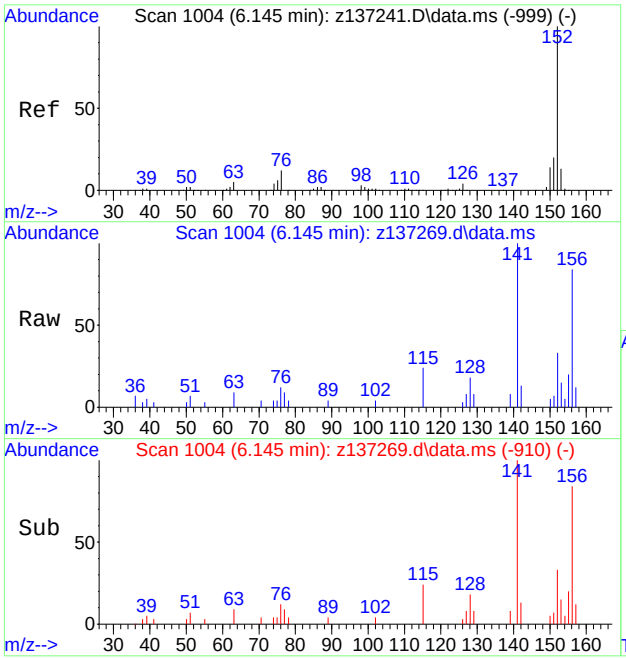


#53
Biphenyl
Concen: 3.34 ppm
RT: 5.835 min Scan# 946
Delta R.T. 0.000 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:154 Resp: 16876

Ion	Ratio	Lower	Upper
154	100		
153	40.6	11.1	71.1
155	11.7	0.0	43.2

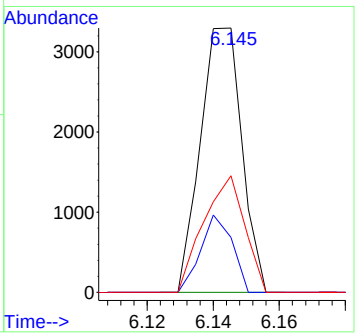


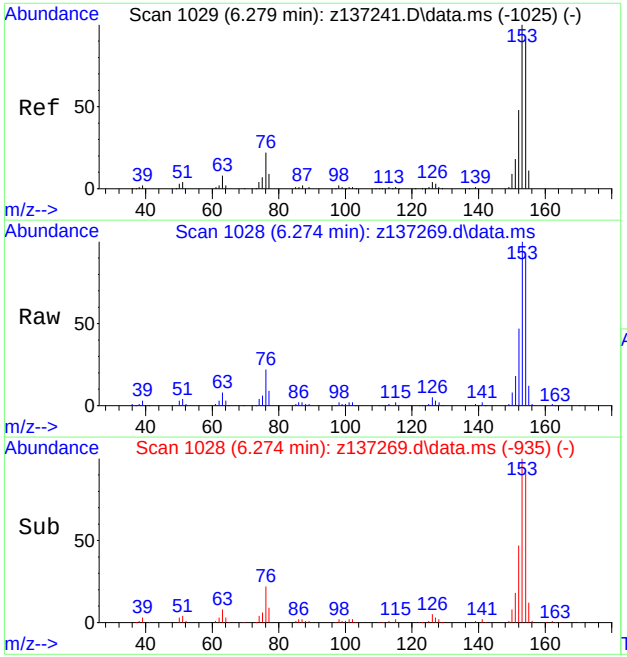


#56
Acenaphthylene
Concen: 0.46 ppm
RT: 6.145 min Scan# 1004
Delta R.T. 0.000 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:152 Resp: 2887

Ion	Ratio	Lower	Upper
152	100		
151	20.8	0.0	50.3
153	44.1	0.0	42.9#

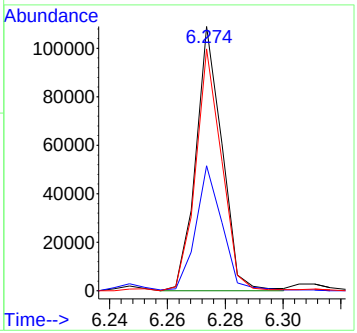


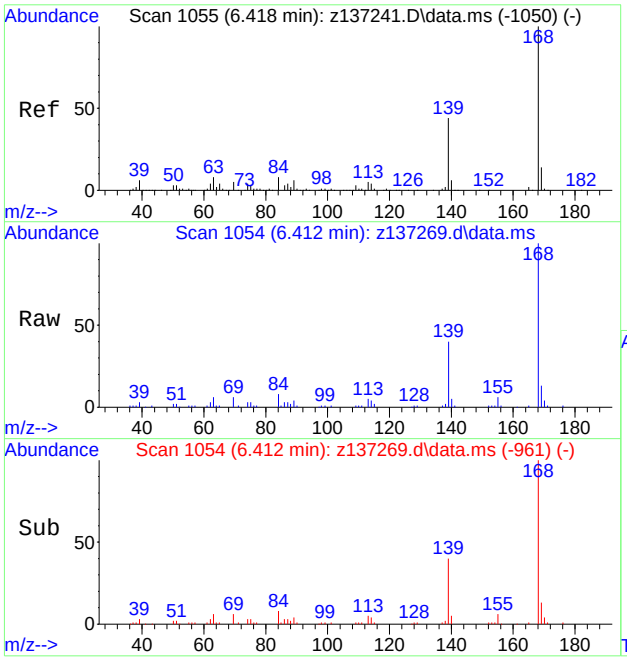


#59
Acenaphthene
Concen: 16.36 ppm
RT: 6.274 min Scan# 1028
Delta R.T. -0.005 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:153 Resp: 68838

Ion	Ratio	Lower	Upper
153	100		
152	47.2	16.7	76.7
154	91.6	55.0	115.0

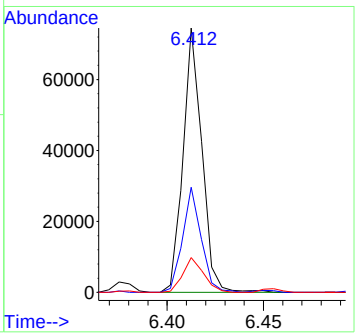


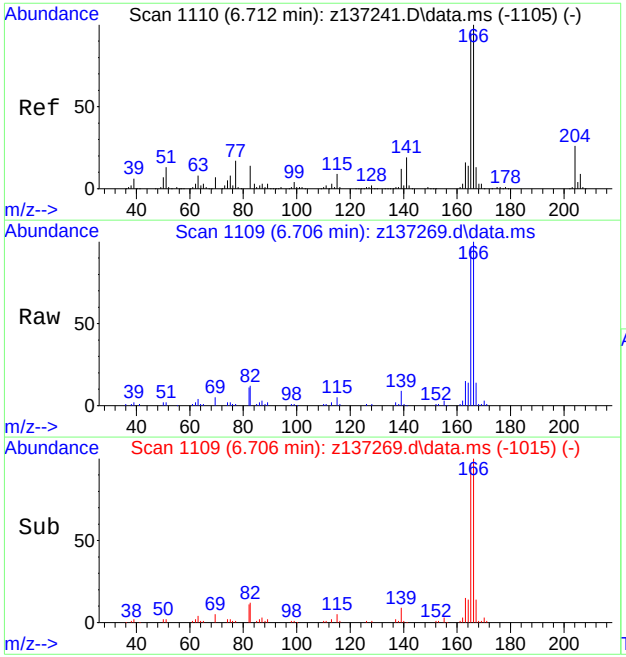


#62
Dibenzofuran
Concen: 9.27 ppm
RT: 6.412 min Scan# 1054
Delta R.T. -0.005 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:168 Resp: 50819

Ion	Ratio	Lower	Upper
168	100		
139	39.7	9.0	69.0
169	12.9	0.0	43.4

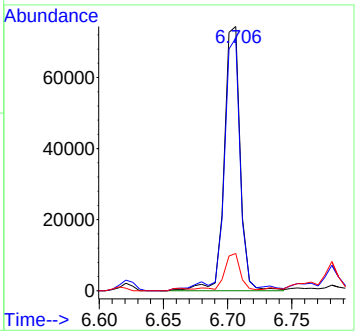


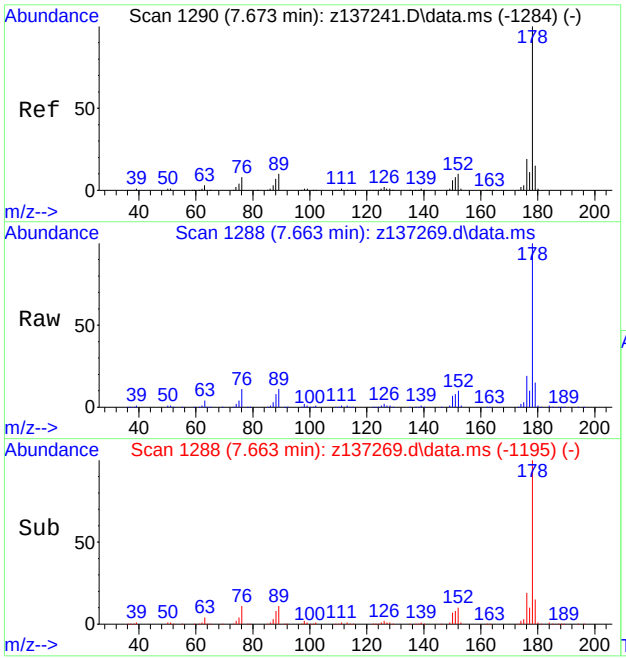


#66
Fluorene
Concen: 14.21 ppm
RT: 6.706 min Scan# 1109
Delta R.T. 0.000 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:166 Resp: 64875

Ion	Ratio	Lower	Upper
166	100		
165	95.3	65.1	125.1
167	13.9	0.0	43.6

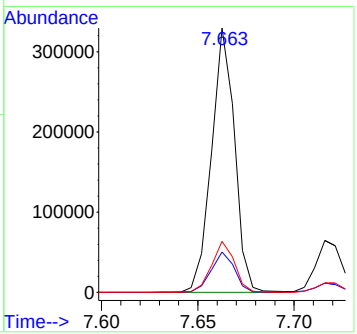


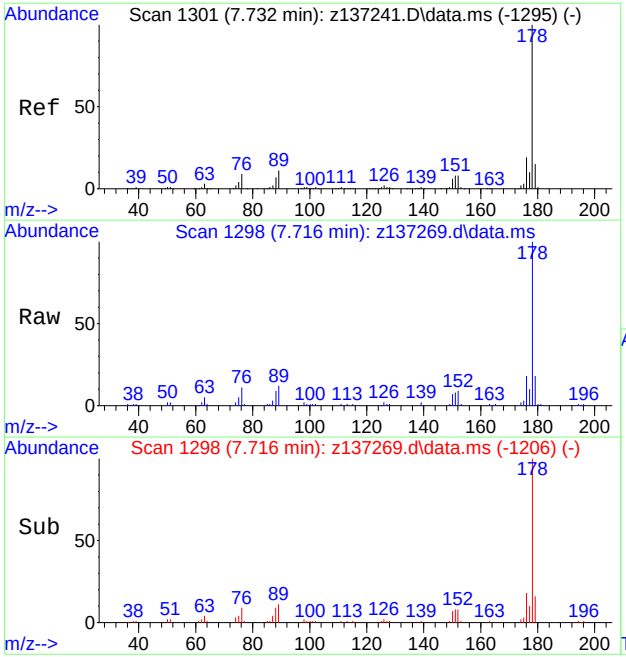


#77
Phenanthrene
Concen: 39.05 ppm
RT: 7.663 min Scan# 1288
Delta R.T. -0.005 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:178 Resp: 274985

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	44.7
176	19.4	0.0	49.0

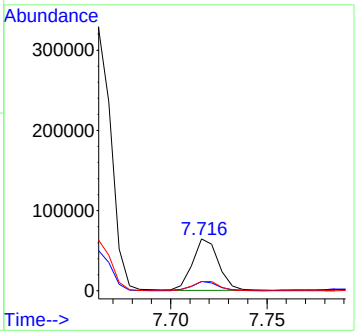


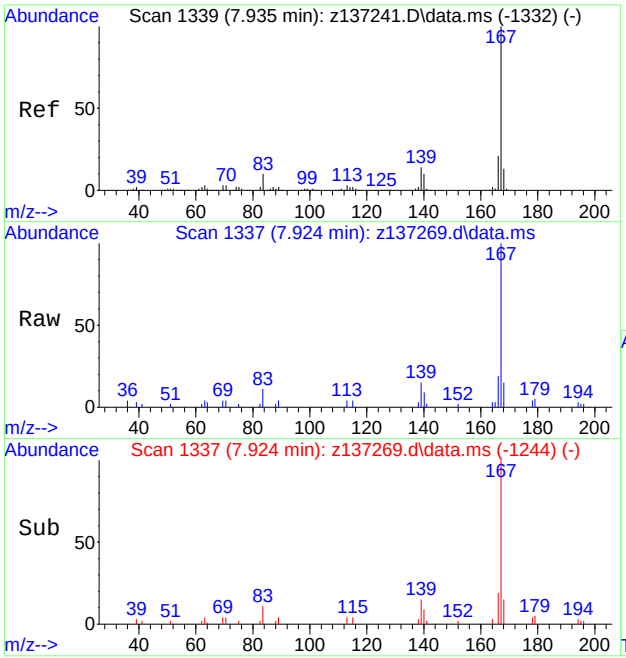


#78
Anthracene
Concen: 8.67 ppm
RT: 7.716 min Scan# 1298
Delta R.T. -0.011 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:178 Resp: 60880

Ion	Ratio	Lower	Upper
178	100		
179	17.1	0.0	44.9
176	18.4	0.0	48.7

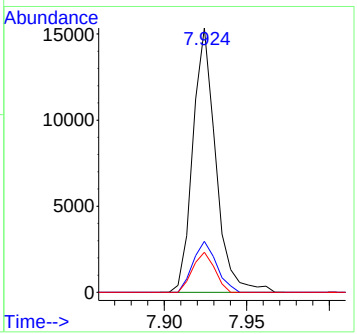


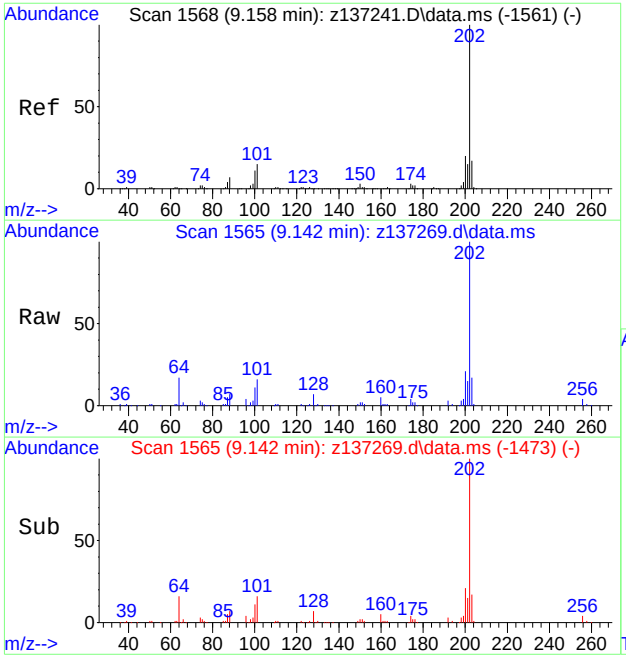


#79
Carbazole
Concen: 2.11 ppm
RT: 7.924 min Scan# 1337
Delta R.T. -0.005 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:167 Resp: 14811

Ion	Ratio	Lower	Upper
167	100		
166	19.3	0.0	51.1
139	15.1	0.0	43.4

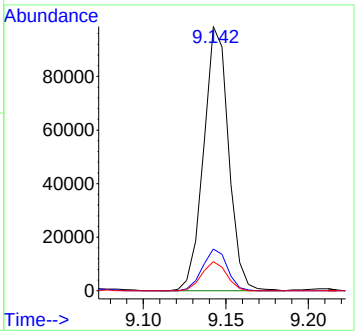


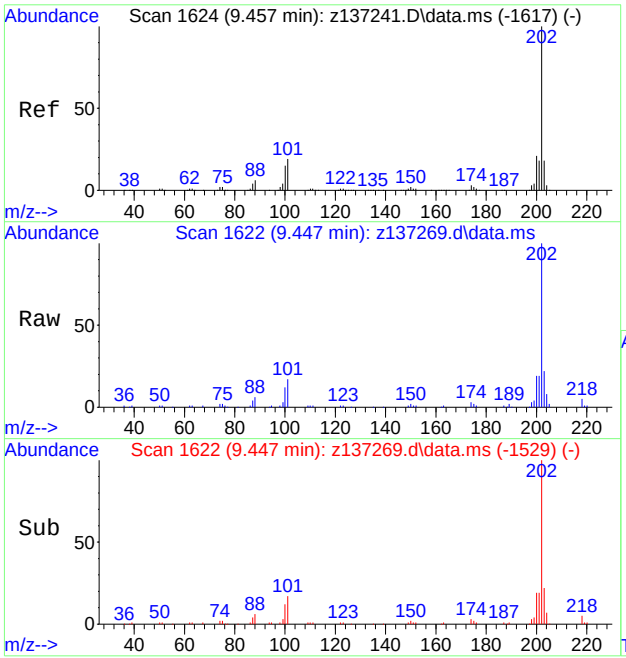


#81
Fluoranthene
Concen: 13.51 ppm
RT: 9.142 min Scan# 1565
Delta R.T. -0.011 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:202 Resp: 103566

Ion	Ratio	Lower	Upper
202	100		
101	15.8	0.0	45.3
100	11.1	0.0	40.9

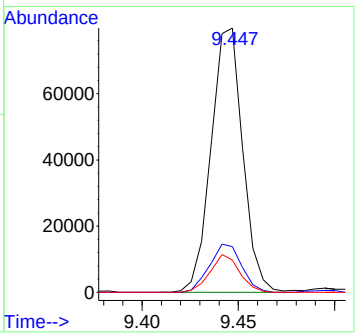


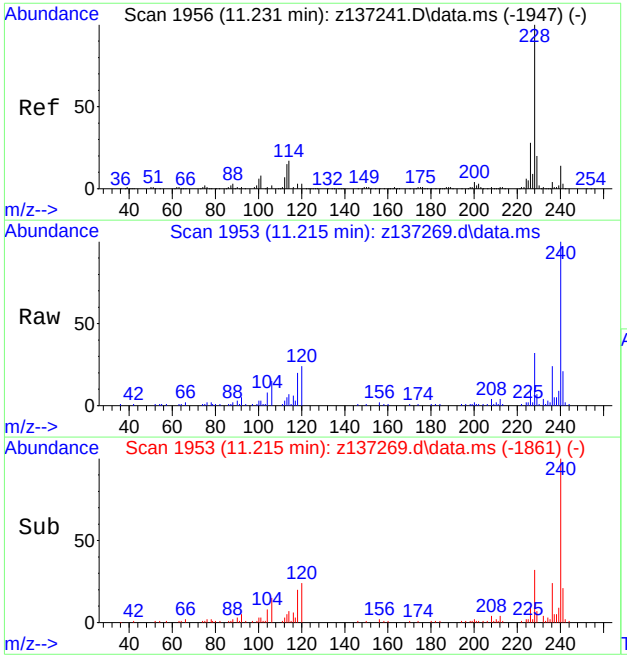


#84
Pyrene
Concen: 10.69 ppm
RT: 9.447 min Scan# 1622
Delta R.T. -0.005 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:202 Resp: 91603

Ion	Ratio	Lower	Upper
202	100		
101	17.3	0.0	47.8
100	12.3	0.0	44.2

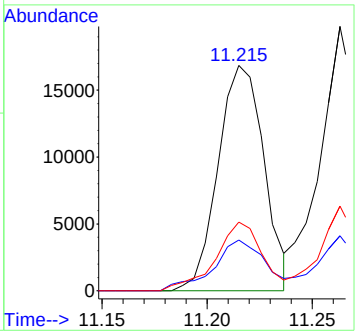


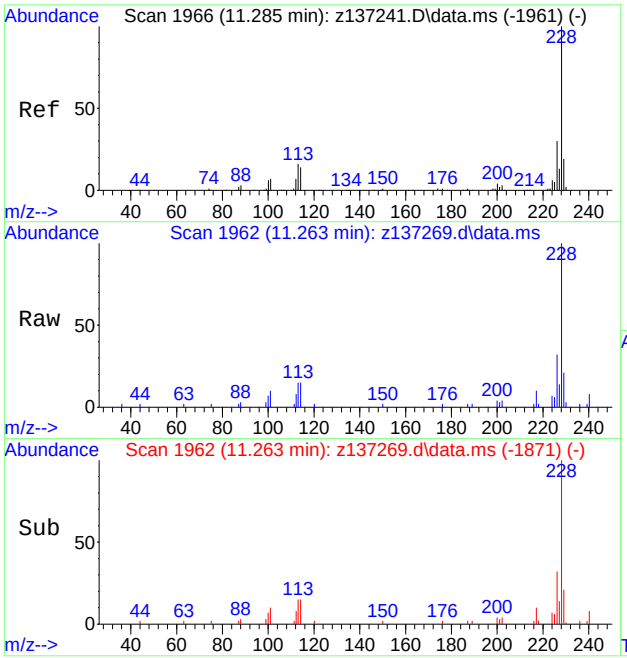


#87
Benzo[a]anthracene
Concen: 3.22 ppm
RT: 11.215 min Scan# 1953
Delta R.T. -0.011 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:228 Resp: 25678

Ion	Ratio	Lower	Upper
228	100		
229	21.6	0.0	49.8
226	30.7	0.0	56.7

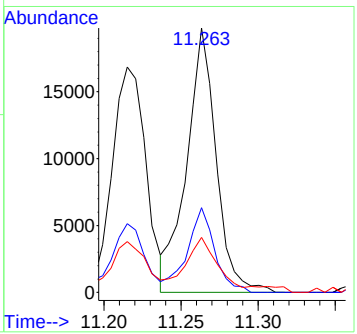


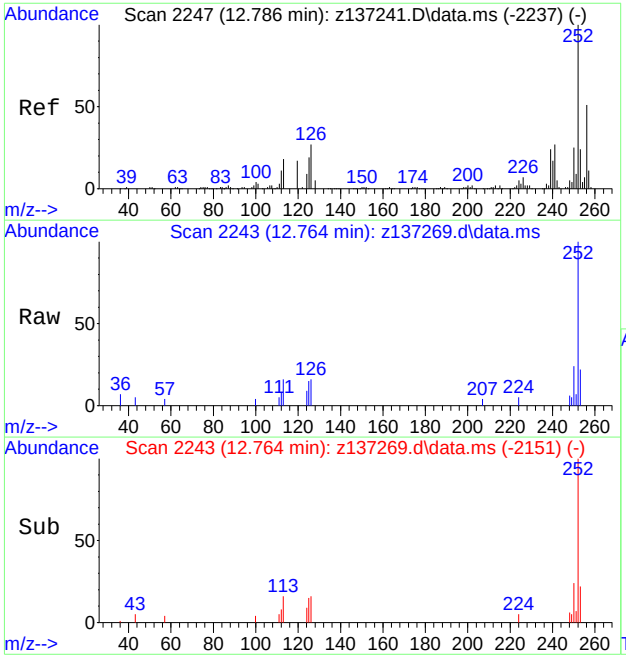


#89
Chrysene
Concen: 3.39 ppm
RT: 11.263 min Scan# 1962
Delta R.T. -0.016 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:228 Resp: 26354

Ion	Ratio	Lower	Upper
228	100		
226	32.3	0.0	59.5
229	18.8	0.0	49.0

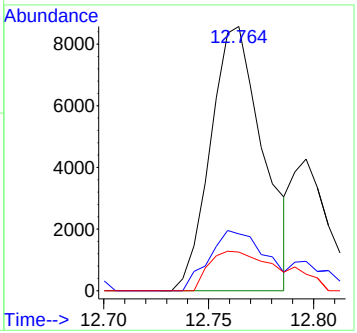


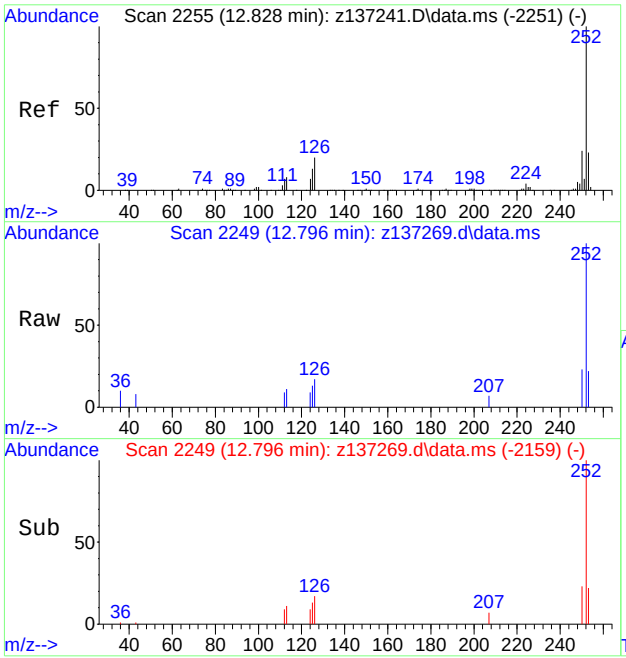


#93
Benzo[b]fluoranthene
Concen: 1.90 ppm
RT: 12.764 min Scan# 2243
Delta R.T. -0.011 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:252 Resp: 14874

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	54.0
125	13.5	0.0	48.3

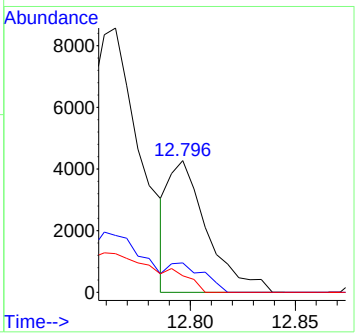


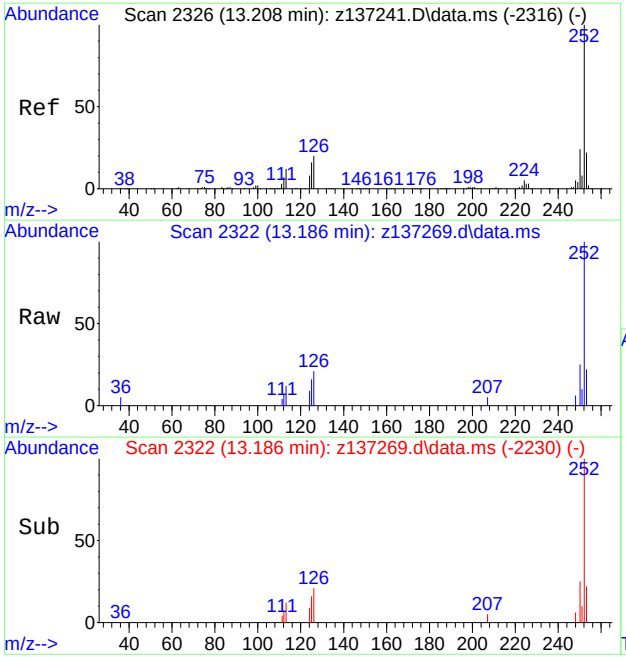


#94
Benzo[k]fluoranthene
Concen: 0.78 ppm
RT: 12.796 min Scan# 2249
Delta R.T. -0.021 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:252 Resp: 5464

Ion	Ratio	Lower	Upper
252	100		
253	23.8	0.0	51.7
125	8.6	0.0	44.4

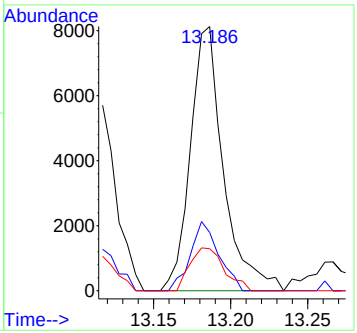


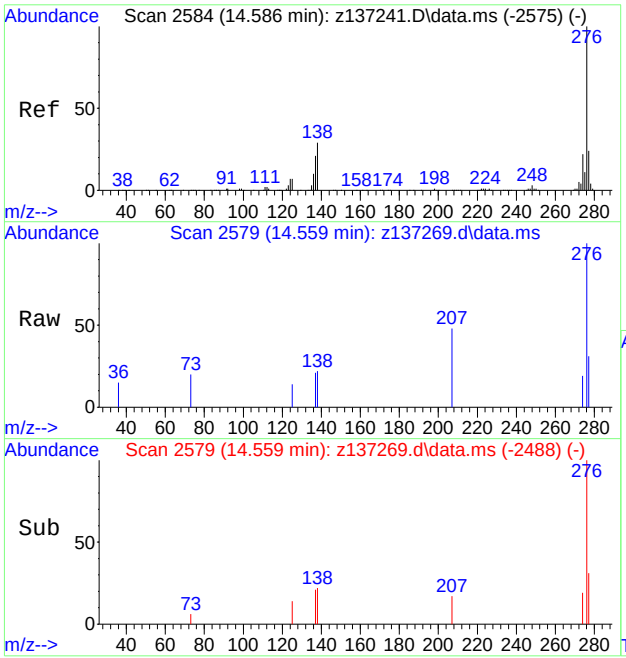


#95
Benzo[a]pyrene
Concen: 1.89 ppm
RT: 13.186 min Scan# 2322
Delta R.T. -0.011 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:252 Resp: 12128

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9
125	15.9	0.0	45.6

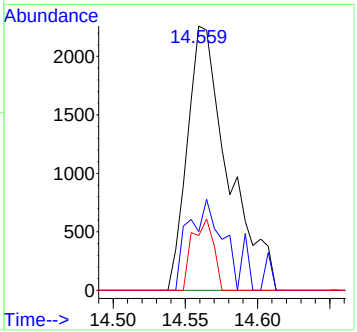


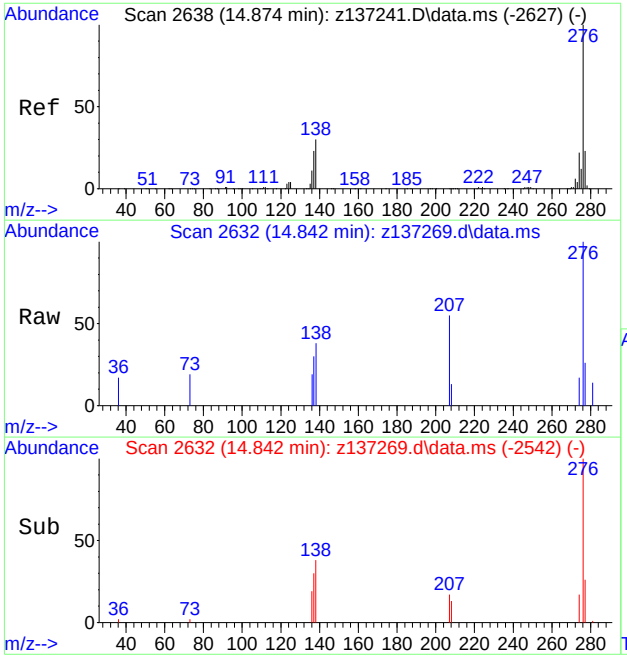


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.74 ppm
RT: 14.559 min Scan# 2579
Delta R.T. -0.016 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:276 Resp: 4438

Ion	Ratio	Lower	Upper
276	100		
138	22.1	0.0	56.2
137	20.7	0.0	50.0

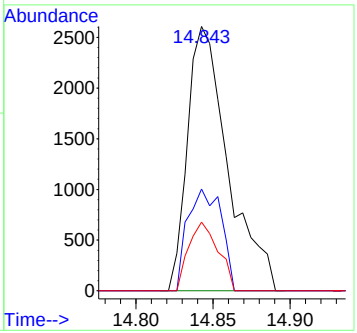




#100
Benzo[g,h,i]perylene
Concen: 0.84 ppm
RT: 14.842 min Scan# 2632
Delta R.T. -0.021 min
Lab File: z137269.d
Acq: 25 Apr 2019 10:03 pm

Tgt Ion:276 Resp: 4771

Ion	Ratio	Lower	Upper
276	100		
138	38.4	0.2	60.2
277	26.0	0.0	53.7



Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/25/19 14:42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86747.D
Acq On : 19 Apr 2019 5:33 am
Operator : carolb
Sample : jc86406-4
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 19 12:46:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	784993	40.00	ppm	-0.16
24) Naphthalene-d8	5.702	136	2438892	40.00	ppm	-0.17
47) Acenaphthene-d10	7.141	164	1019075	40.00	ppm	-0.17
69) Phenanthrene-d10	8.403	188	1671041	40.00	ppm	-0.20
83) Chrysene-d12	11.666	240	1442964	40.00	ppm	-0.23
91) Perylene-d12	13.671	264	1399710	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4a	4.675	152	784993	40.00	ppm	-0.16
103) Naphthalene-d8a	5.702	136	2438892	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.141	164	1019075	40.00	ppm	-0.17
108) Chrysene-d12a	11.666	240	1442964	40.00	ppm	0.05
110) Phenanthrene-d10a	8.403	188	1671041	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	842625	21.33	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 42.66%			
8) Phenol-d5	4.434	99	1078547	24.91	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 49.82%			
25) Nitrobenzene-d5	5.124	82	915245	27.92	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 55.84%			
51) 2-Fluorobiphenyl	6.590	172	1272788	36.08	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 72.16%#			
73) 2,4,6-Tribromophenol	7.793	330	161247	27.51	ppm	-0.18
Spiked Amount 50.000	Range 12 - 68		Recovery = 55.02%			
85) Terphenyl-d14	10.216	244	911815	25.39	ppm	-0.24
Spiked Amount 50.000	Range 16 - 65		Recovery = 50.78%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.445	94	149278	3.30	ppm	99
19) 2-Methylphenol	4.921	108	14554	0.63	ppm	96
21) 3&4-Methylphenol	5.049	108	73496	3.15	ppm	89
30) 2,4-Dimethylphenol	5.467	107	14033	0.60	ppm	87
38) Naphthalene	5.723	128	1931358	33.10	ppm	99
44) 2-Methylnaphthalene	6.285	141	246230	6.64	ppm	94
53) Biphenyl	6.670	154	78359	1.92	ppm	98
56) Acenaphthylene	7.023	152	1928523	38.69	ppm	99
59) Acenaphthene	7.162	153	83751	2.86	ppm	97
62) Dibenzofuran	7.307	168	263228	6.52	ppm	94
66) Fluorene	7.585	166	179683	5.19	ppm	99
77) Phenanthrene	8.430	178	2944082	70.73	ppm	100
78) Anthracene	8.478	178	1365116	32.25	ppm	99
79) Carbazole	8.644	167	320432	7.32	ppm	99
81) Fluoranthene	9.740	202	9143147	154.55	ppm	99
84) Pyrene	10.013	202	7723853	137.57	ppm	97
87) Benzo[a]anthracene	11.650	228	7081627	130.66	ppm	96
89) Chrysene	11.714	228	6211272	161.55	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86747.D
Acq On : 19 Apr 2019 5:33 am
Operator : carolb
Sample : jc86406-4
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 19 12:46:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

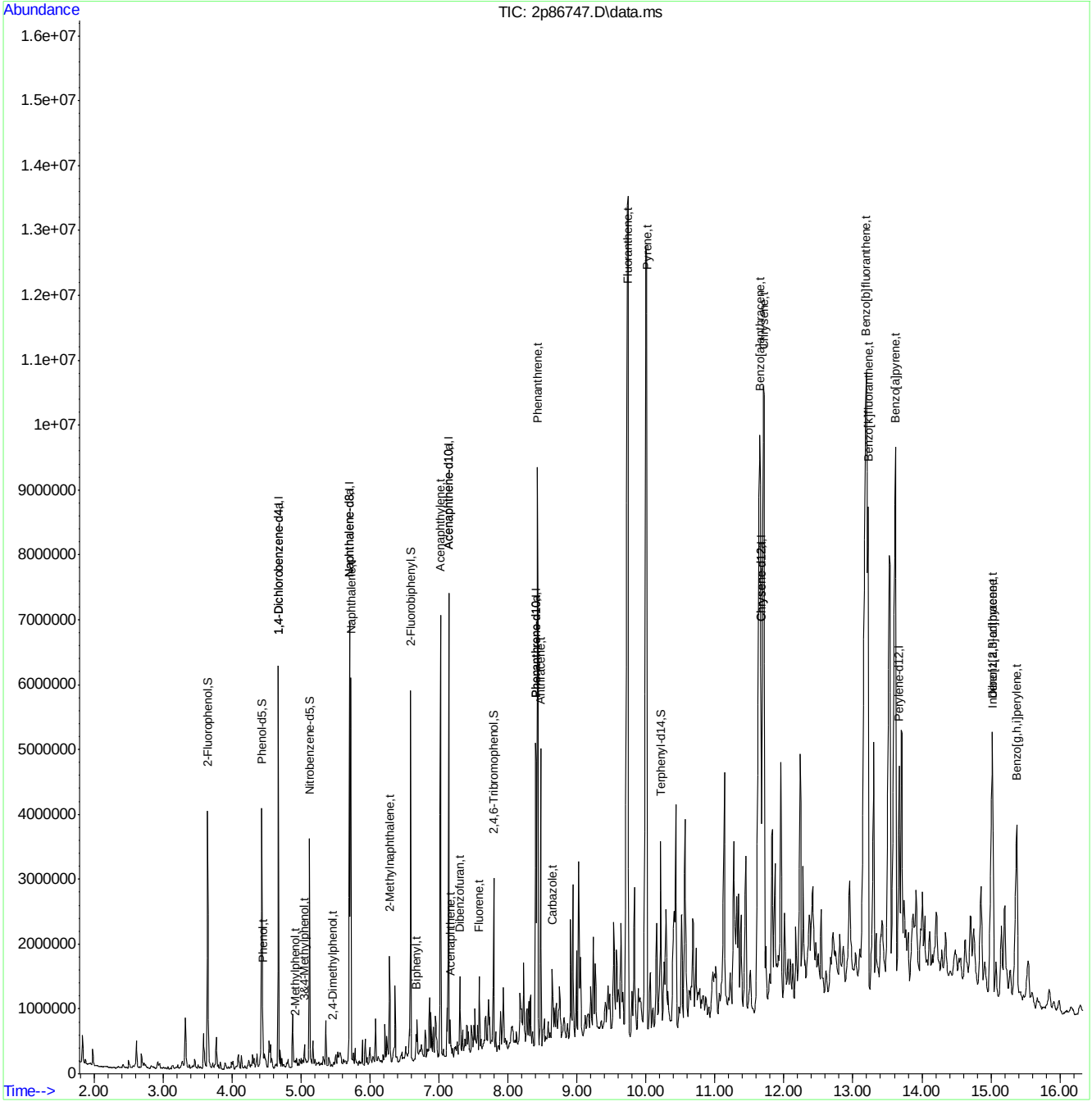
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) Benzo[b]fluoranthene	13.190	252	11304798m	246.48	ppm	
94) Benzo[k]fluoranthene	13.222	252	1937243m	51.66	ppm	
95) Benzo[a]pyrene	13.613	252	5987252	155.33	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.019	276	2722132	61.96	ppm	98
98) Dibenz[a,h]anthracene	15.030	278	982579	28.71	ppm	94
100) Benzo[g,h,i]perylene	15.378	276	1977736	56.87	ppm	98

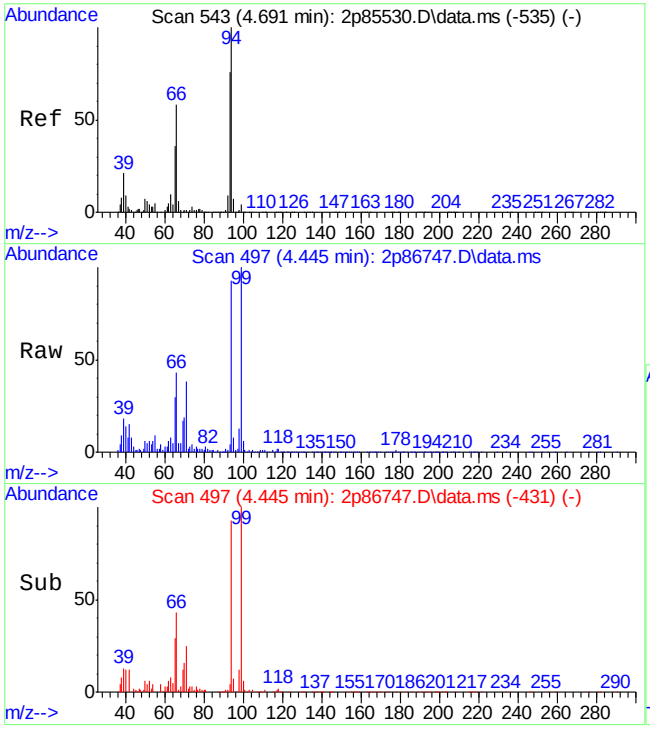
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86747.D
Acq On : 19 Apr 2019 5:33 am
Operator : carolb
Sample : jc86406-4
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 19 12:46:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

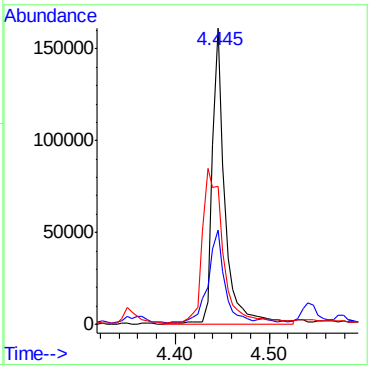


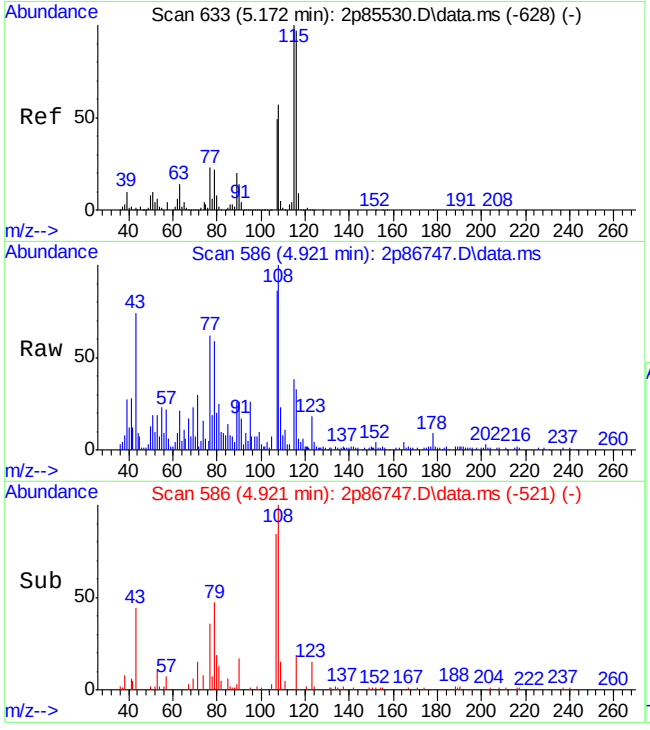


#9
Phenol
Concen: 3.30 ppm
RT: 4.445 min Scan# 497
Delta R.T. -0.145 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion: 94 Resp: 149278

Ion	Ratio	Lower	Upper
94	100		
65	31.1	1.5	61.5
66	46.1	15.3	75.3

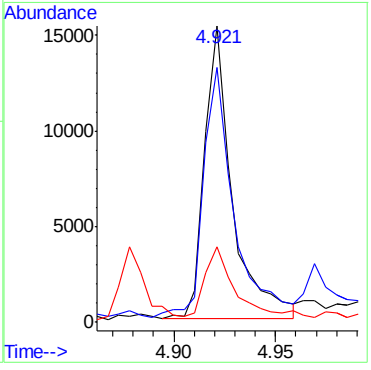


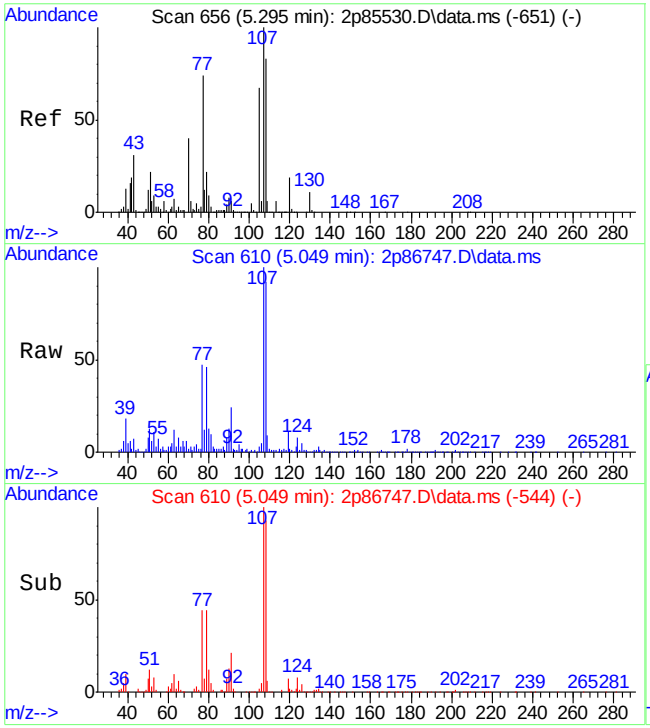


#19
2-Methylphenol
Concen: 0.63 ppm
RT: 4.921 min Scan# 586
Delta R.T. -0.150 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:108 Resp: 14554

Ion	Ratio	Lower	Upper
108	100		
107	84.3	58.4	118.4
90	21.7	0.0	53.9

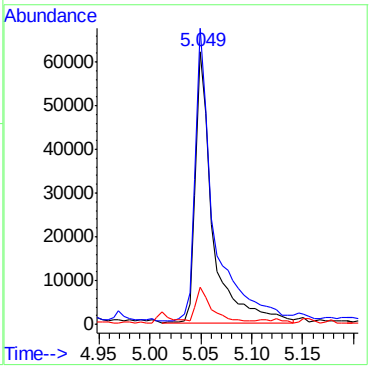


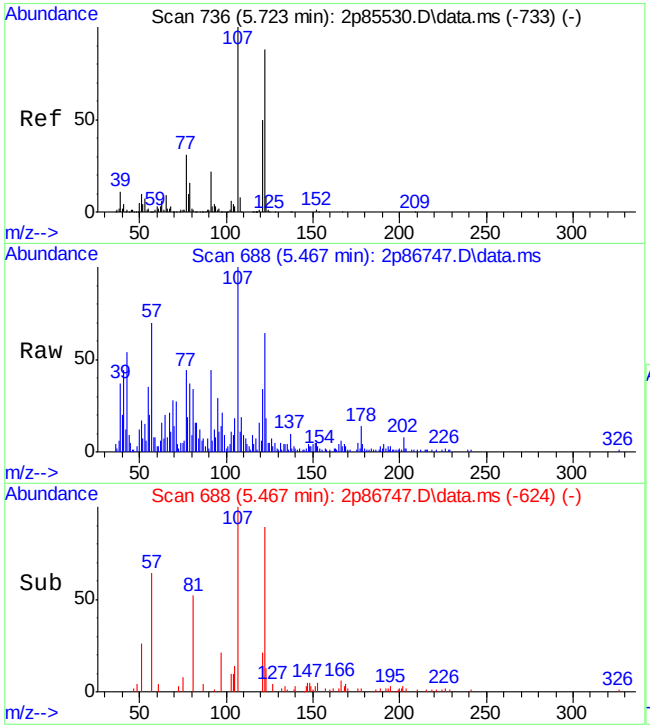


#21
3&4-Methylphenol
Concen: 3.15 ppm
RT: 5.049 min Scan# 610
Delta R.T. -0.150 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:108 Resp: 73496

Ion	Ratio	Lower	Upper
108	100		
107	107.4	90.6	150.6
90	11.1	0.0	39.9

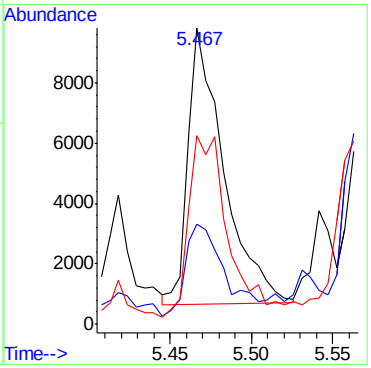


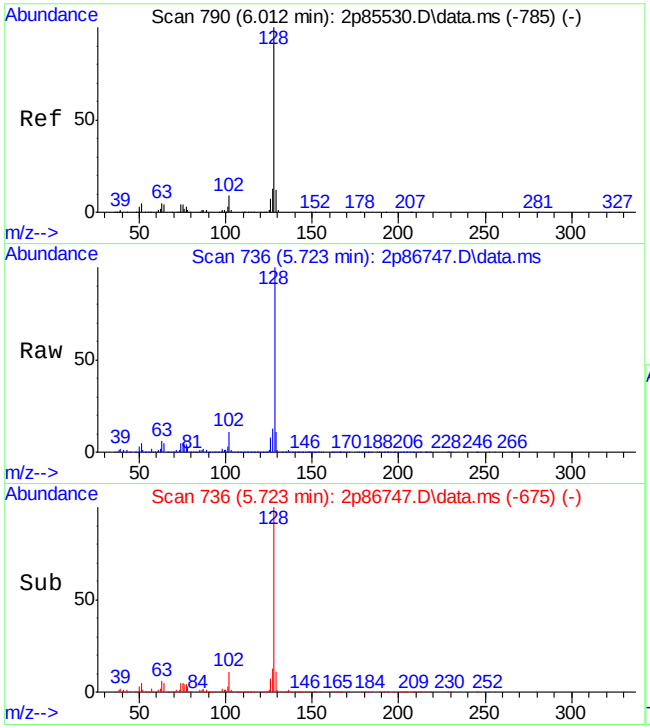


#30
2,4-Dimethylphenol
Concen: 0.60 ppm
RT: 5.467 min Scan# 688
Delta R.T. -0.155 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:107 Resp: 14033

Ion	Ratio	Lower	Upper
107	100		
121	30.2	13.3	73.3
122	64.7	41.5	101.5

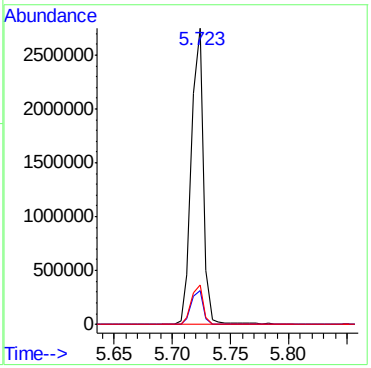


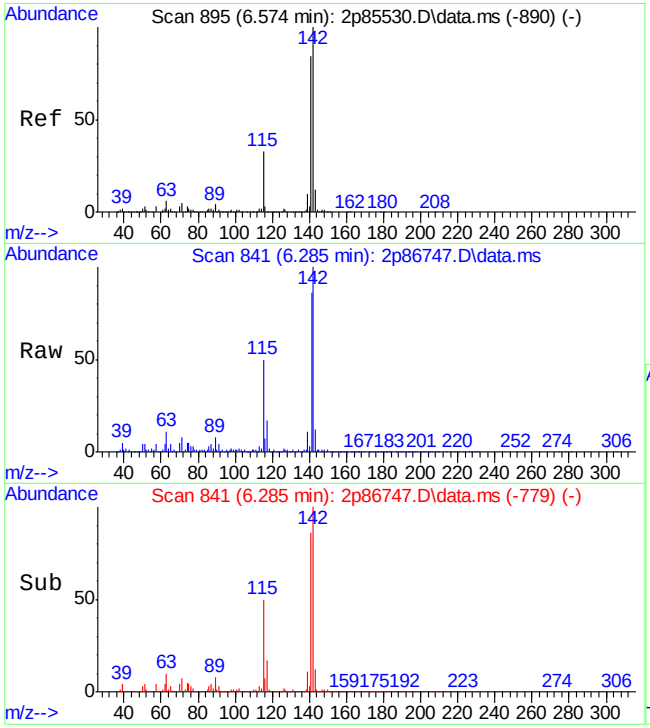


#38
Naphthalene
Concen: 33.10 ppm
RT: 5.723 min Scan# 736
Delta R.T. -0.172 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:128 Resp: 1931358

Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	41.2
127	13.4	0.0	43.7

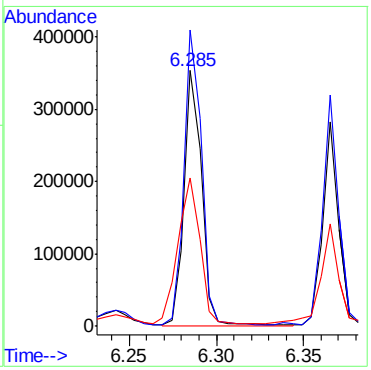


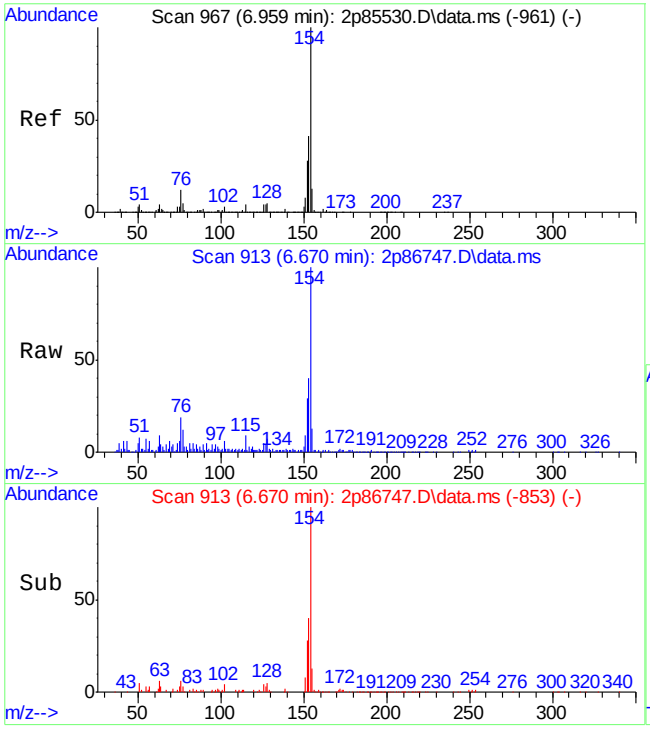


#44
2-Methylnaphthalene
Concen: 6.64 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:141 Resp: 246230

Ion	Ratio	Lower	Upper
141	100		
142	115.9	90.7	150.7
115	55.8	18.7	78.7

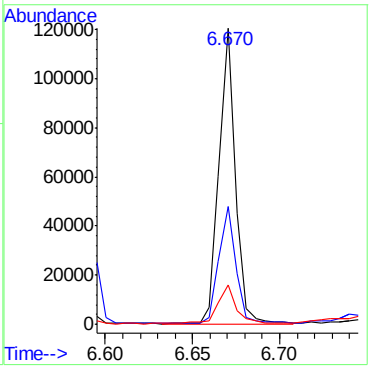


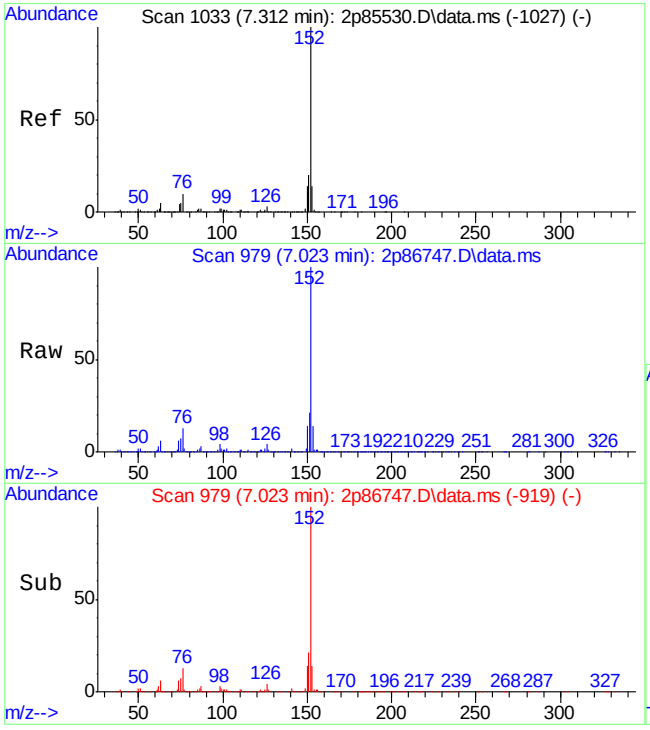


#53
Biphenyl
Concen: 1.92 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:154 Resp: 78359

Ion	Ratio	Lower	Upper
154	100		
153	39.3	11.1	71.1
155	13.0	0.0	43.4

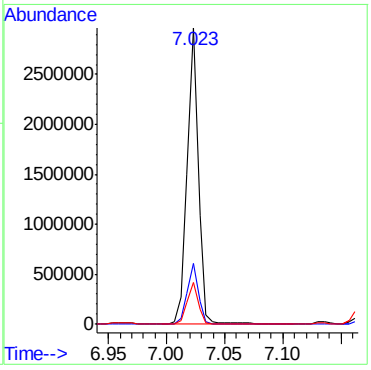


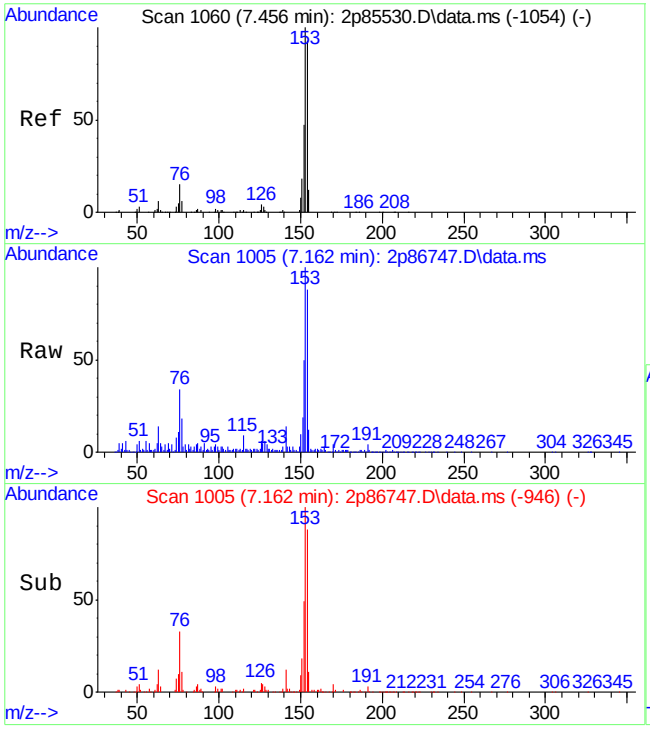


#56
Acenaphthylene
Concen: 38.69 ppm
RT: 7.023 min Scan# 979
Delta R.T. -0.177 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:152 Resp: 1928523

Ion	Ratio	Lower	Upper
152	100		
151	20.5	0.0	50.3
153	13.9	0.0	43.6

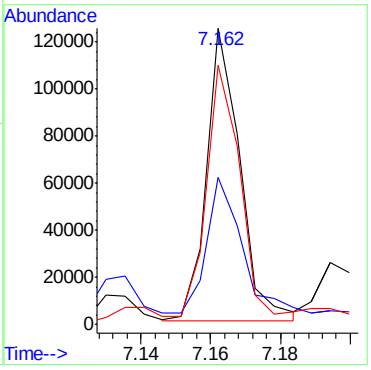


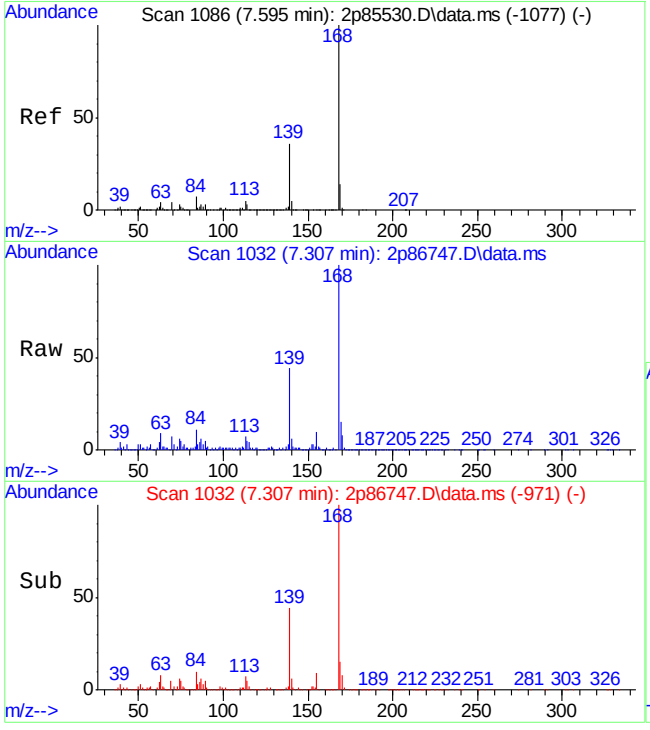


#59
Acenaphthene
Concen: 2.86 ppm
RT: 7.162 min Scan# 1005
Delta R.T. -0.182 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:153 Resp: 83751

Ion	Ratio	Lower	Upper
153	100		
152	46.1	17.8	77.8
154	86.8	59.8	119.8

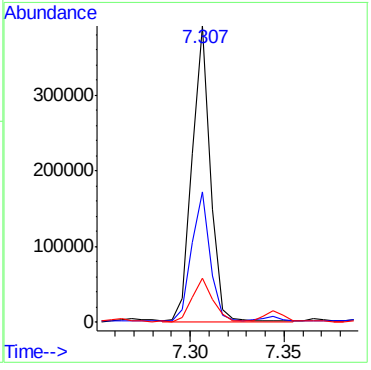


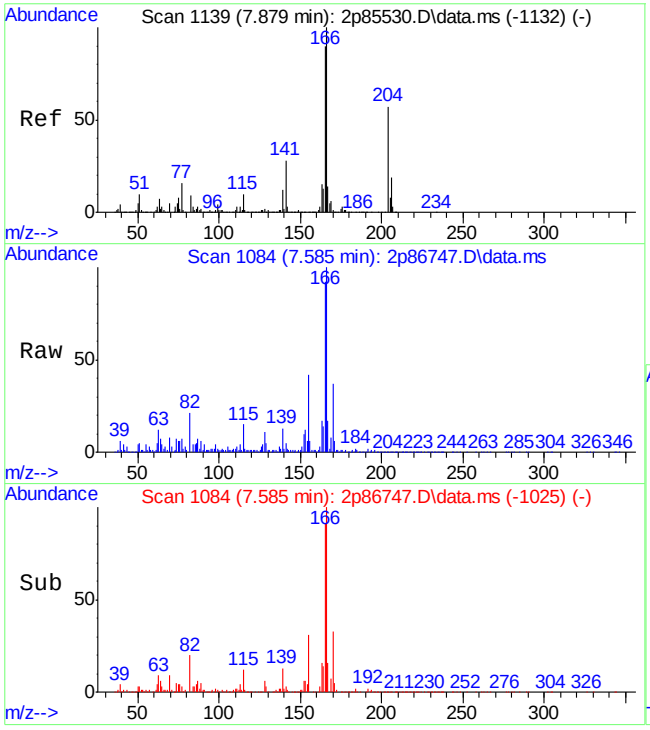


#62
Dibenzofuran
Concen: 6.52 ppm
RT: 7.307 min Scan# 1032
Delta R.T. -0.176 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:168 Resp: 263228

Ion	Ratio	Lower	Upper
168	100		
139	43.8	9.2	69.2
169	14.6	0.0	44.1

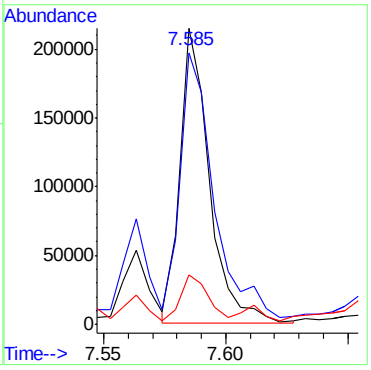


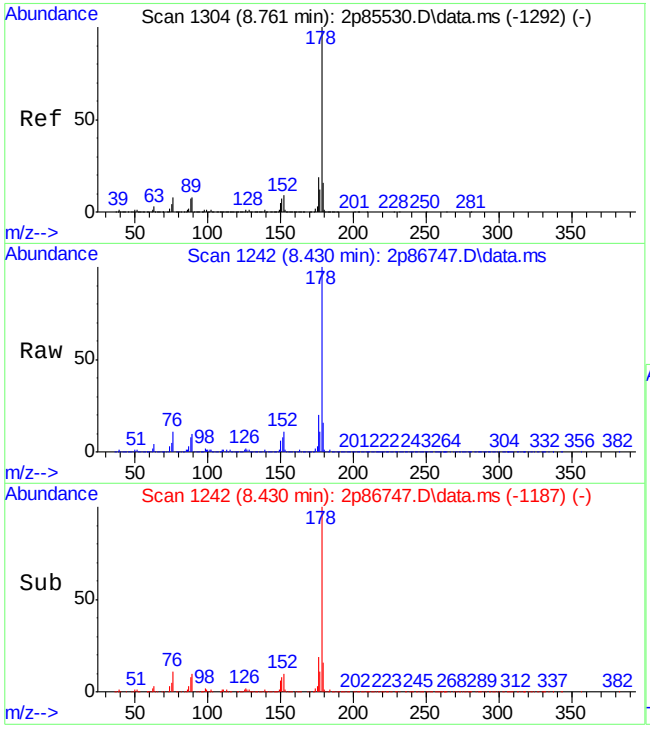


#66
Fluorene
Concen: 5.19 ppm
RT: 7.585 min Scan# 1084
Delta R.T. -0.182 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:166 Resp: 179683

Ion	Ratio	Lower	Upper
166	100		
165	90.4	60.6	120.6
167	15.3	0.0	44.1

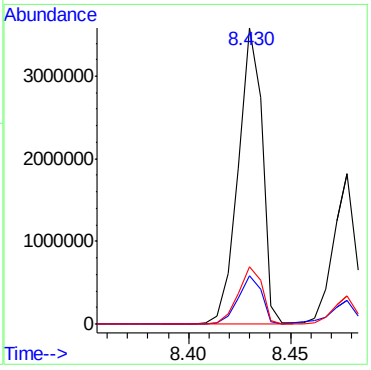


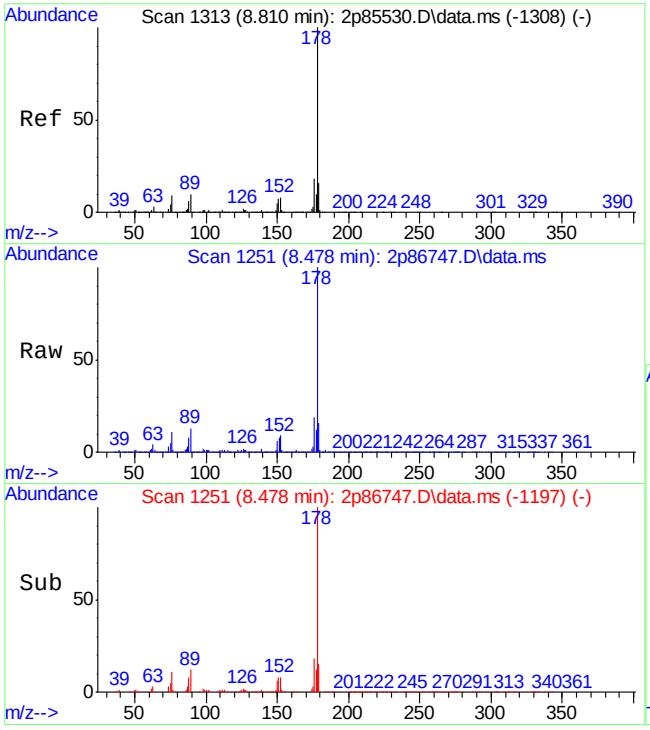


#77
Phenanthrene
Concen: 70.73 ppm
RT: 8.430 min Scan# 1242
Delta R.T. -0.203 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:178 Resp: 2944082

Ion	Ratio	Lower	Upper
178	100		
179	16.0	0.0	46.0
176	19.5	0.0	49.2

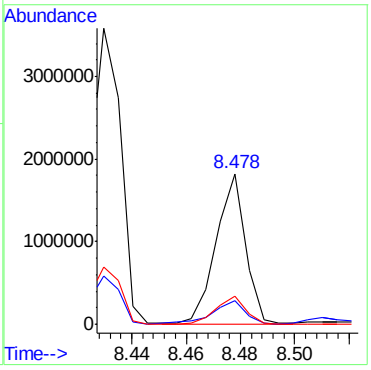


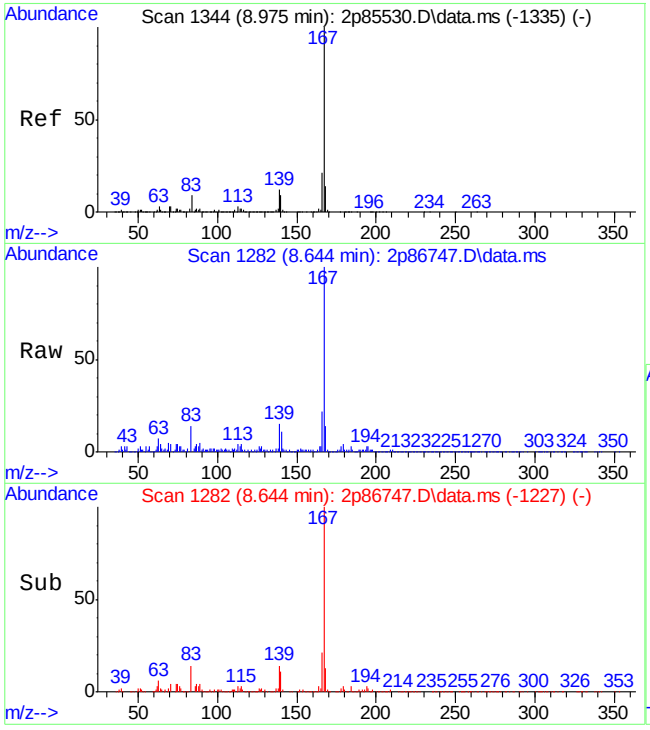


#78
Anthracene
Concen: 32.25 ppm
RT: 8.478 min Scan# 1251
Delta R.T. -0.209 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:178 Resp: 1365116

Ion	Ratio	Lower	Upper
178	100		
179	15.0	0.0	45.7
176	18.6	0.0	48.6

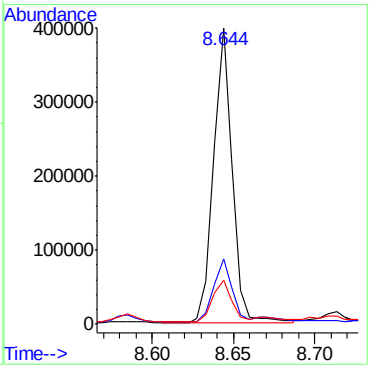


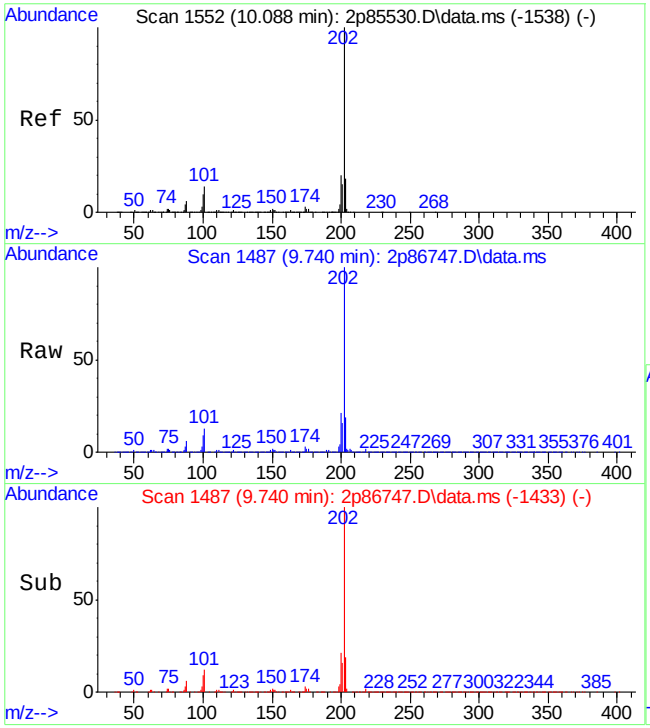


#79
Carbazole
Concen: 7.32 ppm
RT: 8.644 min Scan# 1282
Delta R.T. -0.208 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:167 Resp: 320432

Ion	Ratio	Lower	Upper
167	100		
166	21.1	0.0	50.8
139	13.6	0.0	44.2

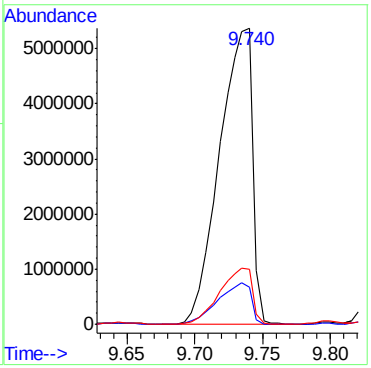


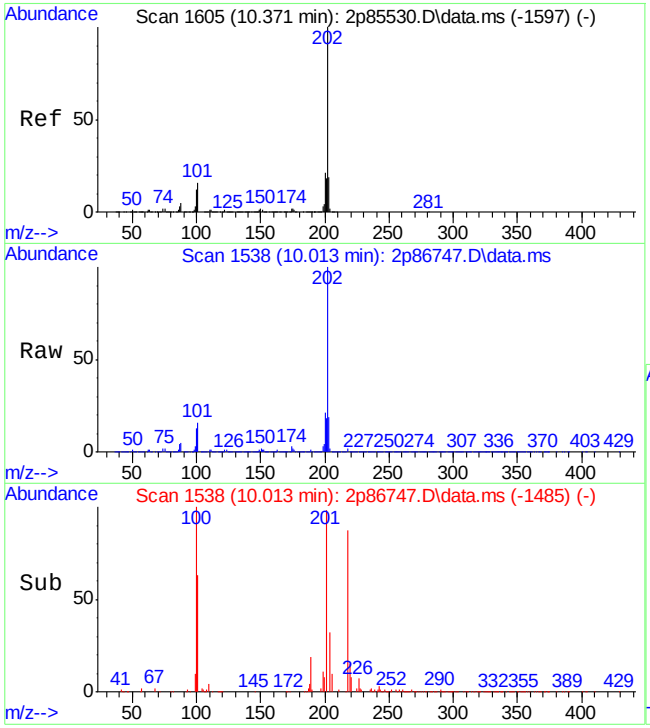


#81
Fluoranthene
Concen: 154.55 ppm
RT: 9.740 min Scan# 1487
Delta R.T. -0.209 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:202 Resp: 9143147

Ion	Ratio	Lower	Upper
202	100		
101	12.6	0.0	43.7
203	18.7	0.0	48.6

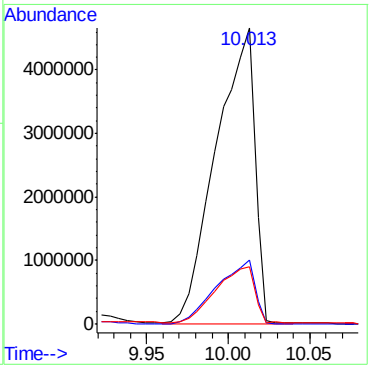


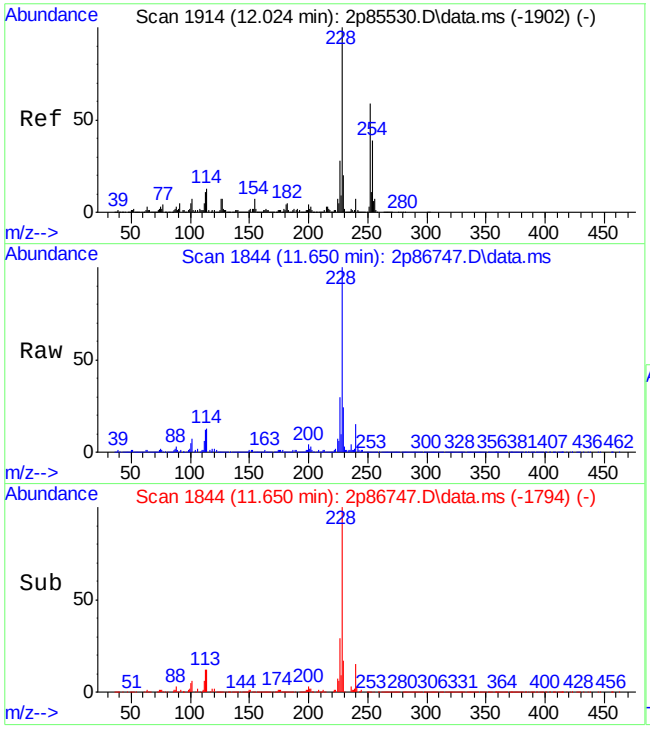


#84
Pyrene
Concen: 137.57 ppm
RT: 10.013 min Scan# 1538
Delta R.T. -0.219 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:202 Resp: 7723853

Ion	Ratio	Lower	Upper
202	100		
200	21.5	0.0	50.1
203	18.9	0.0	47.4

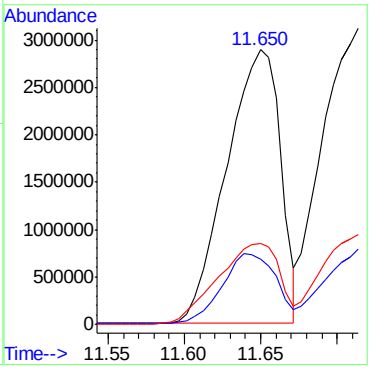


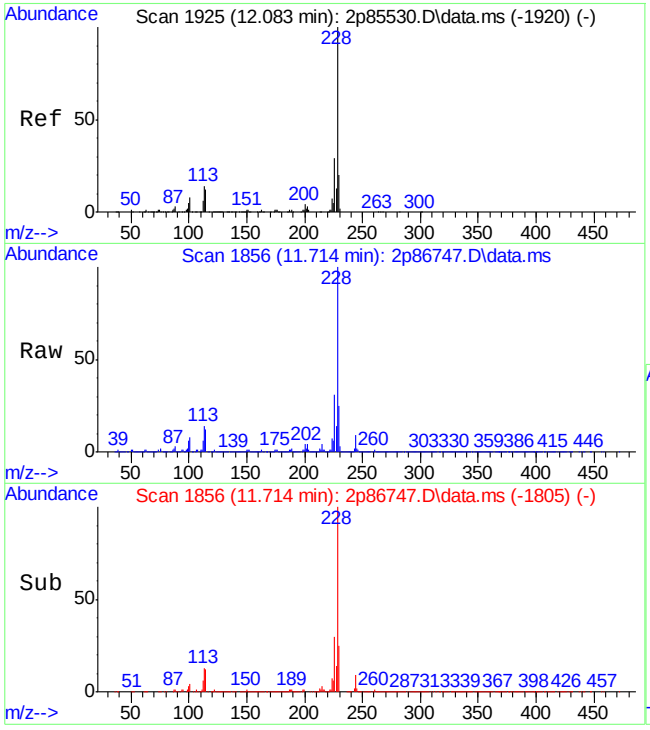


#87
Benzo[a]anthracene
Concen: 130.66 ppm
RT: 11.650 min Scan# 1844
Delta R.T. -0.230 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:228 Resp: 7081627

Ion	Ratio	Lower	Upper
228	100		
229	23.0	0.0	50.3
226	29.1	0.0	57.9

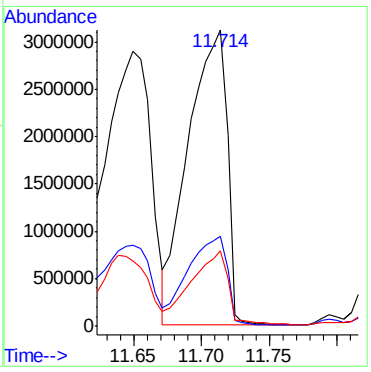


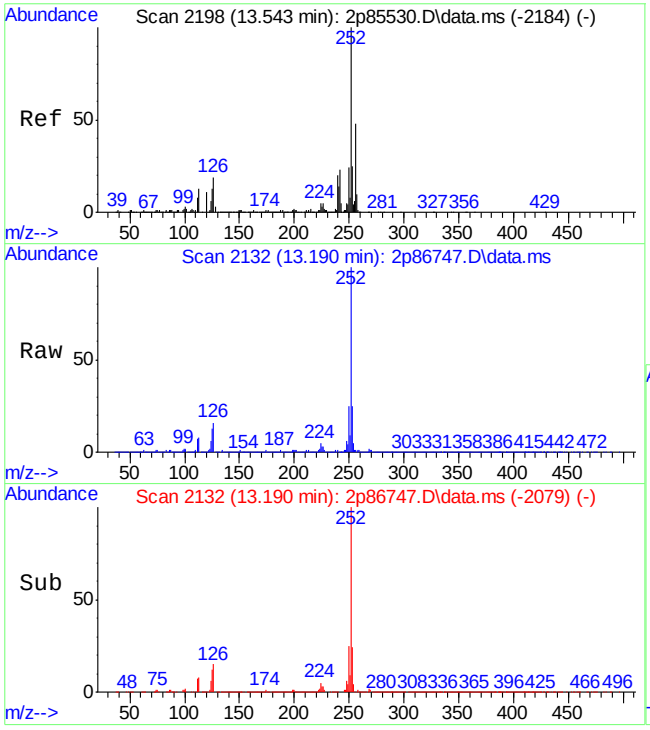


#89
Chrysene
Concen: 161.55 ppm
RT: 11.714 min Scan# 1856
Delta R.T. -0.225 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:228 Resp: 6211272

Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.0	59.2
229	24.9	0.0	50.2

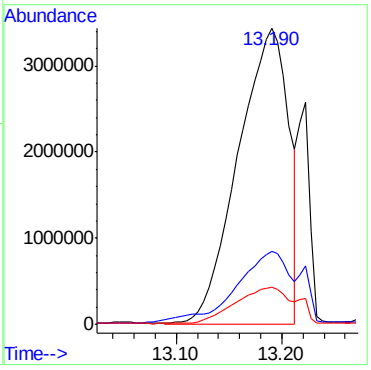


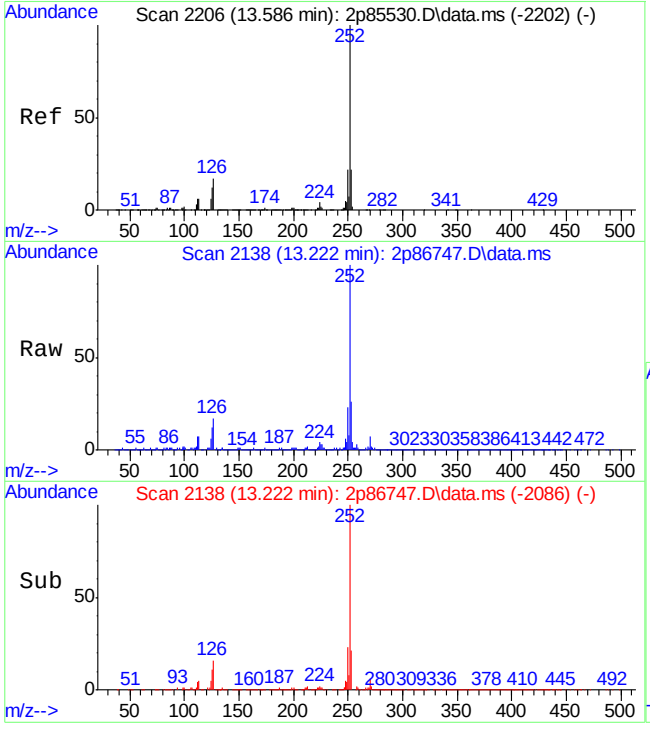


#93
Benzo[b]fluoranthene
Concen: 246.48 ppm m
RT: 13.190 min Scan# 2132
Delta R.T. -0.214 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:252 Resp:11304798

Ion	Ratio	Lower	Upper
252	100		
253	24.5	0.0	54.9
125	12.7	0.0	42.5

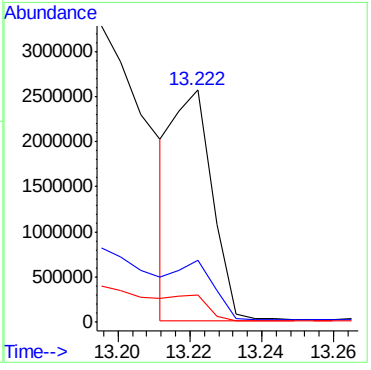


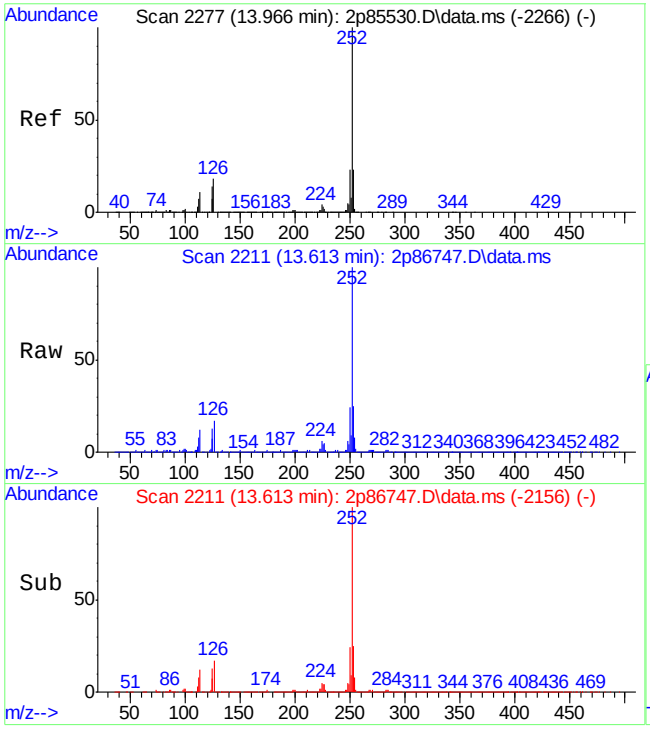


#94
Benzo[k]fluoranthene
Concen: 51.66 ppm m
RT: 13.222 min Scan# 2138
Delta R.T. -0.220 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:252 Resp: 1937243

Ion	Ratio	Lower	Upper
252	100		
253	26.4	0.0	52.4
125	11.5	0.0	40.8

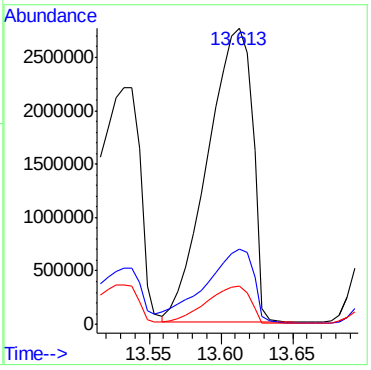


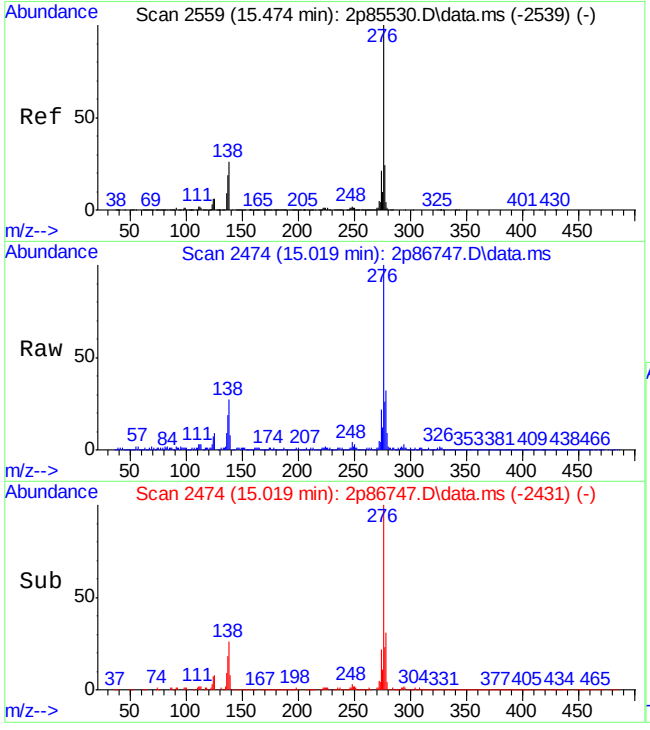


#95
Benzo[a]pyrene
Concen: 155.33 ppm
RT: 13.613 min Scan# 2211
Delta R.T. -0.208 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:252 Resp: 5987252

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.1
125	12.4	0.0	42.5

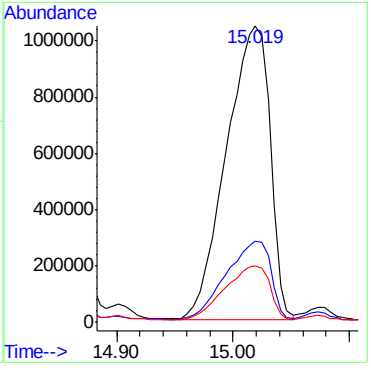


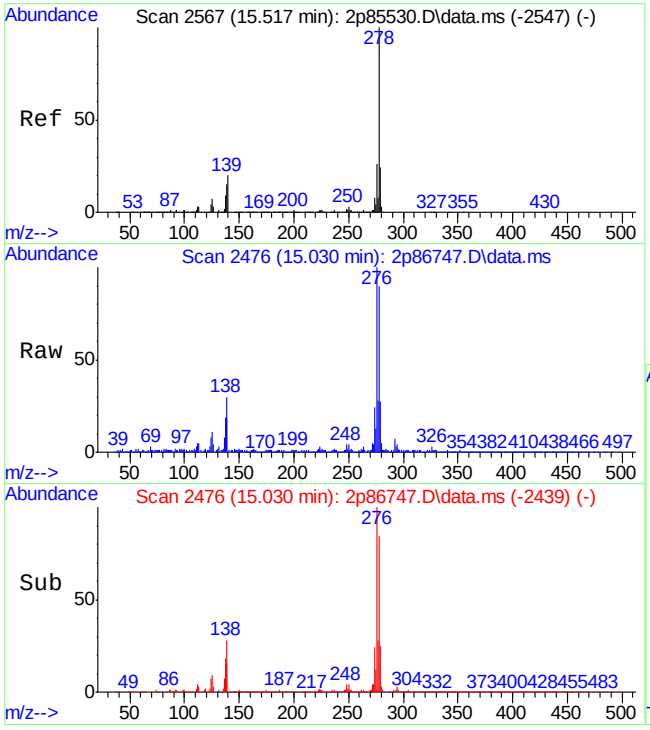


#96
Indeno[1,2,3-cd]pyrene
Concen: 61.96 ppm
RT: 15.019 min Scan# 2474
Delta R.T. -0.273 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:276 Resp: 2722132

Ion	Ratio	Lower	Upper
276	100		
138	26.6	0.0	55.3
137	18.4	0.0	48.5

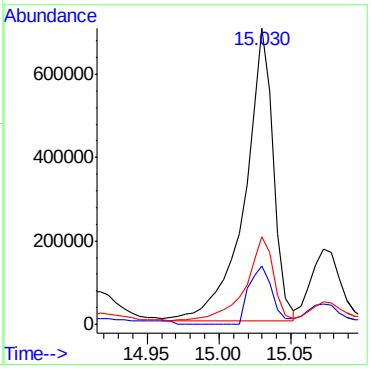


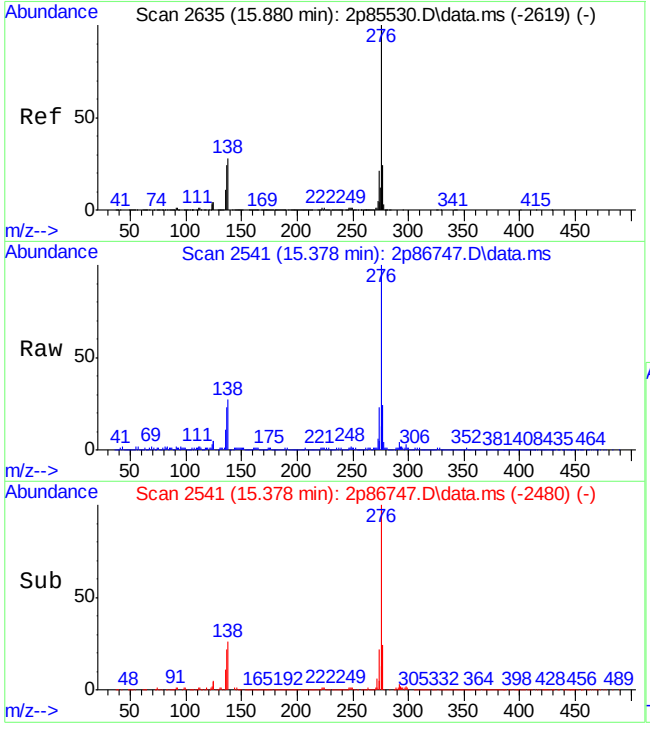


#98
Dibenz[a,h]anthracene
Concen: 28.71 ppm
RT: 15.030 min Scan# 2476
Delta R.T. -0.300 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:278 Resp: 982579

Ion	Ratio	Lower	Upper
278	100		
139	19.0	0.0	50.3
279	28.8	0.0	54.3

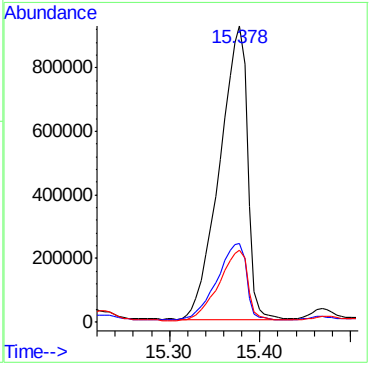




#100
Benzo[g,h,i]perylene
Concen: 56.87 ppm
RT: 15.378 min Scan# 2541
Delta R.T. -0.172 min
Lab File: 2p86747.D
Acq: 19 Apr 2019 5:33 am

Tgt Ion:276 Resp: 1977736

Ion	Ratio	Lower	Upper
276	100		
138	25.9	0.0	57.9
277	24.1	0.0	54.0



Manual Integration Approval Summary

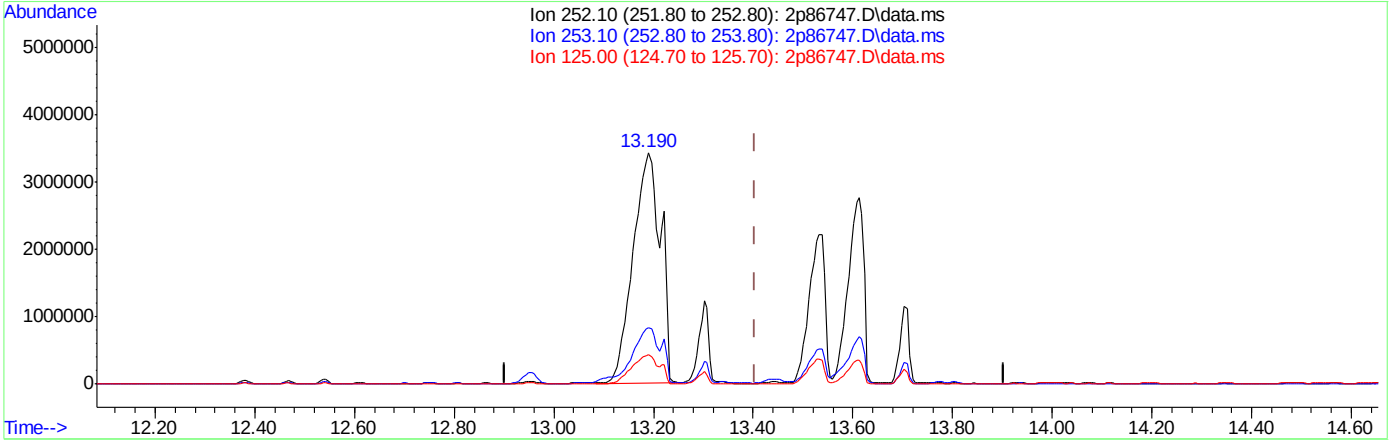
Sample Number:	JC86406-4	**Method:**	SW846 8270D
Lab FileID:	2P86747.D	**Analyst approved:**	04/19/19 12:49 Dipa Patel
Injection Time:	04/19/19 05:33	**Supervisor approved:**	04/25/19 14:42 Nancy Ma

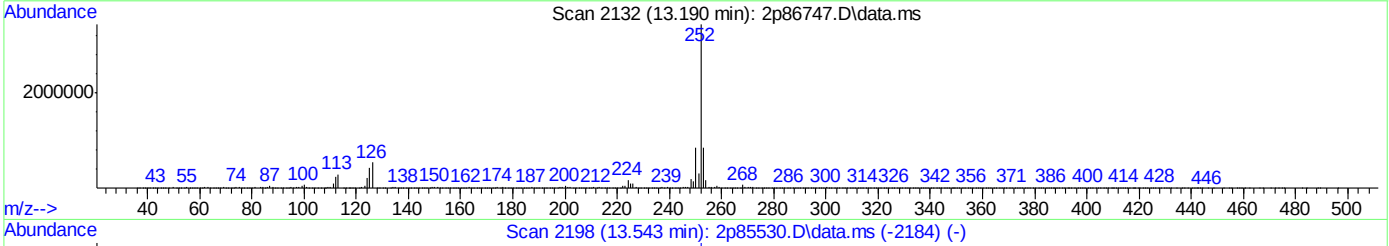
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		13.19	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.22	Overlapping peak

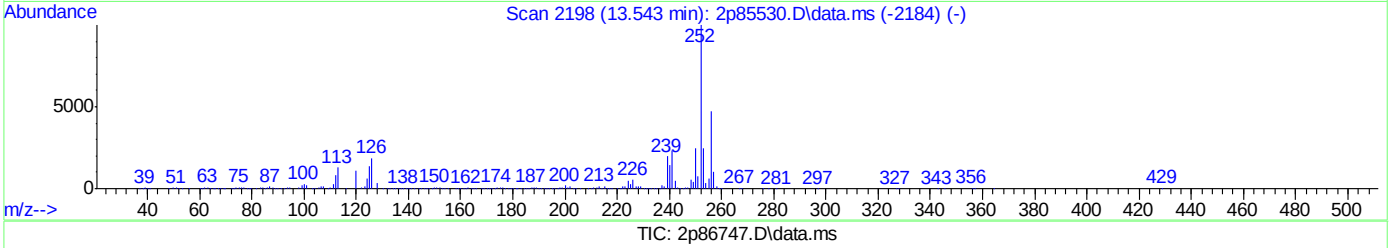
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86747.D
Acq On : 19 Apr 2019 5:33 am
Operator : carolb
Sample : jc86406-4
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 19 11:37:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86747.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.190min (-0.214) 286.85ppm

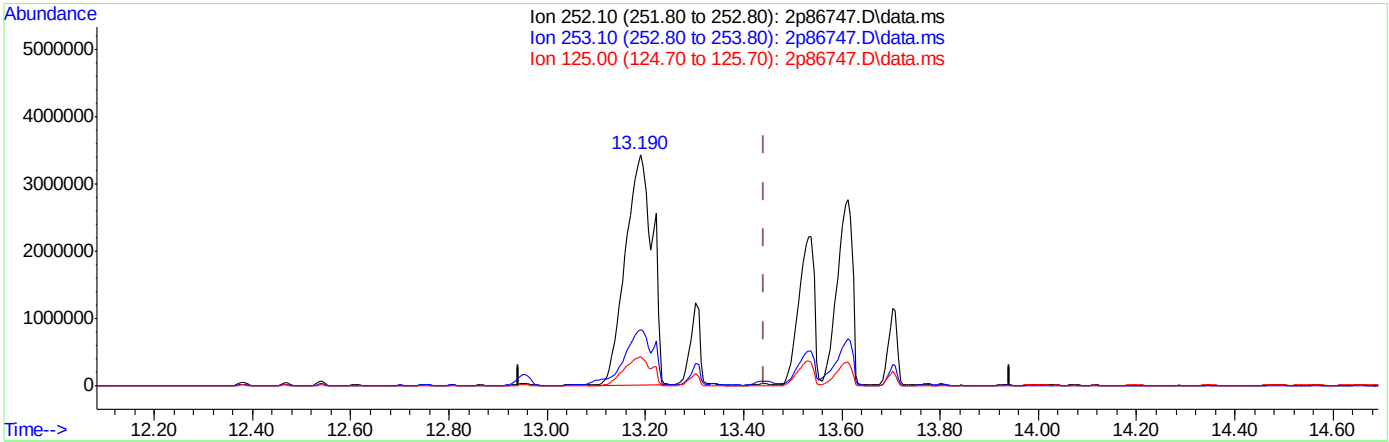
response 13156478

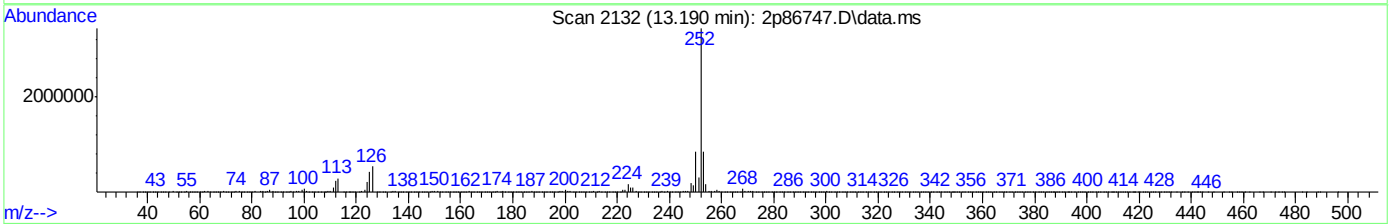
Ion	Exp%	Act%
252.10	100	100
253.10	24.90	23.80
125.00	12.50	12.48
0.00	0.00	0.00

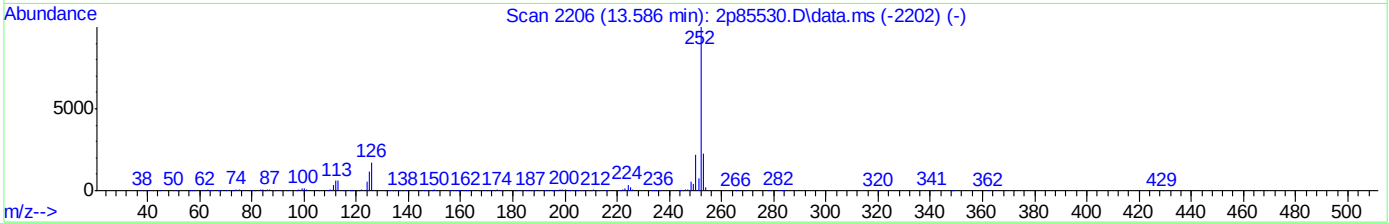
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86747.D
Acq On : 19 Apr 2019 5:33 am
Operator : carolb
Sample : jc86406-4
Misc : op19810,e2p3831,30.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 19 11:37:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86747.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.190min (-0.252) 350.88ppm

response 13158892

Ion	Exp%	Act%
252.10	100	100
253.10	22.40	23.80
125.00	10.80	12.48
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/25/19 14:42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86768.d
Acq On : 22 Apr 2019 6:29 pm
Operator : yujiac
Sample : jc86406-4 Inst : MS2P
Misc : op19810,e2p3832,30.8,,,1,5
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:34:00 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

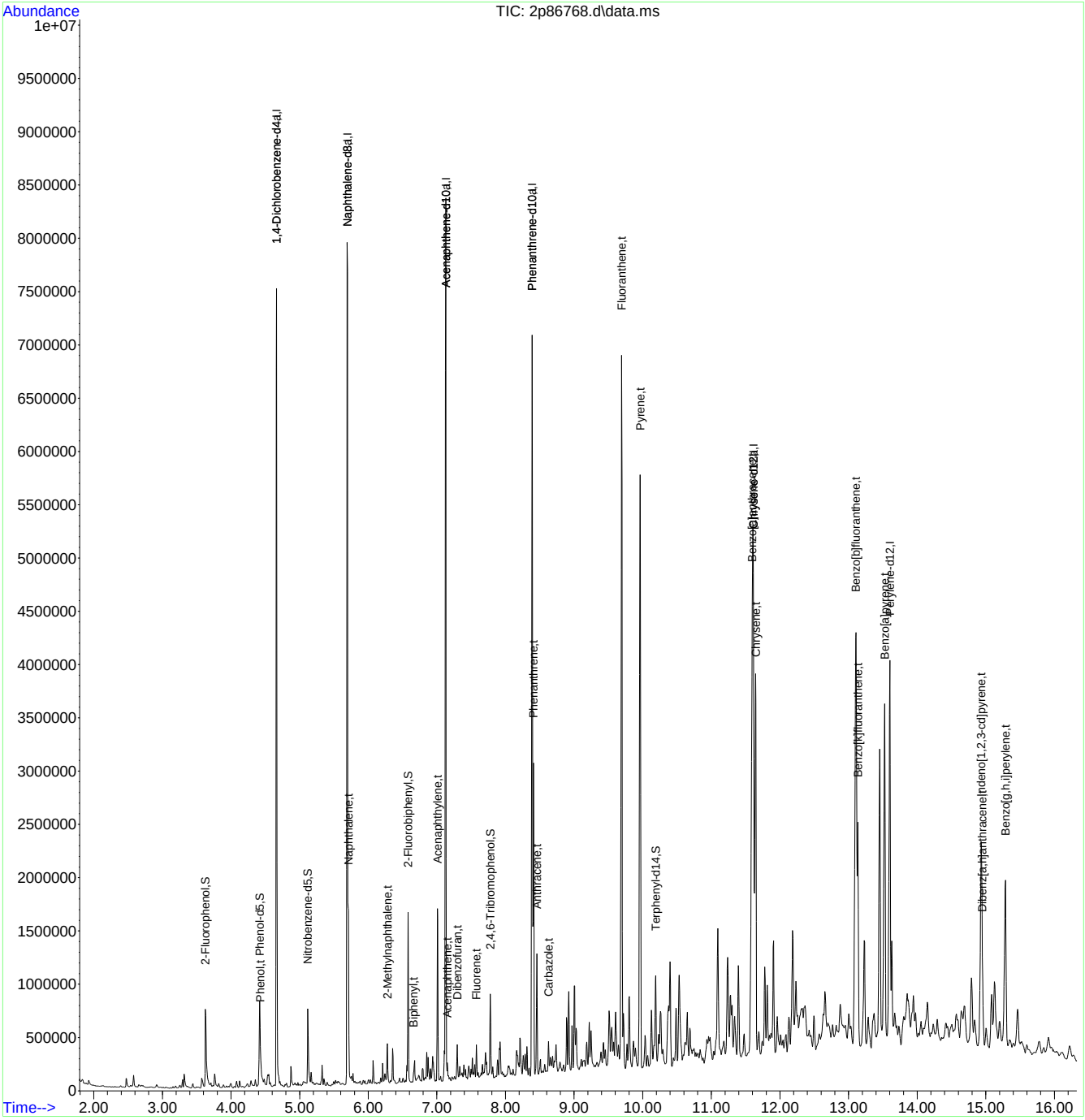
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	849230	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	2701584	40.00	ppm	0.00
47) Acenaphthene-d10	7.130	164	1233848	40.00	ppm	0.00
69) Phenanthrene-d10	8.387	188	2054798	40.00	ppm	0.00
83) Chrysene-d12	11.612	240	1511940	40.00	ppm	0.02
91) Perylene-d12	13.602	264	1543890	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4a	4.664	152	849230	40.00	ppm	0.00
103) Naphthalene-d8a	5.697	136	2701584	40.00	ppm	0.00
105) Acenaphthene-d10a	7.130	164	1233848	40.00	ppm	0.00
108) Chrysene-d12a	11.612	240	1511940	40.00	ppm	0.02
110) Phenanthrene-d10a	8.387	188	2054825	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.627	112	232508	5.44	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 10.88%			
8) Phenol-d5	4.418	99	308241	6.58	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 13.16%			
25) Nitrobenzene-d5	5.119	82	261838	7.21	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 14.42%#			
51) 2-Fluorobiphenyl	6.579	172	326572	7.65	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 15.30%#			
73) 2,4,6-Tribromophenol	7.777	330	32780	4.55	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 9.10%#			
85) Terphenyl-d14	10.190	244	238818	6.35	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 12.70%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.429	94	40944	0.84	ppm	84
38) Naphthalene	5.713	128	507050	7.85	ppm	99
44) 2-Methylnaphthalene	6.280	141	64140	1.56	ppm	97
53) Biphenyl	6.659	154	21763	0.44	ppm	99
56) Acenaphthylene	7.007	152	521814	8.65	ppm	99
59) Acenaphthene	7.152	153	19503	0.55	ppm	90
62) Dibenzofuran	7.296	168	72050	1.47	ppm	97
66) Fluorene	7.574	166	46426	1.11	ppm	93
77) Phenanthrene	8.408	178	755533	14.76	ppm	99
78) Anthracene	8.457	178	329896	6.34	ppm	99
79) Carbazole	8.628	167	92562	1.72	ppm	99
81) Fluoranthene	9.692	202	2625708	36.09	ppm	98
84) Pyrene	9.965	202	2127144	36.16	ppm	100
87) Benzo[a]anthracene	11.596	228	1736713	30.58	ppm	97
89) Chrysene	11.650	228	1459509	36.23	ppm	98
93) Benzo[b]fluoranthene	13.105	252	2344453	46.34	ppm	97
94) Benzo[k]fluoranthene	13.137	252	624357	15.09	ppm	98
95) Benzo[a]pyrene	13.527	252	1380019	32.46	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.934	276	1016465	20.98	ppm	95
98) Dibenz[a,h]anthracene	14.950	278	309661m	8.20	ppm	
100) Benzo[g,h,i]perylene	15.287	276	910732	23.74	ppm	99

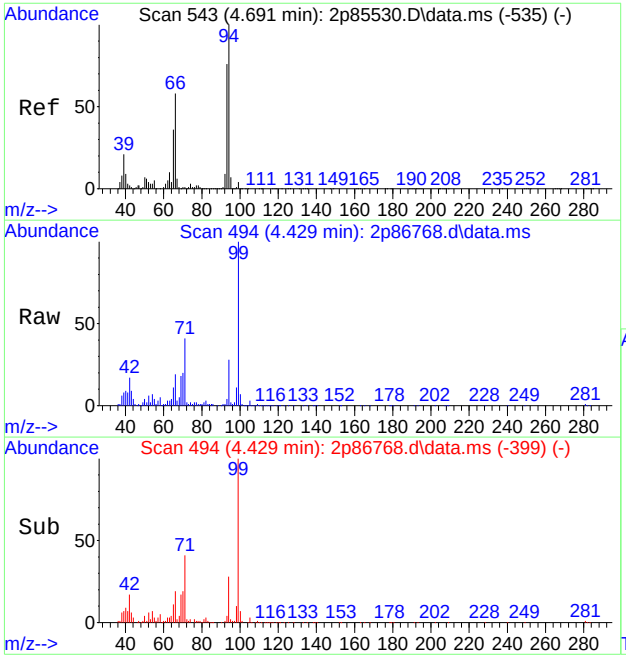
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86768.d
Acq On : 22 Apr 2019 6:29 pm
Operator : yujiac
Sample : jc86406-4 Inst : MS2P
Misc : op19810,e2p3832,30.8,,,1,5
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:34:00 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

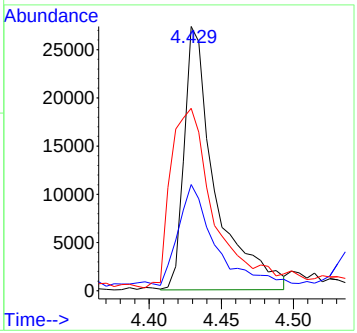


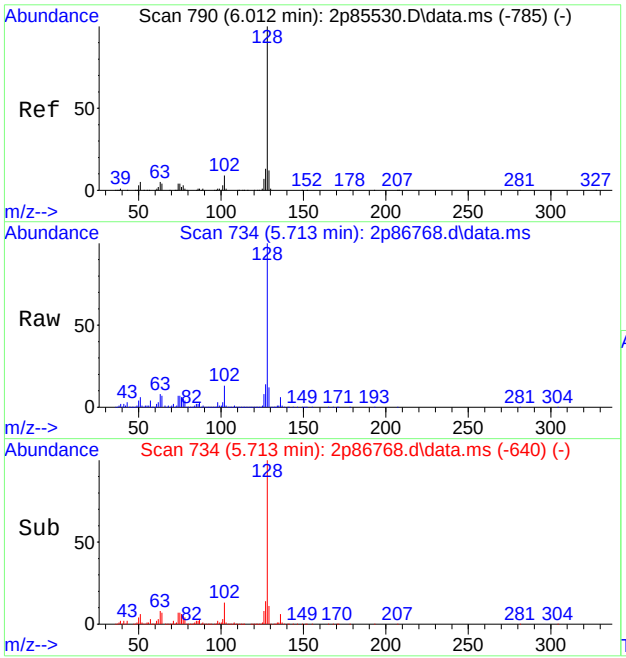


#9
Phenol
Concen: 0.84 ppm
RT: 4.429 min Scan# 494
Delta R.T. 0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion: 94 Resp: 40944

Ion	Ratio	Lower	Upper
94	100		
65	38.1	4.7	64.7
66	66.3	19.9	79.9

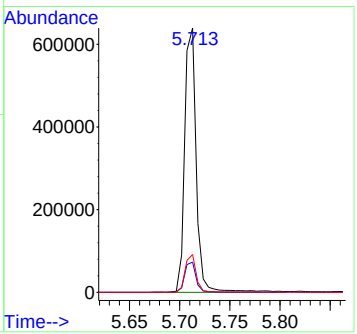


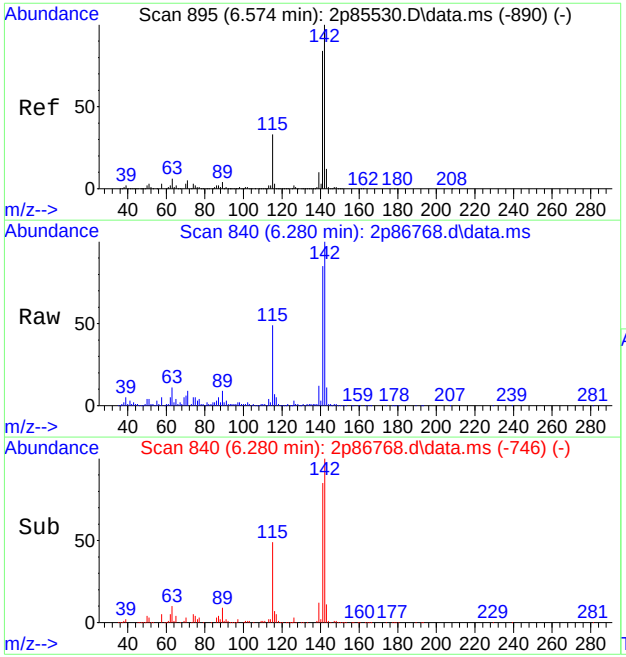


#38
Naphthalene
Concen: 7.85 ppm
RT: 5.713 min Scan# 734
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:128 Resp: 507050

Ion	Ratio	Lower	Upper
128	100		
129	11.5	0.0	41.5
127	14.3	0.0	43.5

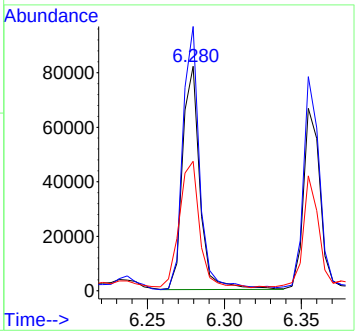


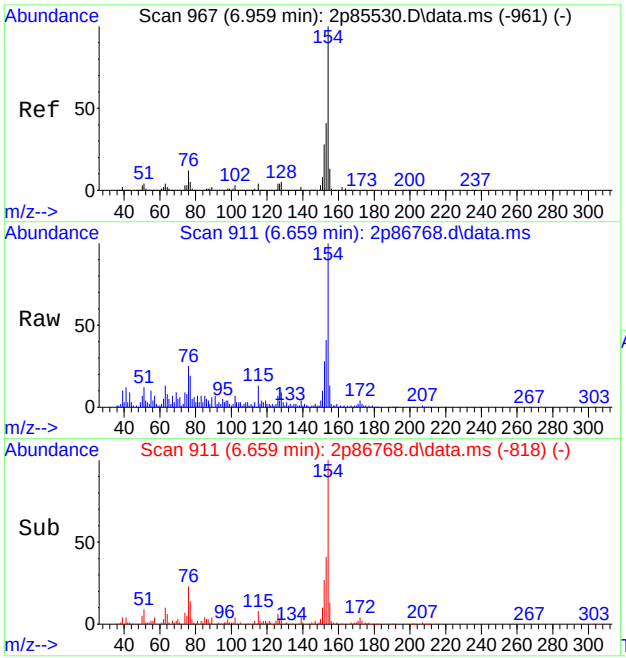


#44
2-Methylnaphthalene
Concen: 1.56 ppm
RT: 6.280 min Scan# 840
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:141 Resp: 64140

Ion	Ratio	Lower	Upper
141	100		
142	117.9	88.5	148.5
115	56.2	20.8	80.8

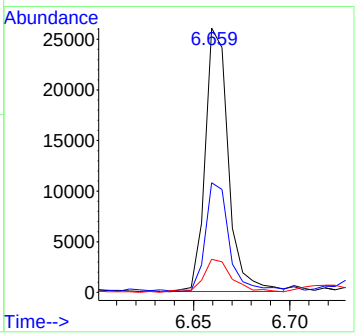


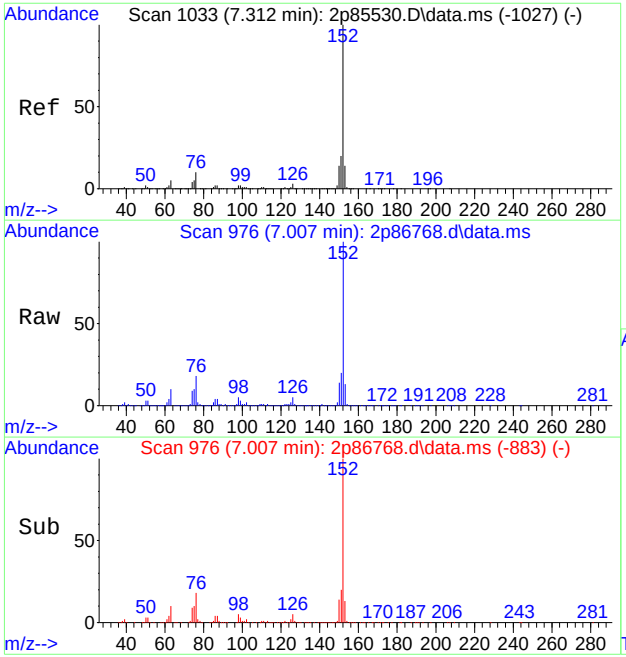


#53
Biphenyl
Concen: 0.44 ppm
RT: 6.659 min Scan# 911
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:154 Resp: 21763

Ion	Ratio	Lower	Upper
154	100		
153	40.6	10.3	70.3
155	12.6	0.0	43.1

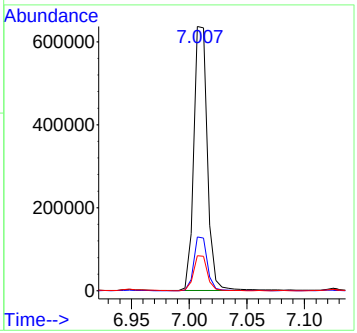


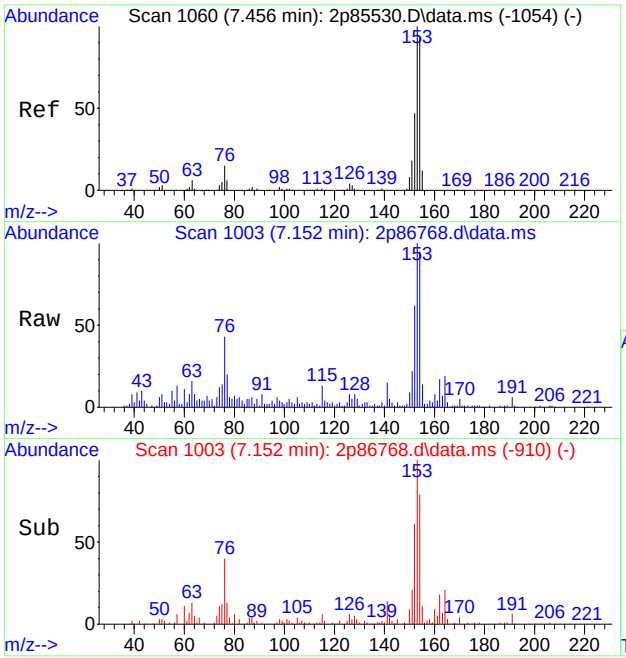


#56
Acenaphthylene
Concen: 8.65 ppm
RT: 7.007 min Scan# 976
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:152 Resp: 521814

Ion	Ratio	Lower	Upper
152	100		
151	20.3	0.0	50.2
153	13.2	0.0	43.6

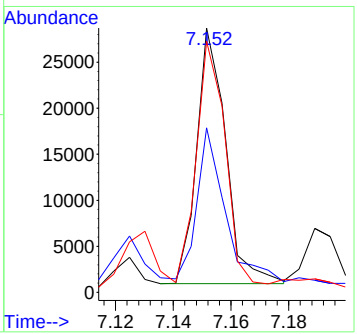


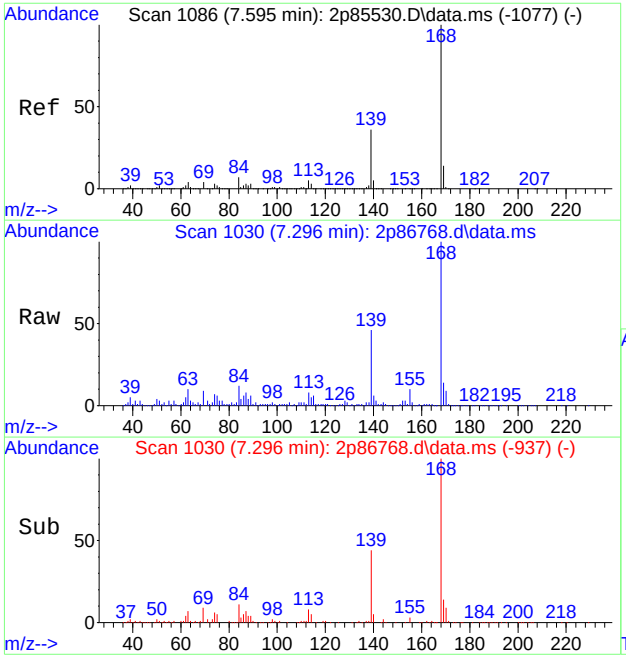


#59
Acenaphthene
Concen: 0.55 ppm
RT: 7.152 min Scan# 1003
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:153 Resp: 19503

Ion	Ratio	Lower	Upper
153	100		
152	59.7	18.5	78.5
154	92.0	56.7	116.7

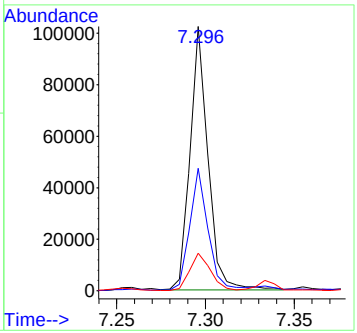


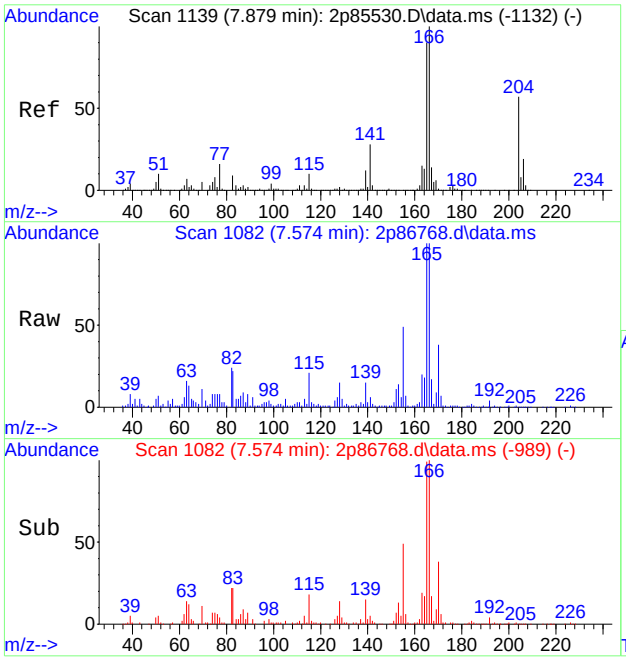


#62
Dibenzofuran
Concen: 1.47 ppm
RT: 7.296 min Scan# 1030
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:168 Resp: 72050

Ion	Ratio	Lower	Upper
168	100		
139	46.1	14.0	74.0
169	14.0	0.0	43.3

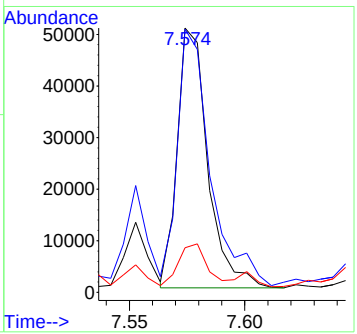


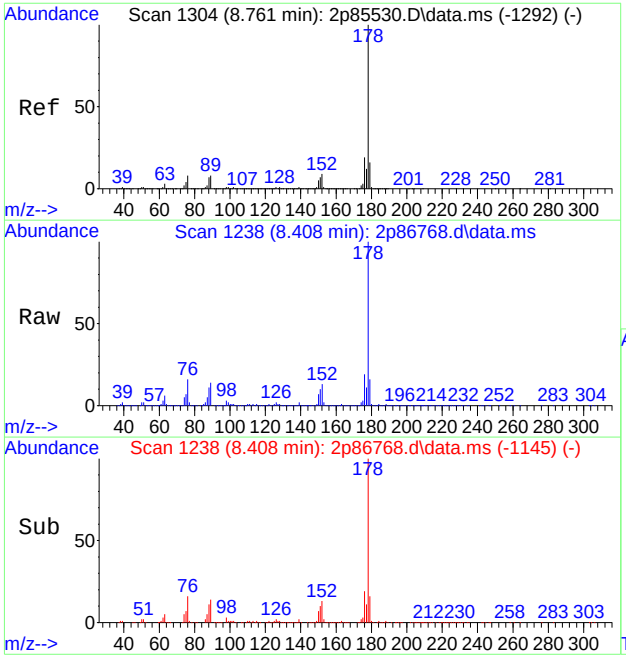


#66
Fluorene
Concen: 1.11 ppm
RT: 7.574 min Scan# 1082
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:166 Resp: 46426

Ion	Ratio	Lower	Upper
166	100		
165	97.4	60.3	120.3
167	14.8	0.0	43.9

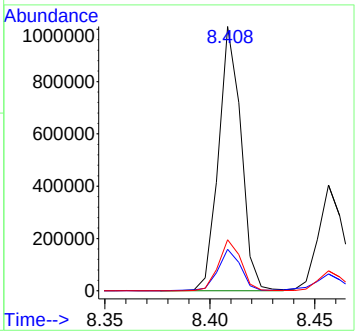


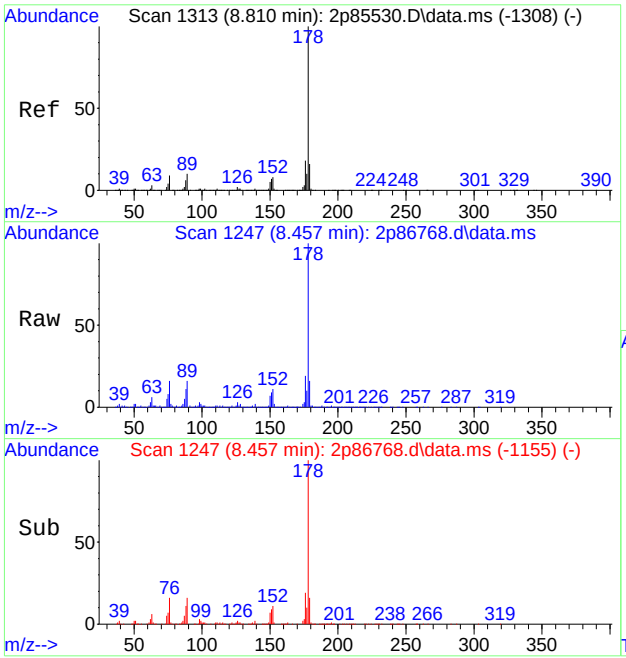


#77
Phenanthrene
Concen: 14.76 ppm
RT: 8.408 min Scan# 1238
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:178 Resp: 755533

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.8
176	19.3	0.0	49.9

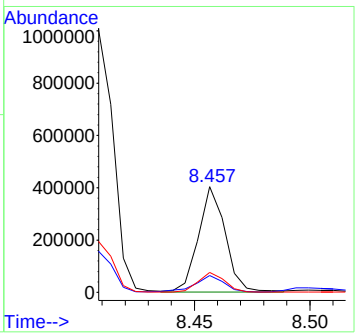


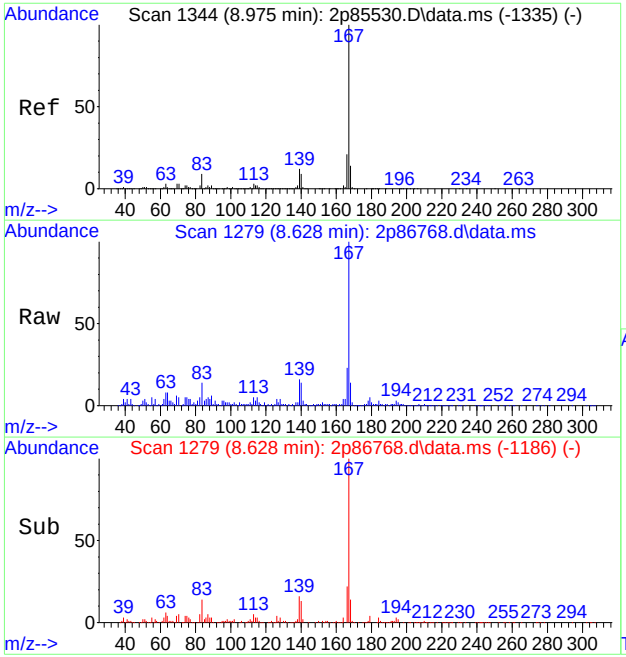


#78
Anthracene
Concen: 6.34 ppm
RT: 8.457 min Scan# 1247
Delta R.T. -0.011 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:178 Resp: 329896

Ion	Ratio	Lower	Upper
178	100		
179	14.9	0.0	45.3
176	18.8	0.0	49.1

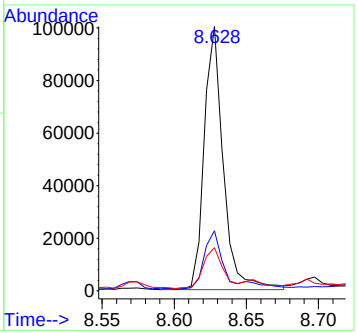


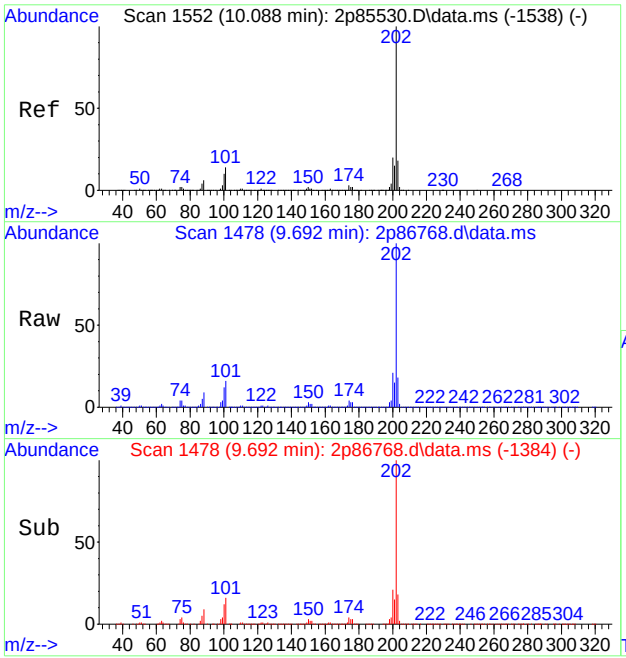


#79
Carbazole
Concen: 1.72 ppm
RT: 8.628 min Scan# 1279
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:167 Resp: 92562

Ion	Ratio	Lower	Upper
167	100		
166	21.8	0.0	51.0
139	14.8	0.0	45.1

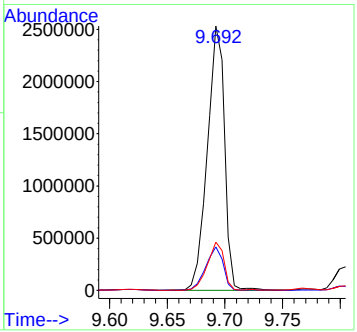


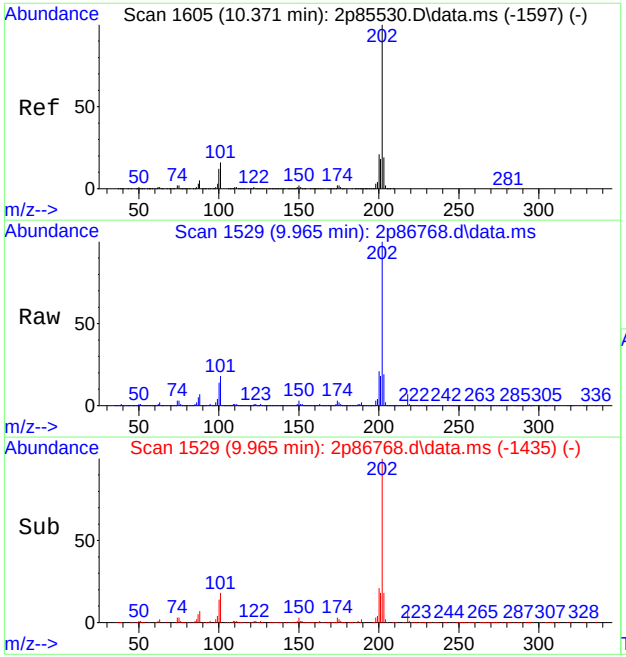


#81
Fluoranthene
Concen: 36.09 ppm
RT: 9.692 min Scan# 1478
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:202 Resp: 2625708

Ion	Ratio	Lower	Upper
202	100		
101	16.4	0.0	45.0
203	18.1	0.0	48.2

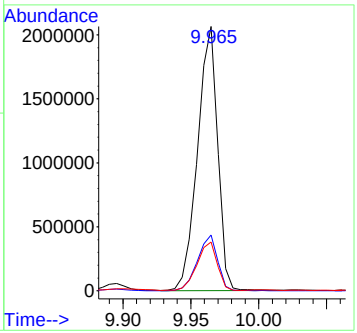


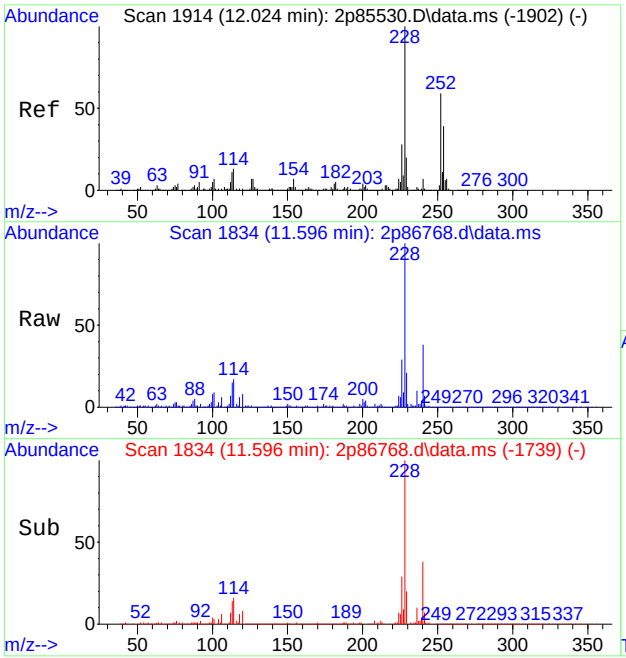


#84
Pyrene
Concen: 36.16 ppm
RT: 9.965 min Scan# 1529
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:202 Resp: 2127144

Ion	Ratio	Lower	Upper
202	100		
200	21.1	0.0	51.2
203	18.4	0.0	48.2

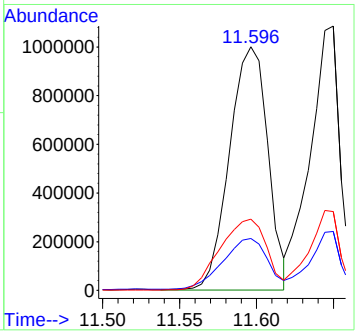


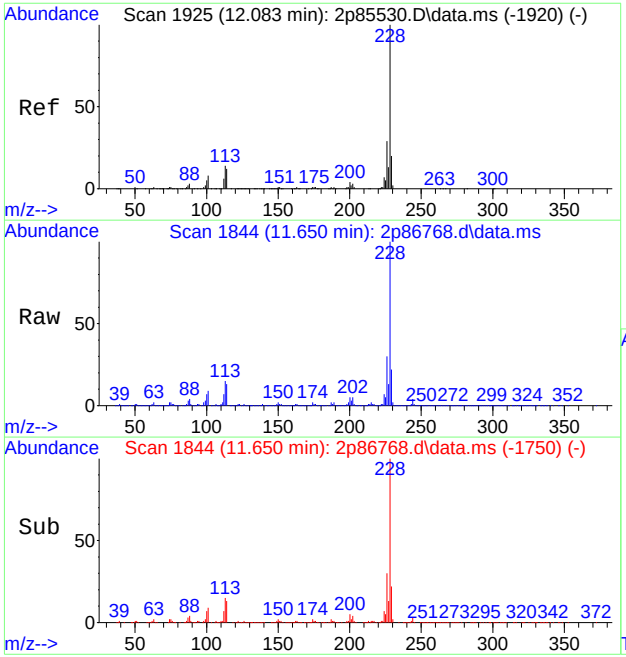


#87
Benzo[a]anthracene
Concen: 30.58 ppm
RT: 11.596 min Scan# 1834
Delta R.T. 0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:228 Resp: 1736713

Ion	Ratio	Lower	Upper
228	100		
229	20.4	0.0	49.9
226	29.0	0.0	57.1

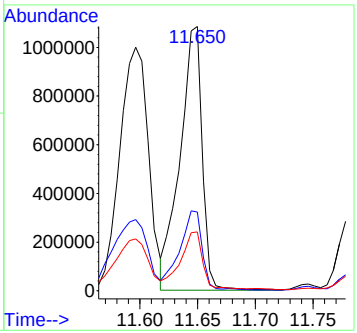


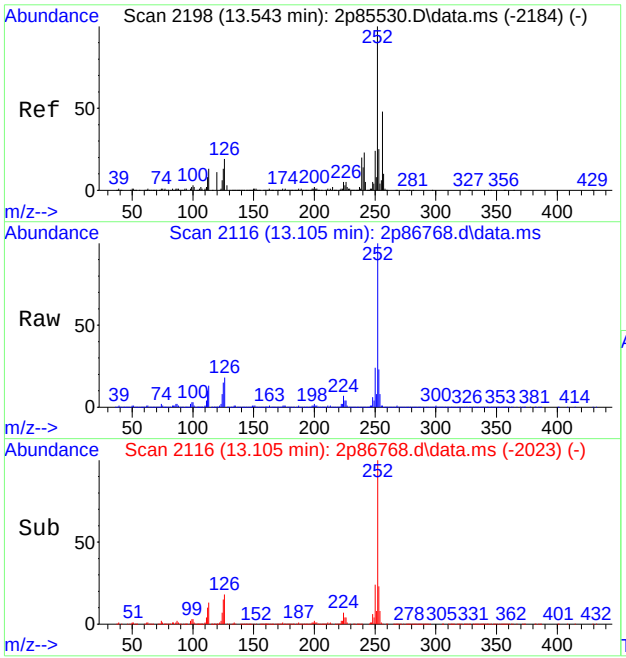


#89
Chrysene
Concen: 36.23 ppm
RT: 11.650 min Scan# 1844
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:228 Resp: 1459509

Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	59.7
229	21.5	0.0	49.5

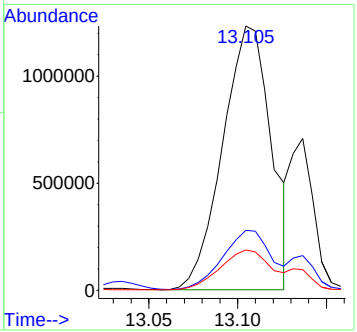


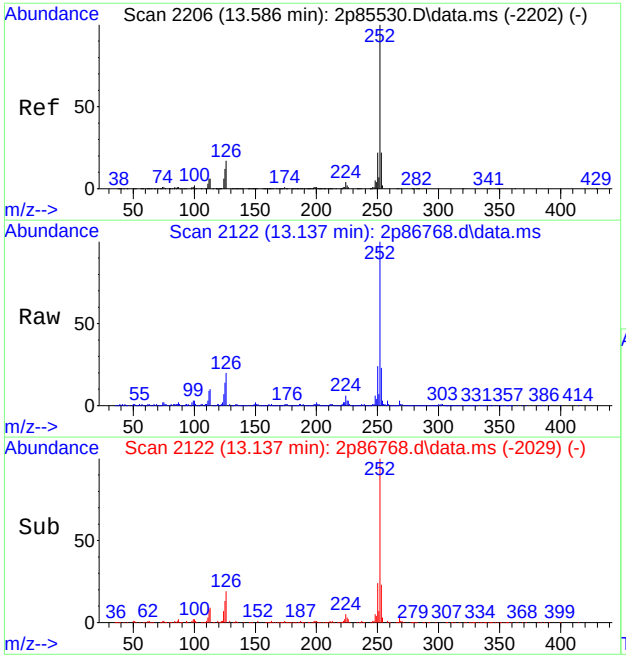


#93
Benzo[b]fluoranthene
Concen: 46.34 ppm
RT: 13.105 min Scan# 2116
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:252 Resp: 2344453

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	51.8
125	14.8	0.0	42.6

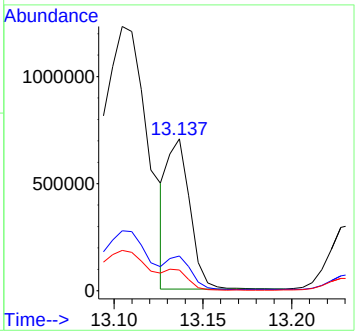


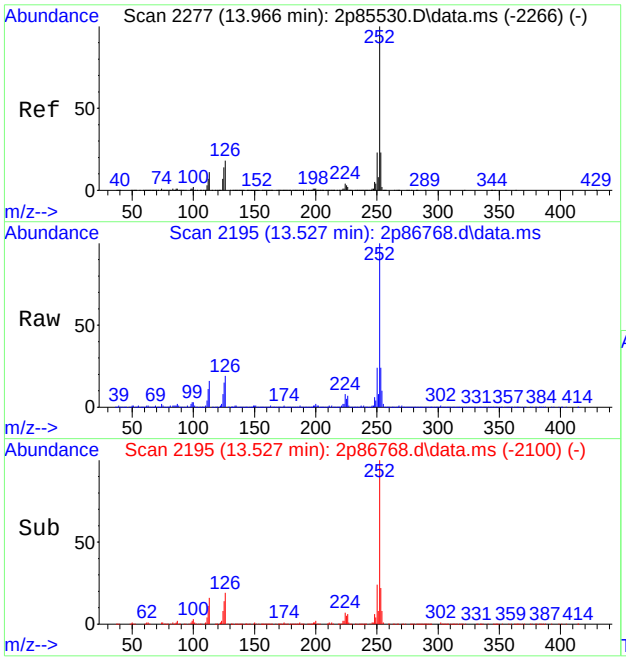


#94
Benzo[k]fluoranthene
Concen: 15.09 ppm
RT: 13.137 min Scan# 2122
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:252 Resp: 624357

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.1
125	12.0	0.0	42.9

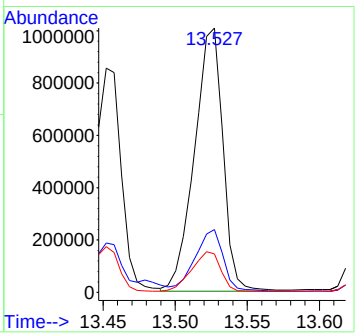


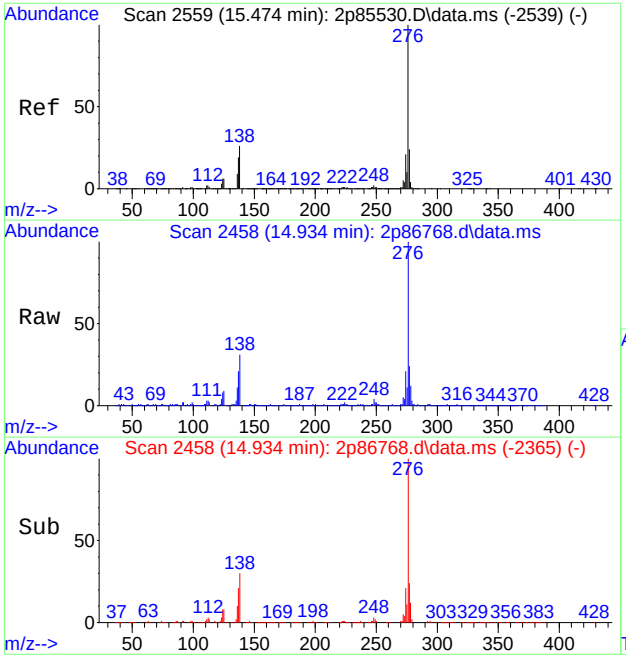


#95
Benzo[a]pyrene
Concen: 32.46 ppm
RT: 13.527 min Scan# 2195
Delta R.T. 0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:252 Resp: 1380019

Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	53.0
125	14.3	0.0	44.7

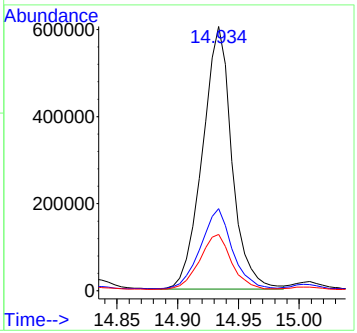


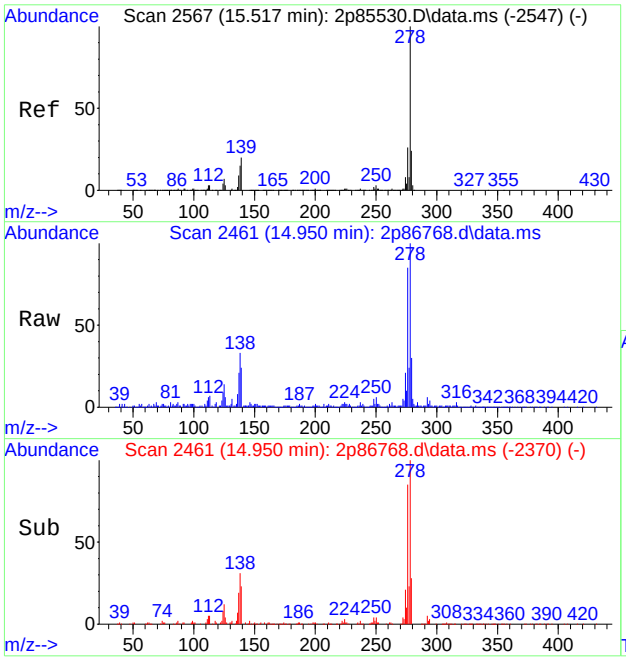


#96
Indeno[1,2,3-cd]pyrene
Concen: 20.98 ppm
RT: 14.934 min Scan# 2458
Delta R.T. -0.005 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:276 Resp: 1016465

Ion	Ratio	Lower	Upper
276	100		
138	30.3	0.0	58.1
137	20.8	0.0	48.2

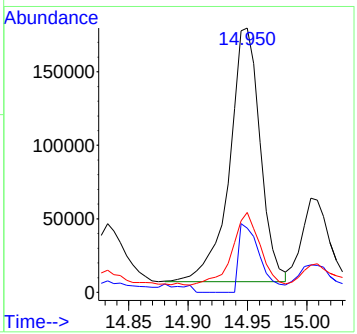


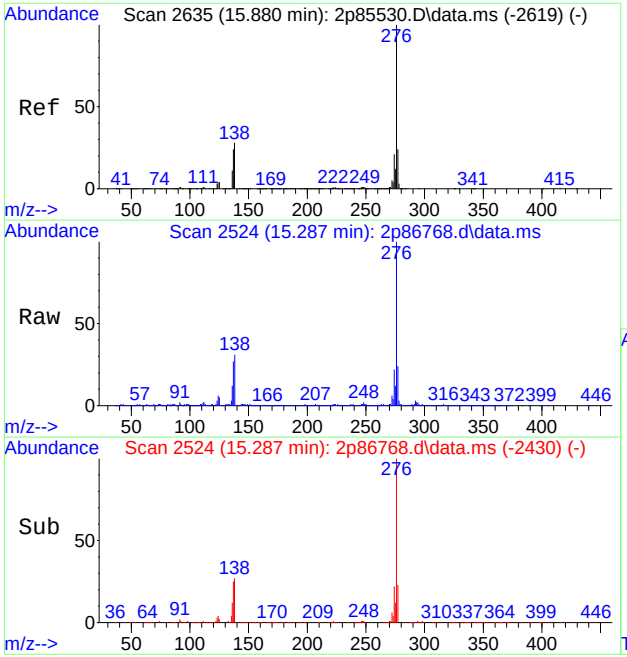


#98
Dibenz[a,h]anthracene
Concen: 8.20 ppm m
RT: 14.950 min Scan# 2461
Delta R.T. -0.016 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:278 Resp: 309661

Ion	Ratio	Lower	Upper
278	100		
139	24.2	0.0	51.1
279	30.2	0.0	54.6

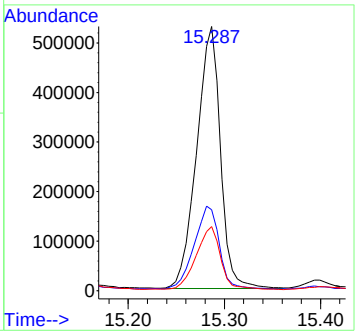




#100
Benzo[g,h,i]perylene
Concen: 23.74 ppm
RT: 15.287 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 2p86768.d
Acq: 22 Apr 2019 6:29 pm

Tgt Ion:276 Resp: 910732

Ion	Ratio	Lower	Upper
276	100		
138	30.2	0.0	59.8
277	24.0	0.0	53.4



Manual Integration Approval Summary

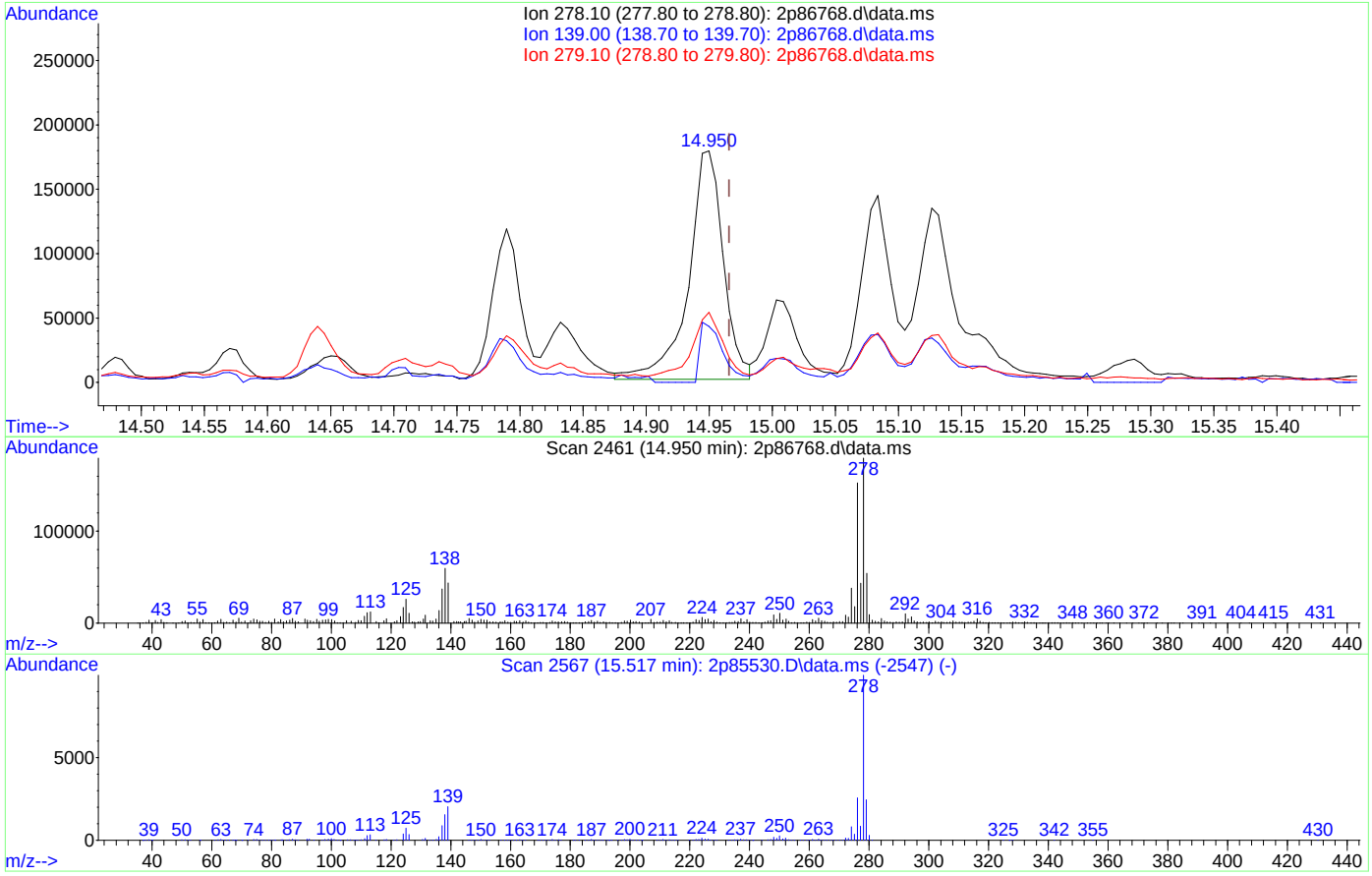
Sample Number:	JC86406-4	**Method:**	SW846 8270D
Lab FileID:	2P86768.D	**Analyst approved:**	04/23/19 06:13 Michelle Co
Injection Time:	04/22/19 18:29	**Supervisor approved:**	04/25/19 14:42 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		14.95	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86768.d
Acq On : 22 Apr 2019 6:29 pm
Operator : yujiac
Sample : jc86406-4 Inst : MS2P
Misc : op19810,e2p3832,30.8,,,1,5
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:27:33 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86768.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.950min (-0.016) 9.04ppm

response 341063

Ion	Exp%	Act%
278.10	100	100
139.00	21.10	23.21
279.10	24.60	28.72
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 11:20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 26 13:57:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	669285	40.00	ppm	-0.16
24) Naphthalene-d8	5.723	136	1069602	40.00	ppm	-0.15
47) Acenaphthene-d10	7.152	164	865431	40.00	ppm	-0.16
69) Phenanthrene-d10	8.451	188	821516	40.00	ppm	-0.16
83) Chrysene-d12	11.842	240	1064816	40.00	ppm	-0.05
91) Perylene-d12	13.778	264	765062	40.00	ppm	-0.12
101) 1,4-Dichlorobenzene-d4a	4.675	152	669285	40.00	ppm	-0.16
103) Naphthalene-d8a	5.723	136	1072167	40.00	ppm	-0.15
105) Acenaphthene-d10a	7.152	164	865431	40.00	ppm	-0.16
108) Chrysene-d12a	11.842	240	1064816	40.00	ppm	0.22
110) Phenanthrene-d10a	8.451	188	821516	40.00	ppm	#-0.15
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	787865	23.39	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.78%			
8) Phenol-d5	4.440	99	973148	26.36	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 52.72%			
25) Nitrobenzene-d5	5.130	82	638918	44.44	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 88.88%#			
51) 2-Fluorobiphenyl	6.601	172	761514	25.42	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 50.84%			
73) 2,4,6-Tribromophenol	7.836	330	97990	34.01	ppm	-0.14
Spiked Amount 50.000	Range 12 - 68		Recovery = 68.02%#			
85) Terphenyl-d14	10.291	244	805858	30.41	ppm	-0.17
Spiked Amount 50.000	Range 16 - 65		Recovery = 60.82%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.456	94	2960389	76.85	ppm	91
19) 2-Methylphenol	4.921	108	890359m	45.31	ppm	
21) 3&4-Methylphenol	5.060	108	2480050	124.53	ppm	83
30) 2,4-Dimethylphenol	5.493	107	1133034m	111.21	ppm	
38) Naphthalene	5.734	128	35310122	1380.06	ppm	96
44) 2-Methylnaphthalene	6.306	141	12192881	749.30	ppm	95
53) Biphenyl	6.686	154	6785331	195.64	ppm	98
56) Acenaphthylene	7.050	152	14609545	345.12	ppm	95
59) Acenaphthene	7.184	153	2871600	115.58	ppm	94
62) Dibenzofuran	7.339	168	17978191	524.67	ppm	96
66) Fluorene	7.628	166	18932993	644.25	ppm	98
77) Phenanthrene	8.473	178	53240629	2601.58	ppm	89
78) Anthracene	8.606	178	14764379m	709.52	ppm	
79) Carbazole	8.745	167	17068332m	793.26	ppm	
81) Fluoranthene	9.853	202	51176740m	1759.61	ppm	
84) Pyrene	10.179	202	41288349m	996.53	ppm	
87) Benzo[a]anthracene	11.794	228	40017975	1000.56	ppm	87
89) Chrysene	11.864	228	18873793	665.21	ppm	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 26 13:57:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

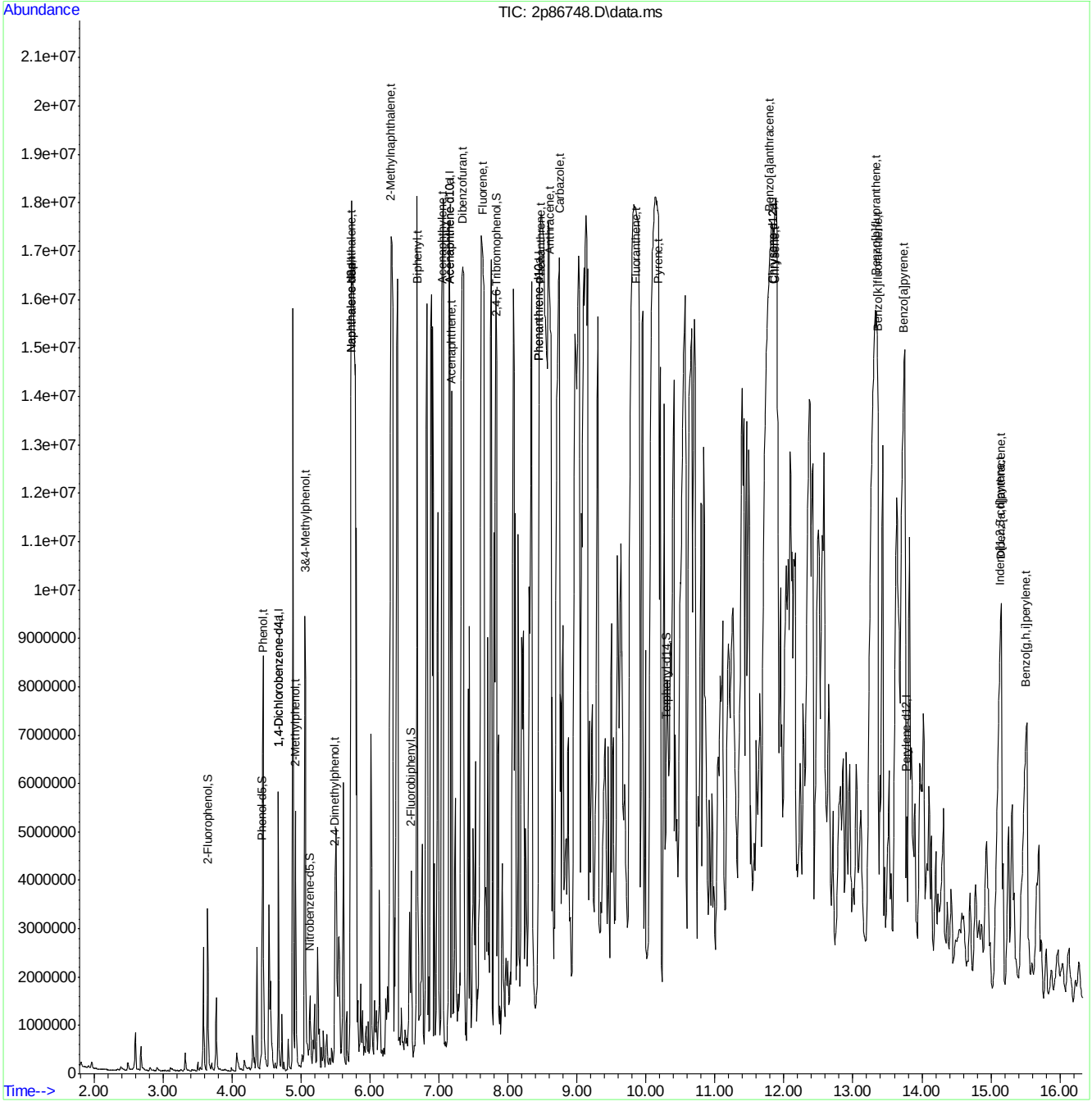
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) Benzo[b]fluoranthene	13.335	252	32912954m	1312.90	ppm	
94) Benzo[k]fluoranthene	13.361	252	2545690m	124.19	ppm	
95) Benzo[a]pyrene	13.736	252	15351010	728.64	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.137	276	8230803	342.77	ppm	97
98) Dibenz[a,h]anthracene	15.148	278	3622522	193.68	ppm	79
100) Benzo[g,h,i]perylene	15.511	276	7030073	369.86	ppm	96

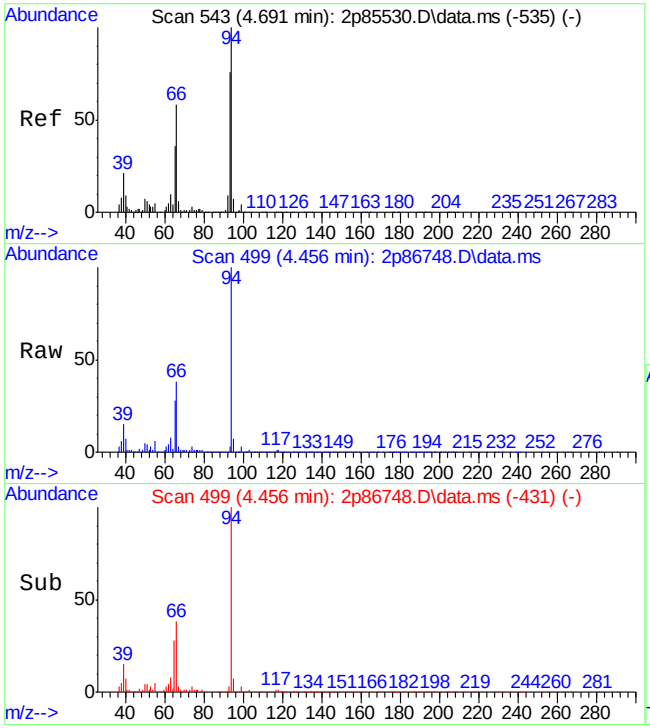
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 26 13:57:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

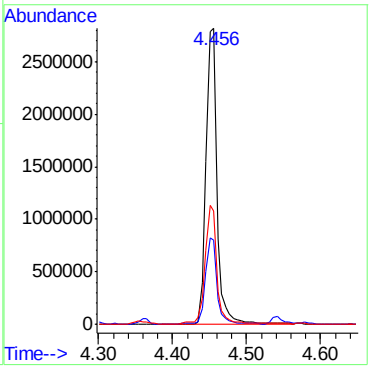


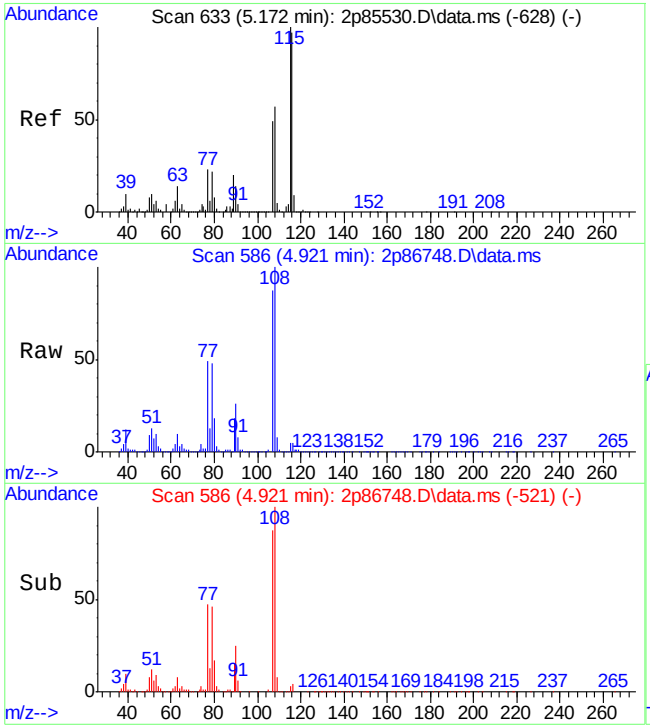


#9
Phenol
Concen: 76.85 ppm
RT: 4.456 min Scan# 499
Delta R.T. -0.134 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion: 94 Resp: 2960389

Ion	Ratio	Lower	Upper
94	100		
65	28.1	1.5	61.5
66	38.1	15.3	75.3

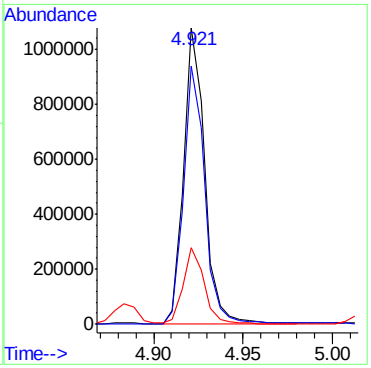


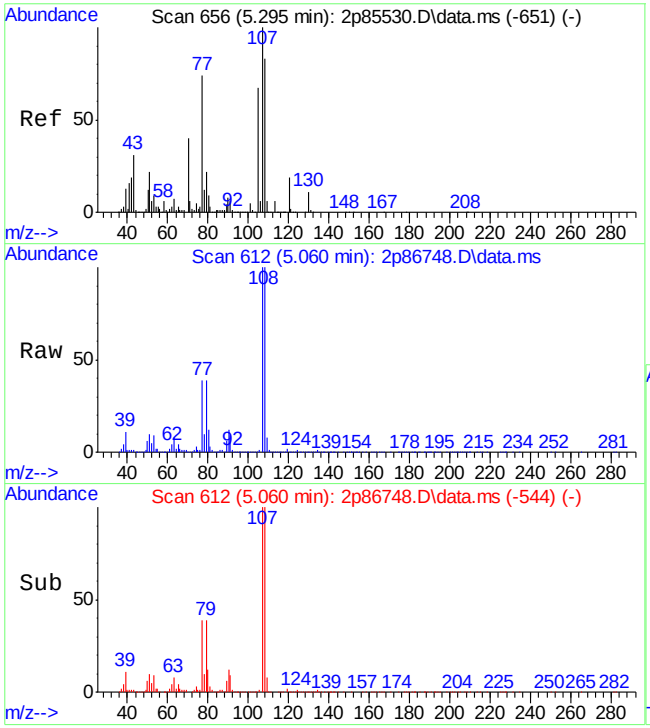


#19
2-Methylphenol
Concen: 45.31 ppm m
RT: 4.921 min Scan# 586
Delta R.T. -0.150 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:108 Resp: 890359

Ion	Ratio	Lower	Upper
108	100		
107	87.0	58.4	118.4
90	25.8	0.0	53.9

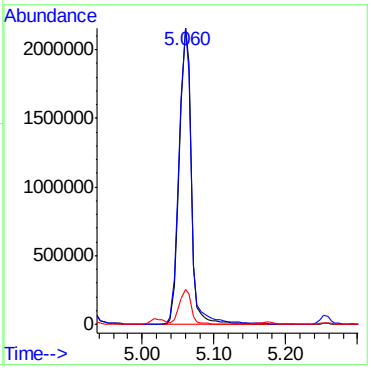


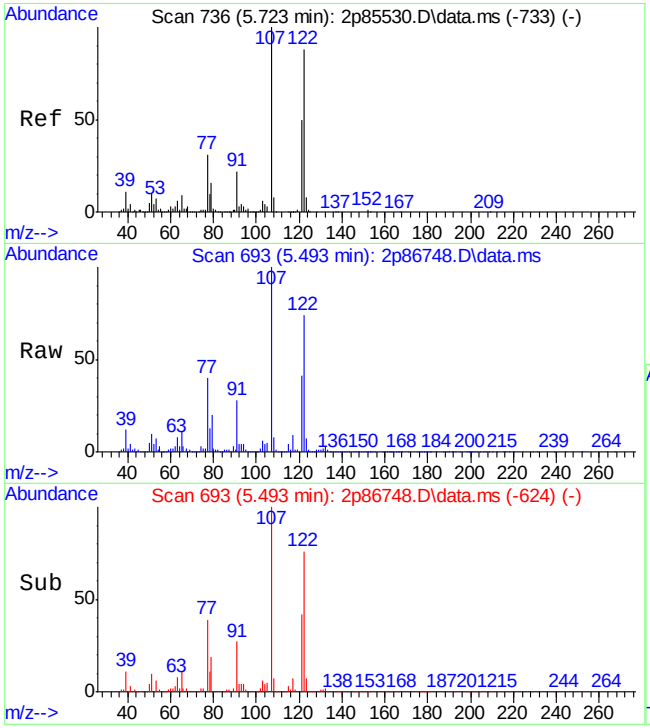


#21
3&4-Methylphenol
Concen: 124.53 ppm
RT: 5.060 min Scan# 612
Delta R.T. -0.139 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:108 Resp: 2480050

Ion	Ratio	Lower	Upper
108	100		
107	100.1	90.6	150.6
90	11.0	0.0	39.9

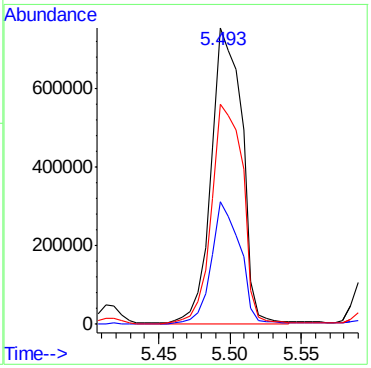


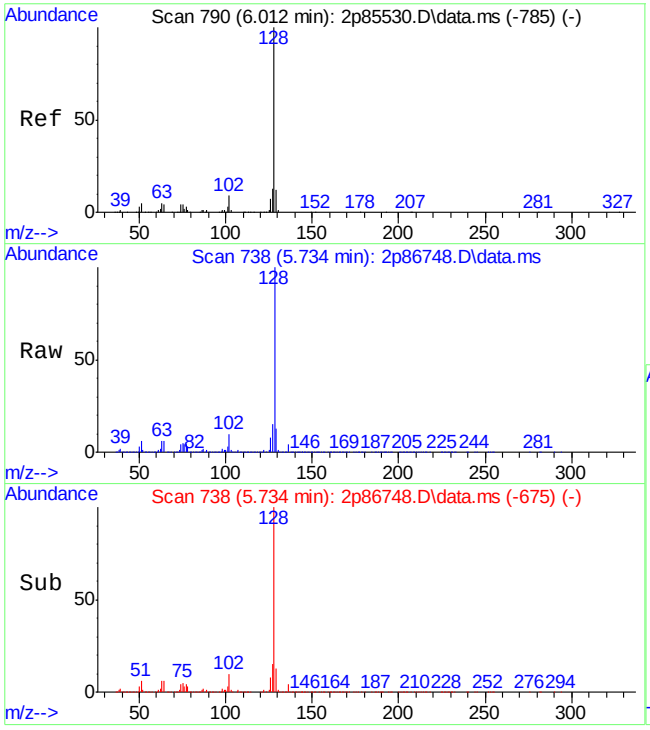


#30
2,4-Dimethylphenol
Concen: 111.21 ppm m
RT: 5.493 min Scan# 693
Delta R.T. -0.129 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:107 Resp: 1133034

Ion	Ratio	Lower	Upper
107	100		
121	41.4	13.3	73.3
122	74.4	41.5	101.5

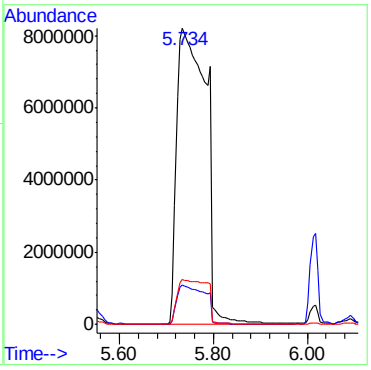


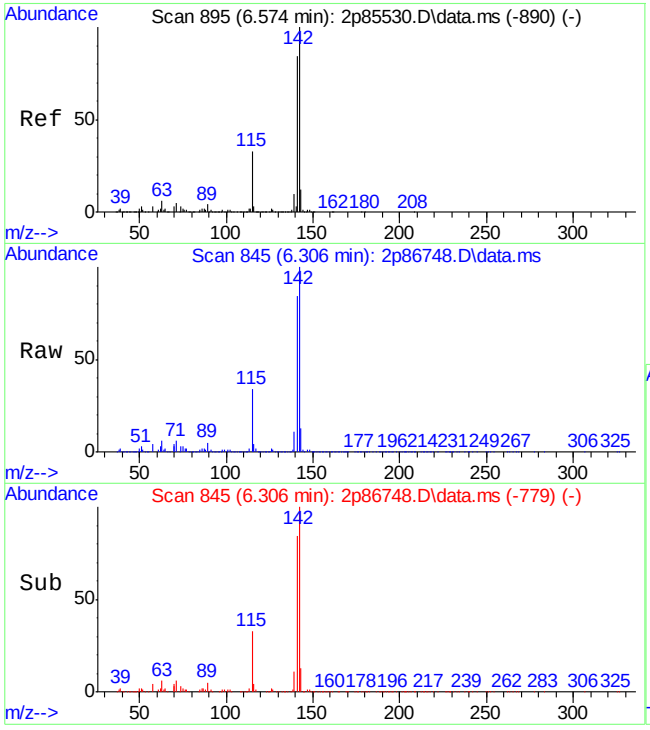


#38
Naphthalene
Concen: 1380.06 ppm
RT: 5.734 min Scan# 738
Delta R.T. -0.161 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:128 Resp:35310122

Ion	Ratio	Lower	Upper
128	100		
129	13.3	0.0	41.2
127	15.1	0.0	43.7

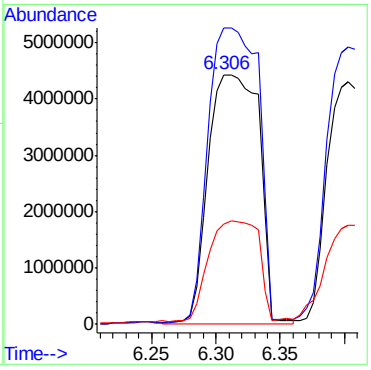


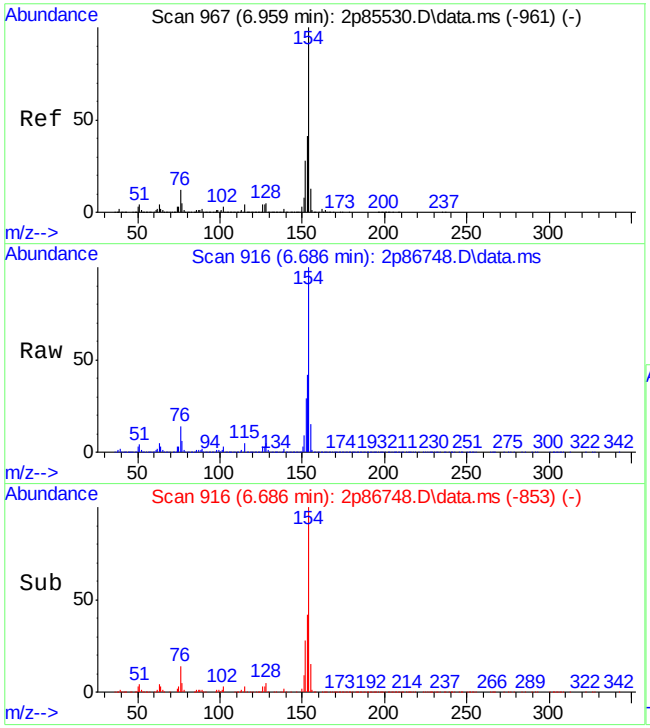


#44
2-Methylnaphthalene
Concen: 749.30 ppm
RT: 6.306 min Scan# 845
Delta R.T. -0.150 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:141 Resp:12192881

Ion	Ratio	Lower	Upper
141	100		
142	118.8	90.7	150.7
115	39.1	18.7	78.7

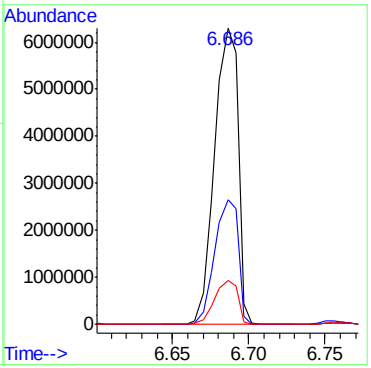


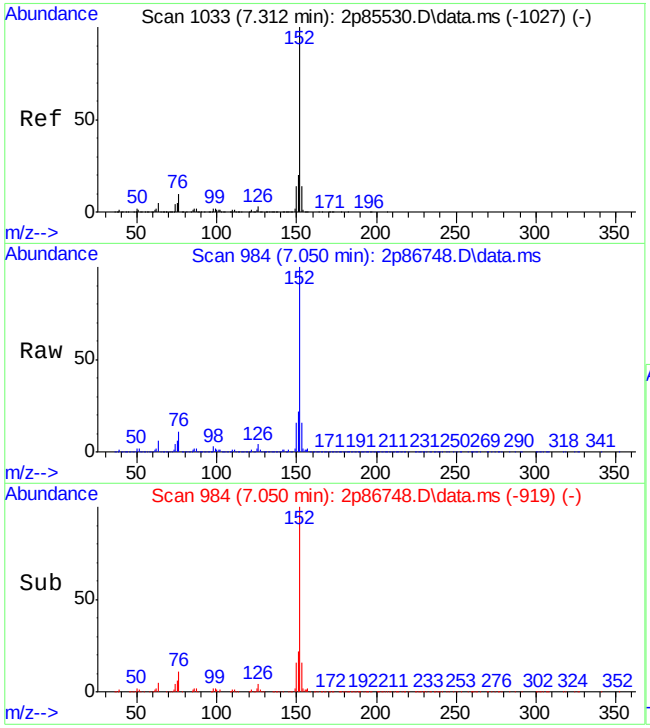


#53
Biphenyl
Concen: 195.64 ppm
RT: 6.686 min Scan# 916
Delta R.T. -0.161 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:154 Resp: 6785331

Ion	Ratio	Lower	Upper
154	100		
153	42.2	11.1	71.1
155	14.6	0.0	43.4

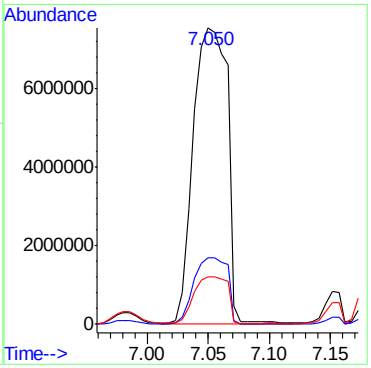


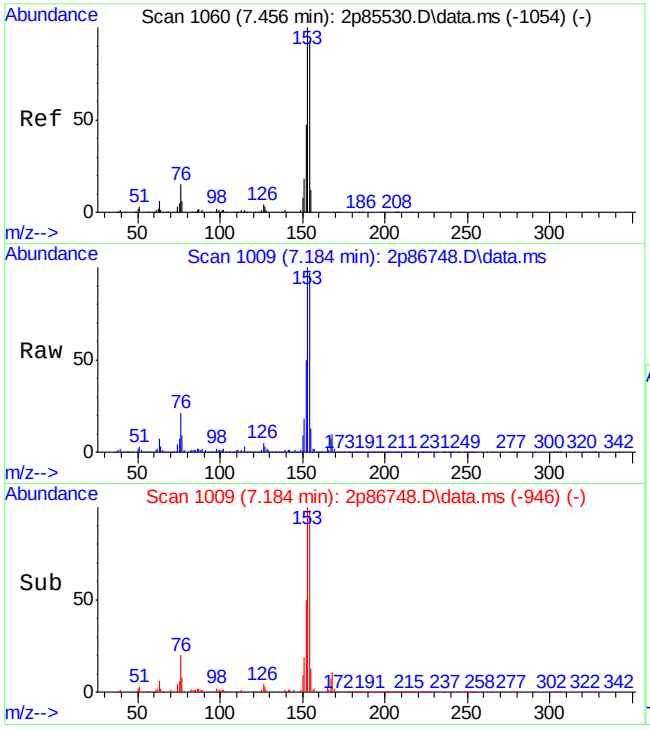


#56
Acenaphthylene
Concen: 345.12 ppm
RT: 7.050 min Scan# 984
Delta R.T. -0.150 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:152 Resp:14609545

Ion	Ratio	Lower	Upper
152	100		
151	22.5	0.0	50.3
153	15.9	0.0	43.6

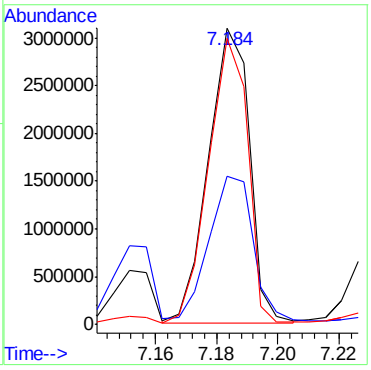


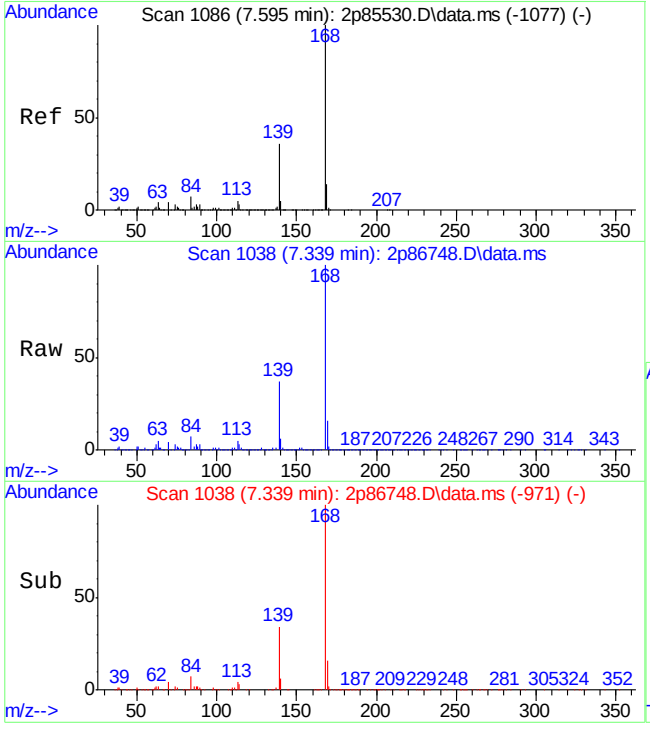


#59
Acenaphthene
Concen: 115.58 ppm
RT: 7.184 min Scan# 1009
Delta R.T. -0.160 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:153 Resp: 2871600

Ion	Ratio	Lower	Upper
153	100		
152	48.7	17.8	77.8
154	97.1	59.8	119.8

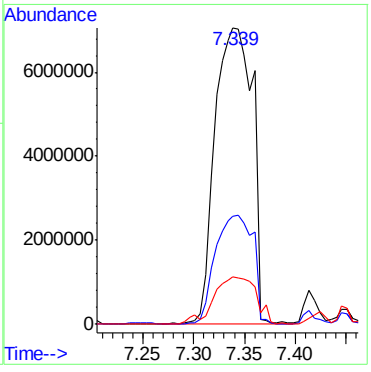


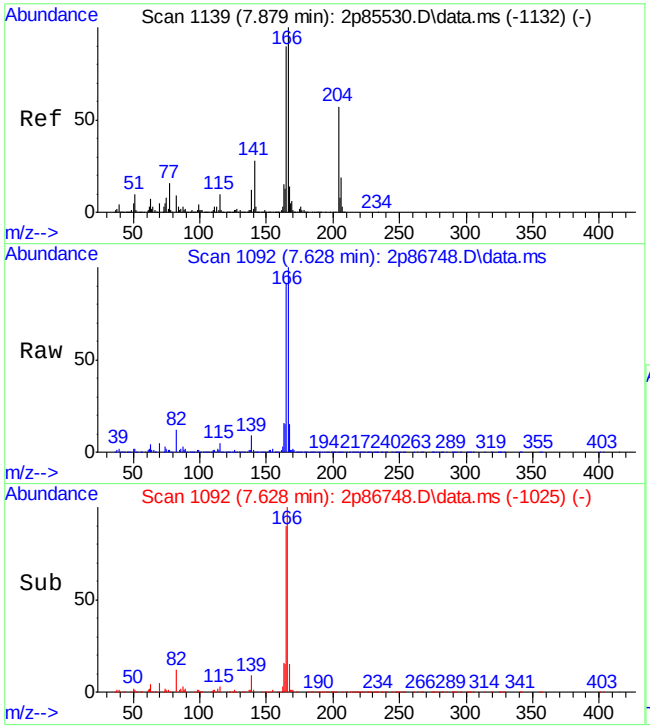


#62
Dibenzofuran
Concen: 524.67 ppm
RT: 7.339 min Scan# 1038
Delta R.T. -0.144 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:168 Resp:17978191

Ion	Ratio	Lower	Upper
168	100		
139	36.5	9.2	69.2
169	15.7	0.0	44.1

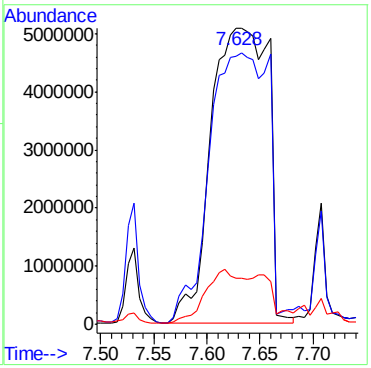


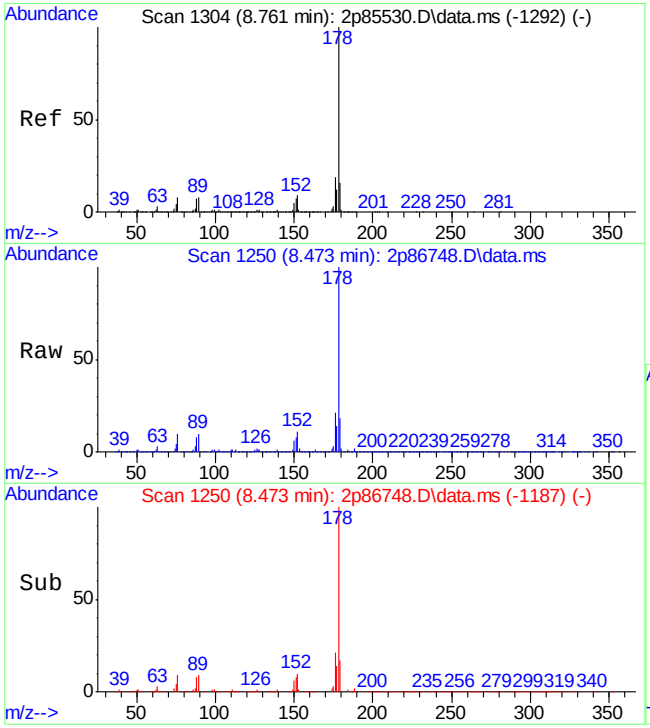


#66
Fluorene
Concen: 644.25 ppm
RT: 7.628 min Scan# 1092
Delta R.T. -0.139 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:166 Resp:18932993

Ion	Ratio	Lower	Upper
166	100		
165	89.0	60.6	120.6
167	13.6	0.0	44.1

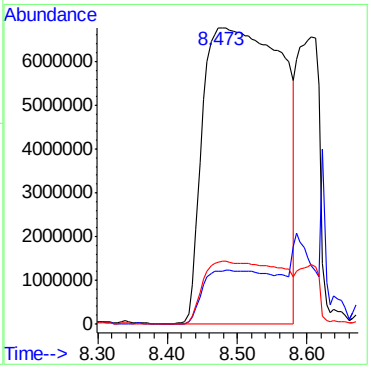


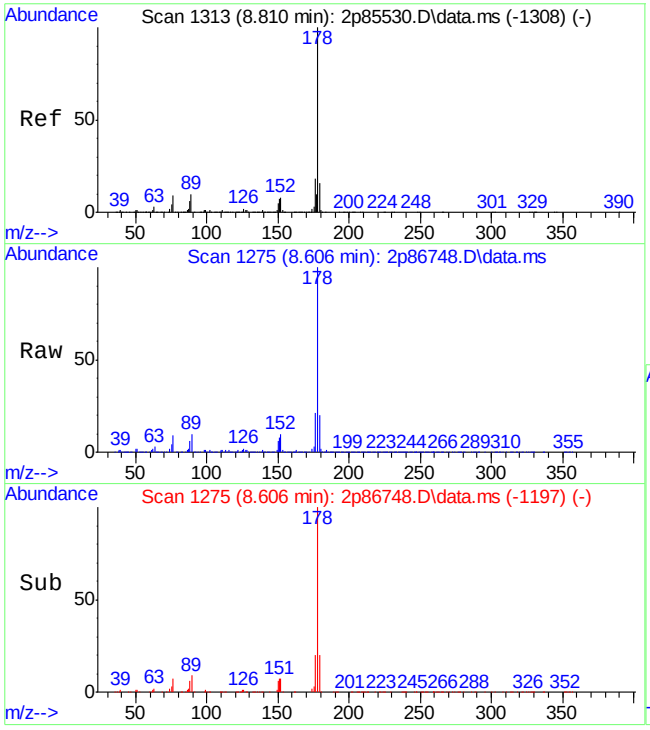


#77
Phenanthrene
Concen: 2601.58 ppm
RT: 8.473 min Scan# 1250
Delta R.T. -0.160 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:178 Resp:53240629

Ion	Ratio	Lower	Upper
178	100		
179	8.2	0.0	46.0
176	21.7	0.0	49.2

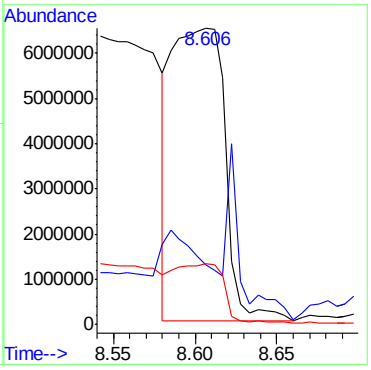


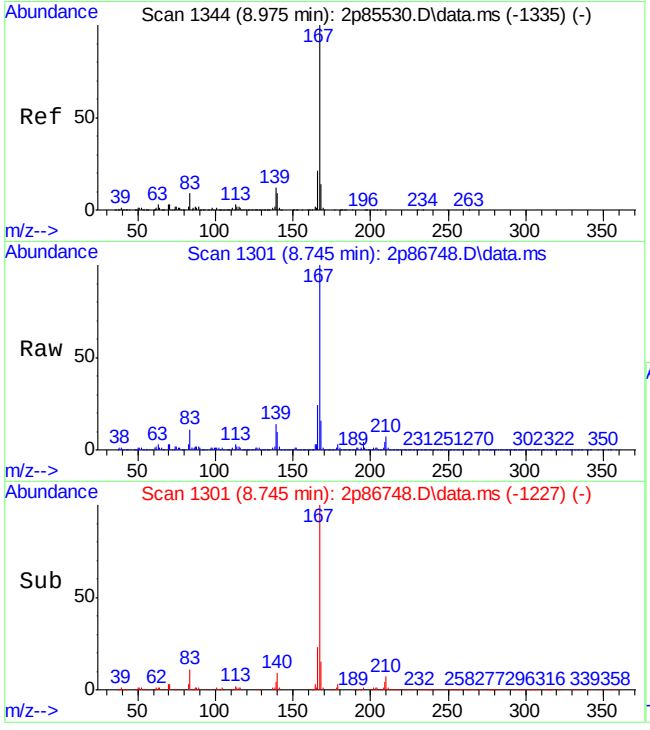


#78
Anthracene
Concen: 709.52 ppm m
RT: 8.606 min Scan# 1275
Delta R.T. -0.081 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:178 Resp:14764379

Ion	Ratio	Lower	Upper
178	100		
179	20.2	0.0	45.7
176	20.6	0.0	48.6

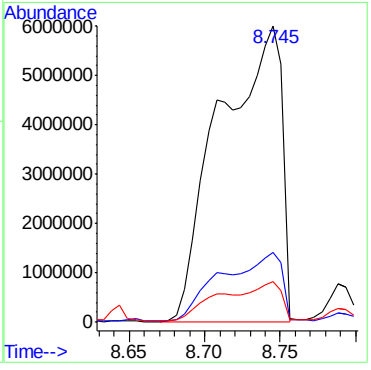


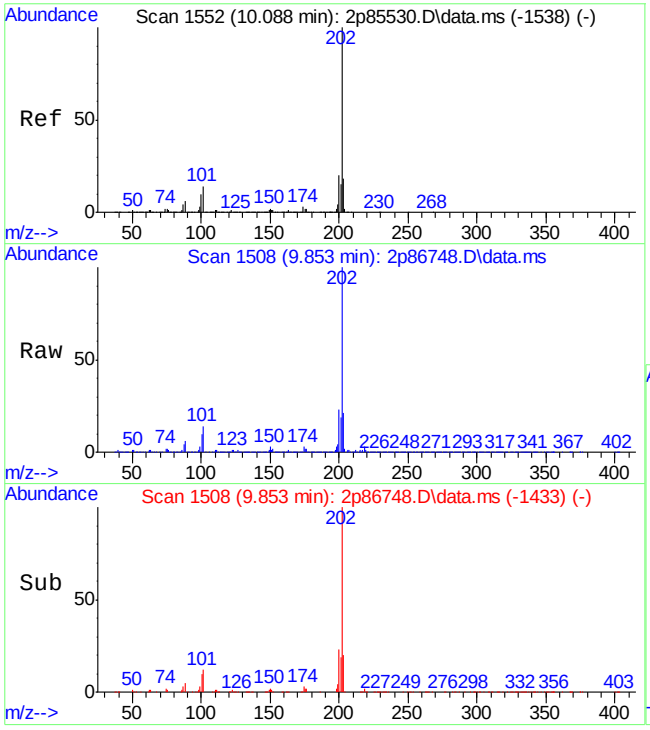


#79
Carbazole
Concen: 793.26 ppm m
RT: 8.745 min Scan# 1301
Delta R.T. -0.107 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:167 Resp:17068332

Ion	Ratio	Lower	Upper
167	100		
166	23.6	0.0	50.8
139	13.7	0.0	44.2

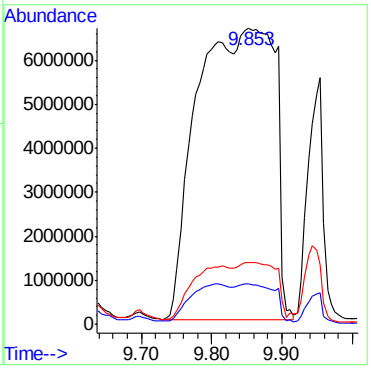


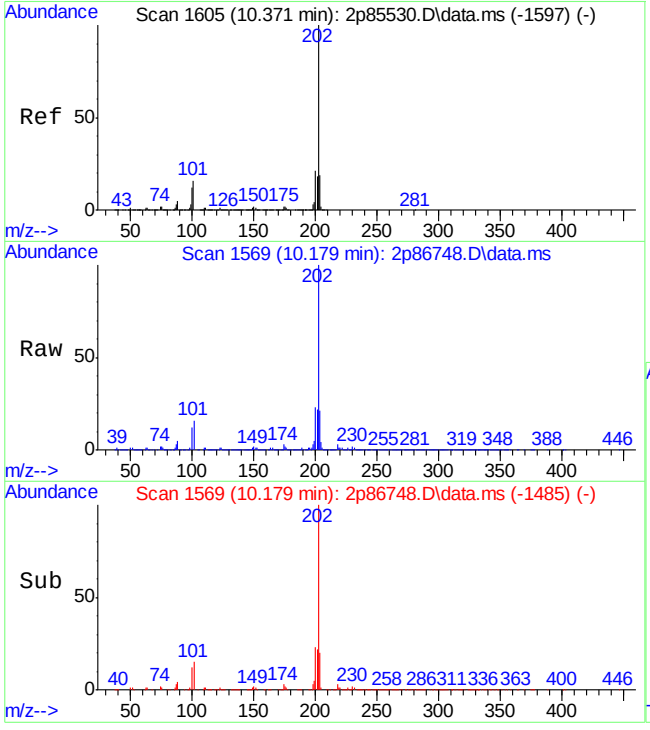


#81
Fluoranthene
Concen: 1759.61 ppm m
RT: 9.853 min Scan# 1508
Delta R.T. -0.096 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:202 Resp:51176740

Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	43.7
203	21.0	0.0	48.6

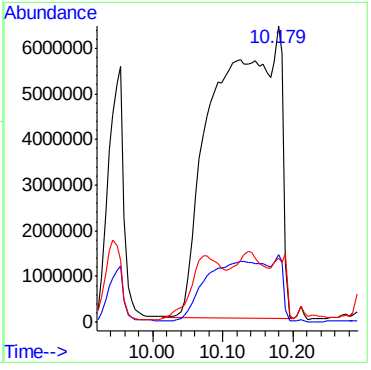


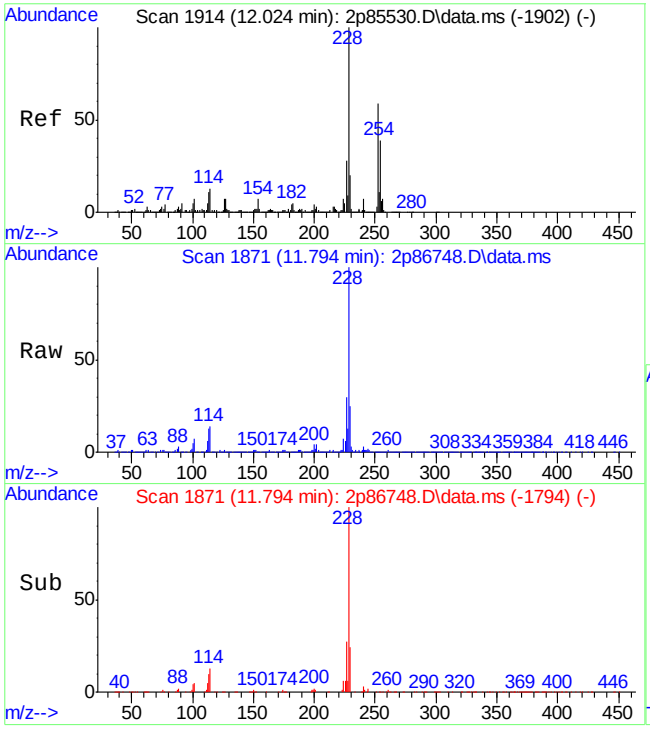


#84
Pyrene
Concen: 996.53 ppm m
RT: 10.179 min Scan# 1569
Delta R.T. -0.053 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:202 Resp:41288349

Ion	Ratio	Lower	Upper
202	100		
200	22.9	0.0	50.1
203	21.5	0.0	47.4

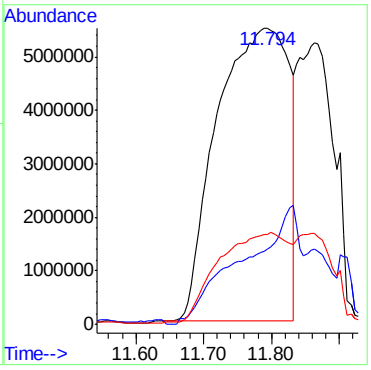


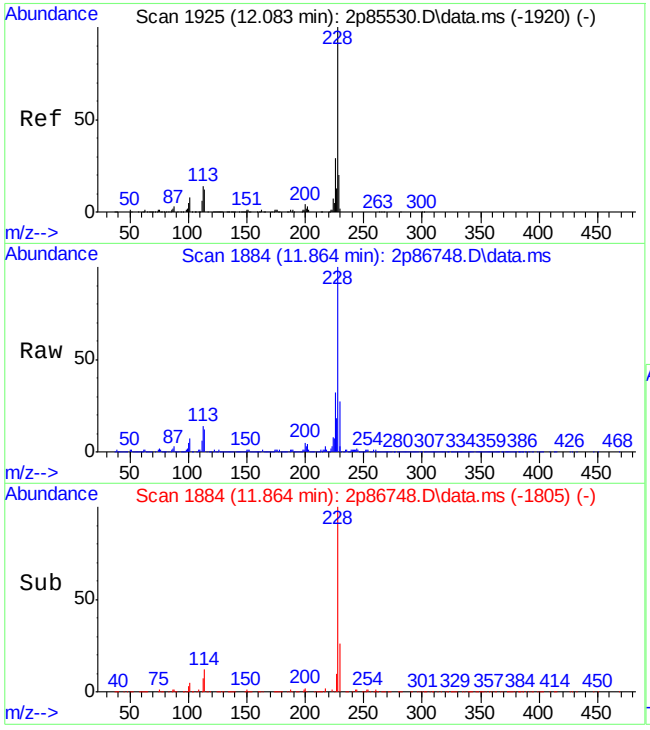


#87
Benzo[a]anthracene
Concen: 1000.56 ppm
RT: 11.794 min Scan# 1871
Delta R.T. -0.086 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:228 Resp:40017975

Ion	Ratio	Lower	Upper
228	100		
229	7.7	0.0	50.3
226	29.0	0.0	57.9

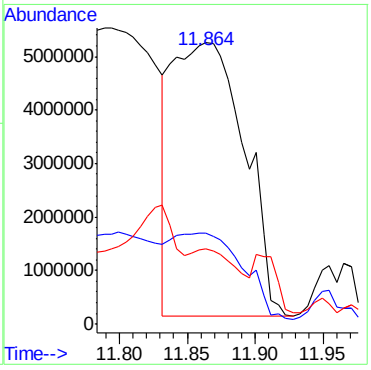


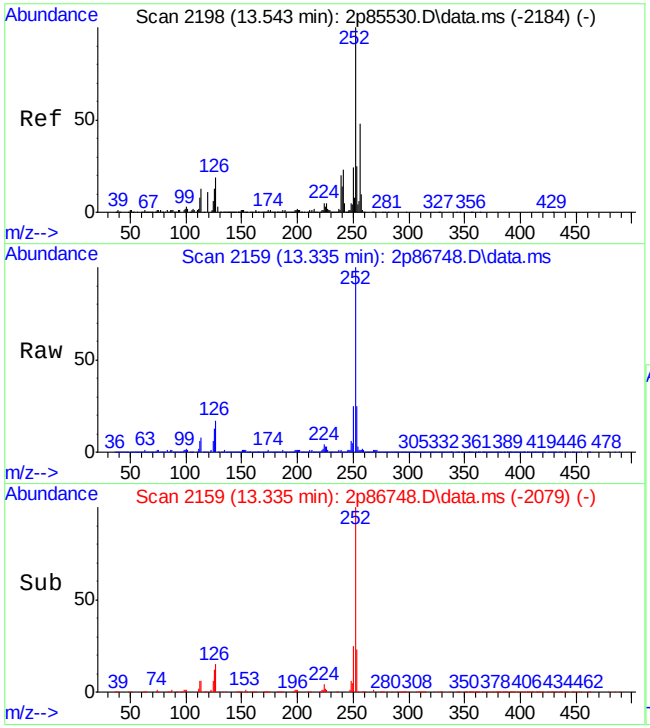


#89
Chrysene
Concen: 665.21 ppm
RT: 11.864 min Scan# 1884
Delta R.T. -0.075 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:228 Resp:18873793

Ion	Ratio	Lower	Upper
228	100		
226	31.8	0.0	59.2
229	6.7	0.0	50.2

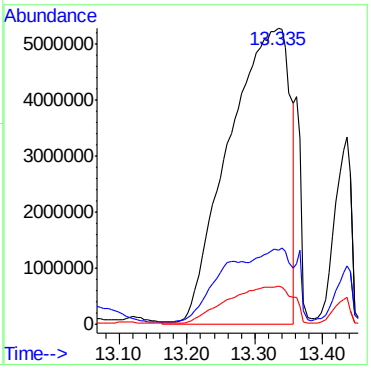


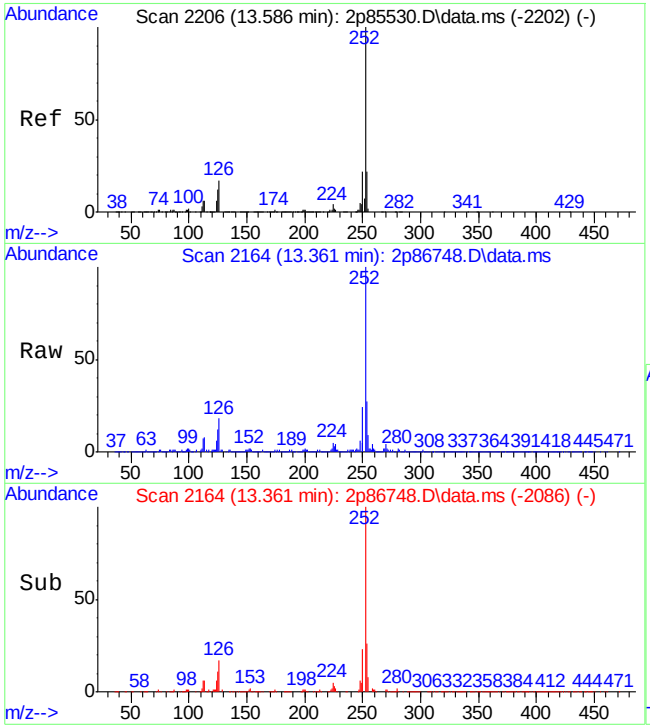


#93
Benzo[b]fluoranthene
Concen: 1312.90 ppm m
RT: 13.335 min Scan# 2159
Delta R.T. -0.069 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:252 Resp:32912954

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	54.9
125	12.8	0.0	42.5

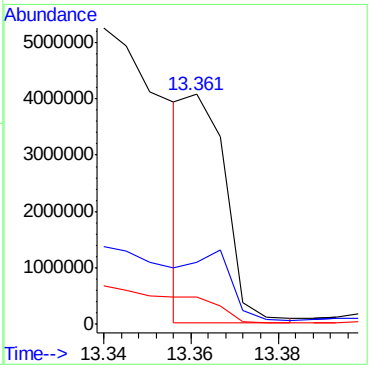


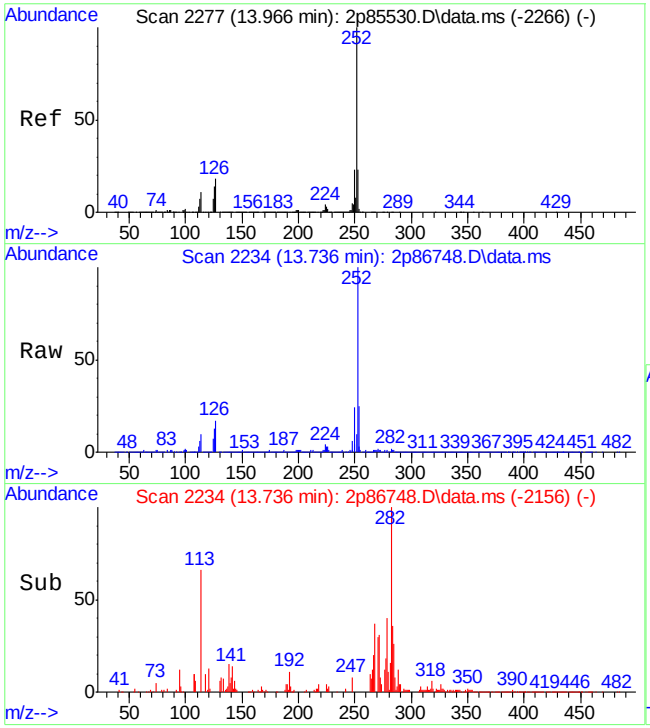


#94
Benzo[k]fluoranthene
Concen: 124.19 ppm m
RT: 13.361 min Scan# 2164
Delta R.T. -0.081 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:252 Resp: 2545690

Ion	Ratio	Lower	Upper
252	100		
253	26.8	0.0	52.4
125	11.9	0.0	40.8

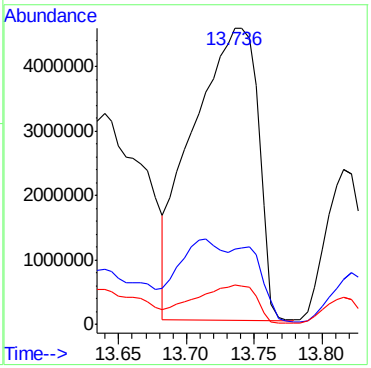


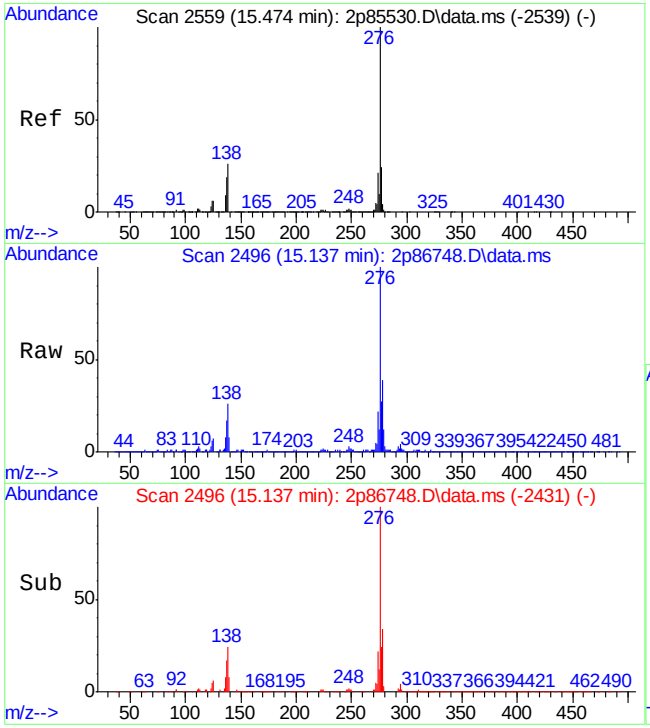


#95
Benzo[a]pyrene
Concen: 728.64 ppm
RT: 13.736 min Scan# 2234
Delta R.T. -0.085 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:252 Resp:15351010

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.1
125	12.9	0.0	42.5

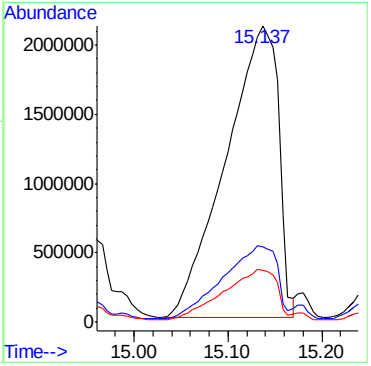


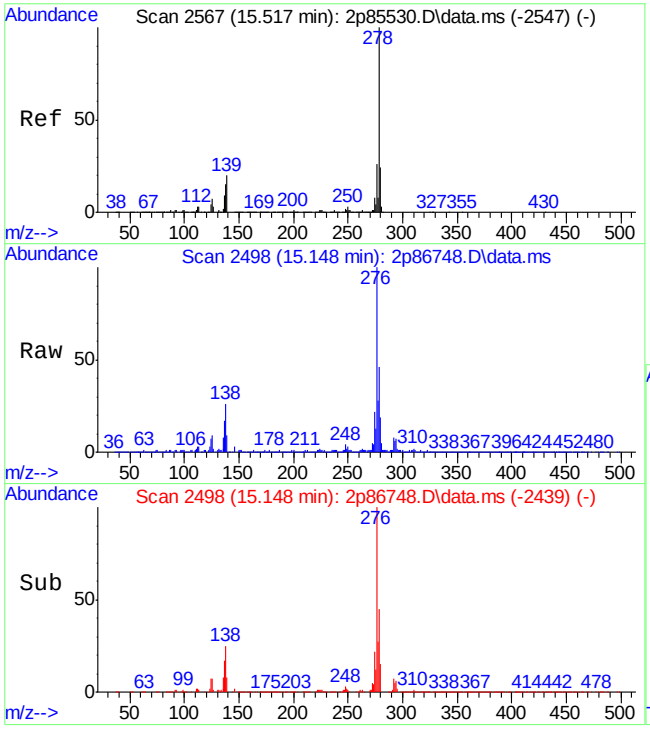


#96
Indeno[1,2,3-cd]pyrene
Concen: 342.77 ppm
RT: 15.137 min Scan# 2496
Delta R.T. -0.155 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:276 Resp: 8230803

Ion	Ratio	Lower	Upper
276	100		
138	23.9	0.0	55.3
137	16.6	0.0	48.5

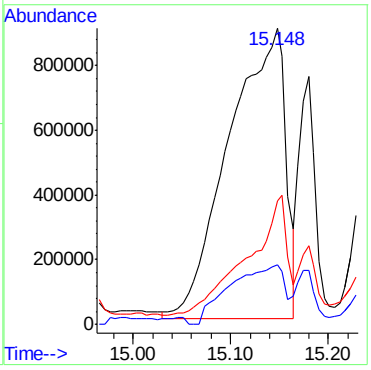


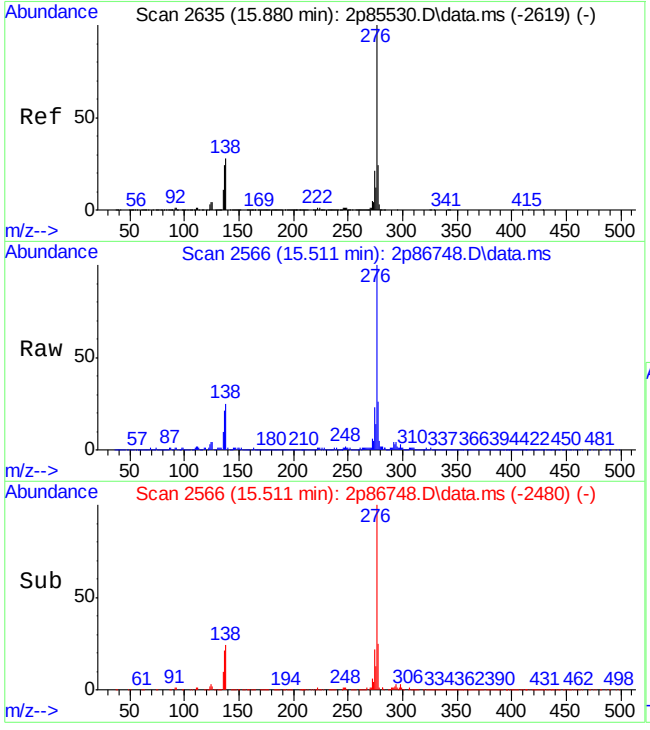


#98
Dibenz[a,h]anthracene
Concen: 193.68 ppm
RT: 15.148 min Scan# 2498
Delta R.T. -0.182 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:278 Resp: 3622522

Ion	Ratio	Lower	Upper
278	100		
139	17.9	0.0	50.3
279	40.8	0.0	54.3

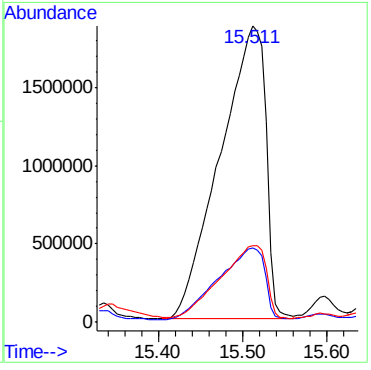




#100
Benzo[g,h,i]perylene
Concen: 369.86 ppm
RT: 15.511 min Scan# 2566
Delta R.T. -0.039 min
Lab File: 2p86748.D
Acq: 19 Apr 2019 5:54 am

Tgt Ion:276 Resp: 7030073

Ion	Ratio	Lower	Upper
276	100		
138	24.4	0.0	57.9
277	24.9	0.0	54.0



Manual Integration Approval Summary

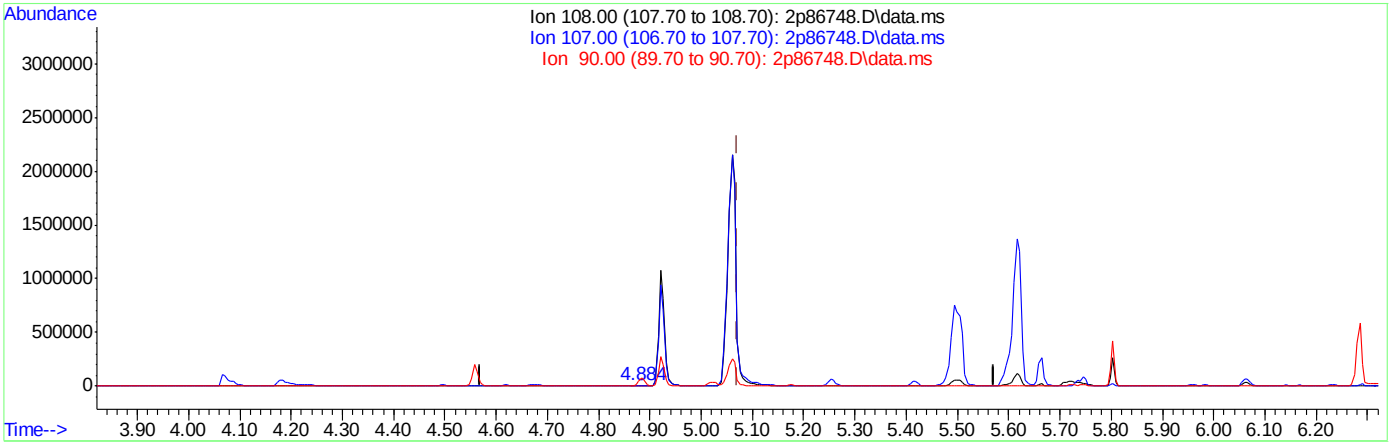
Sample Number: JC86406-5
Lab FileID: 2P86748.D
Injection Time: 04/19/19 05:54
Method: SW846 8270D
Analyst approved: 04/26/19 14:10 Kristi Schollenberger
Supervisor approved: 04/29/19 11:20 Kristi Schollenberger

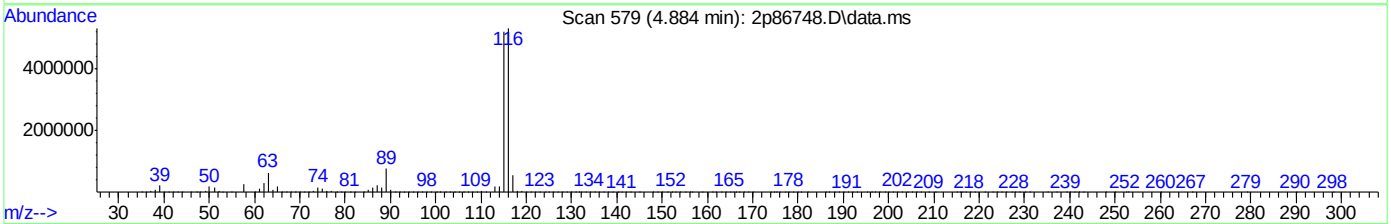
Parameter	CAS	Sig#	R.T. (min.)	Reason
2-Methylphenol	95-48-7		4.92	Poor instrument integration
2,4-Dimethylphenol	105-67-9		5.49	Poor instrument integration
Anthracene	120-12-7		8.61	Poor instrument integration
Carbazole	86-74-8		8.75	Poor instrument integration
Fluoranthene	206-44-0		9.85	Poor instrument integration
Pyrene	129-00-0		10.18	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.33	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		13.36	Poor instrument integration

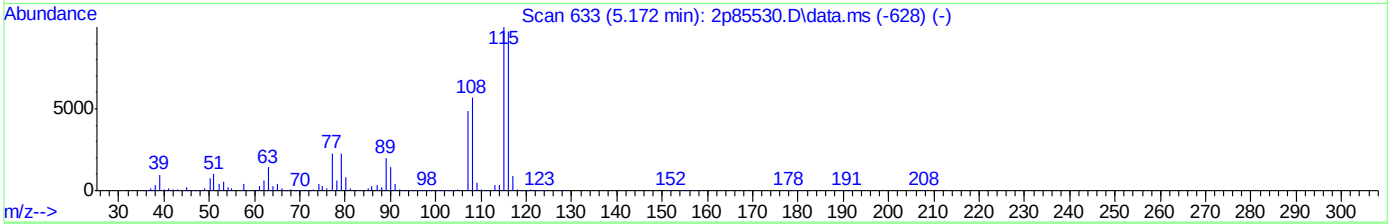
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(19) 2-Methylphenol (t)

4.884min (-0.187) 0.19ppm

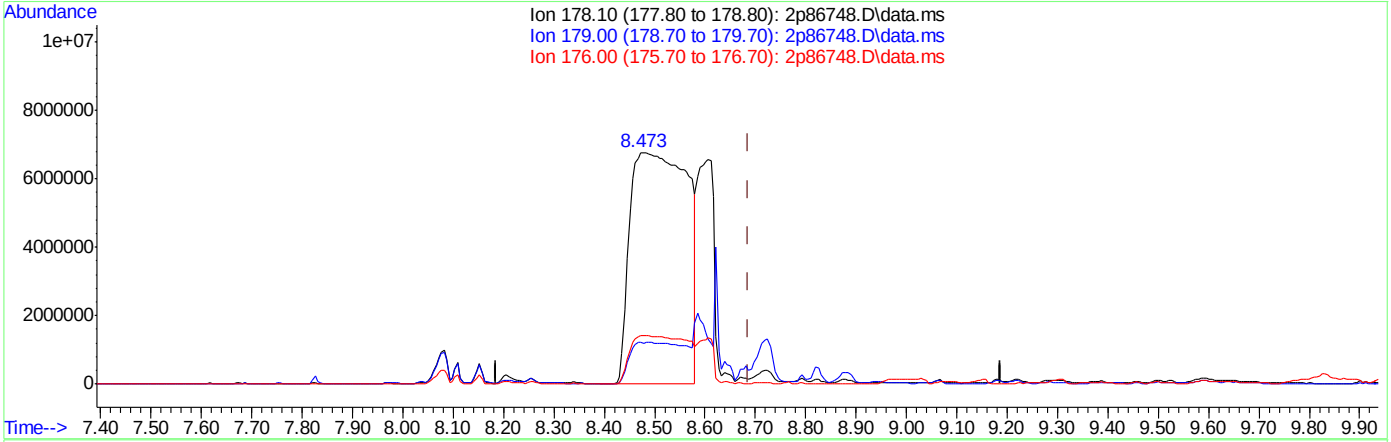
response 3788

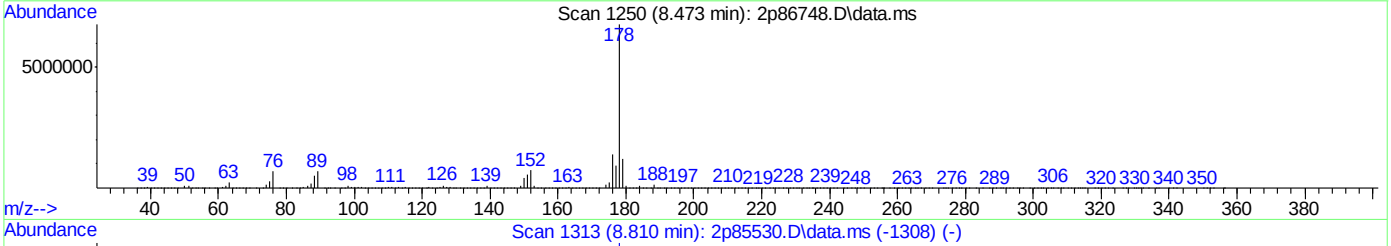
Ion	Exp%	Act%
108.00	100	100
107.00	88.40	12.82#
90.00	23.90	1878.84#
0.00	0.00	0.00

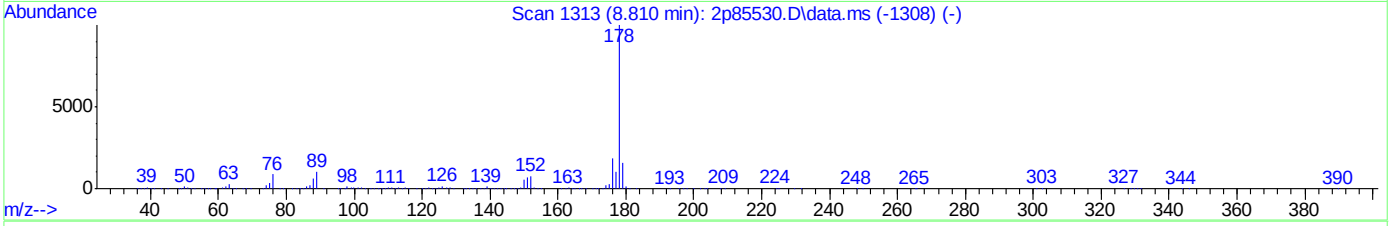
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(78) Anthracene (t)

8.473min (-0.214) 2558.54ppm

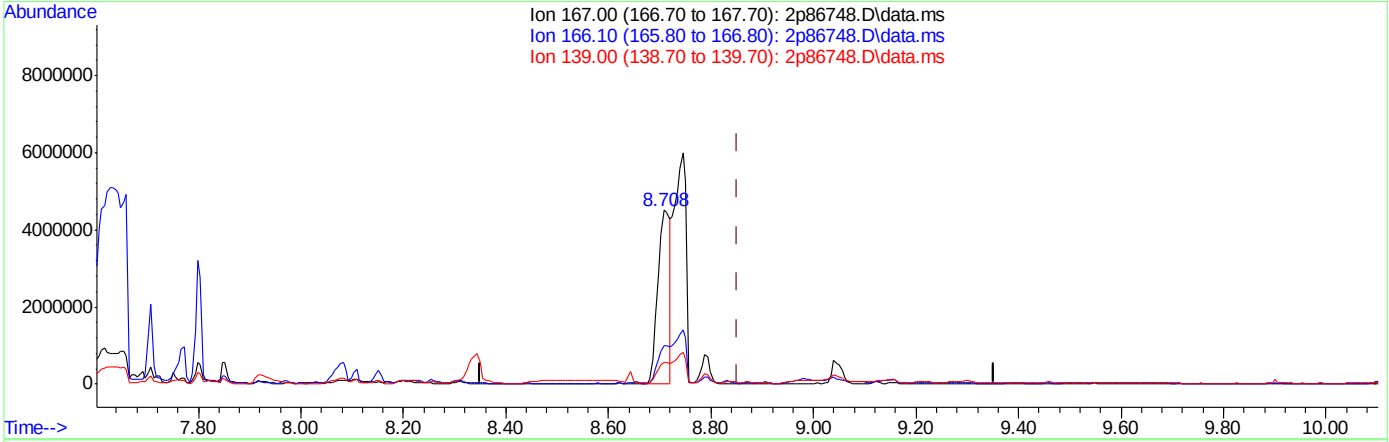
response 53240629

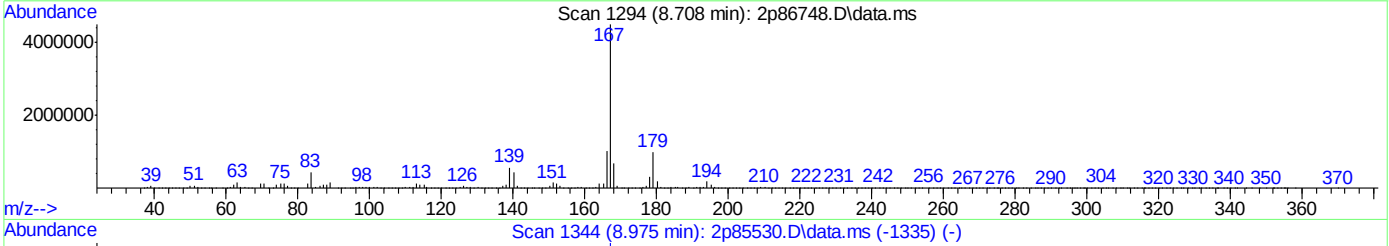
Ion	Exp%	Act%
178.10	100	100
179.00	15.70	8.18
176.00	18.60	21.74
0.00	0.00	0.00

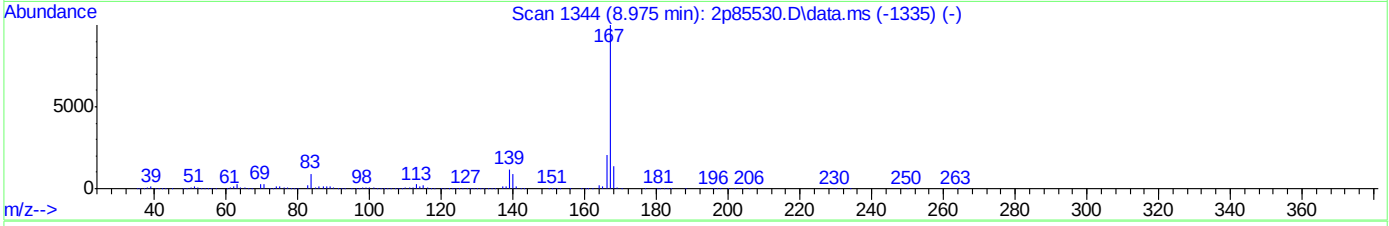
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(79) Carbazole (t)

8.708min (-0.144) 333.81ppm

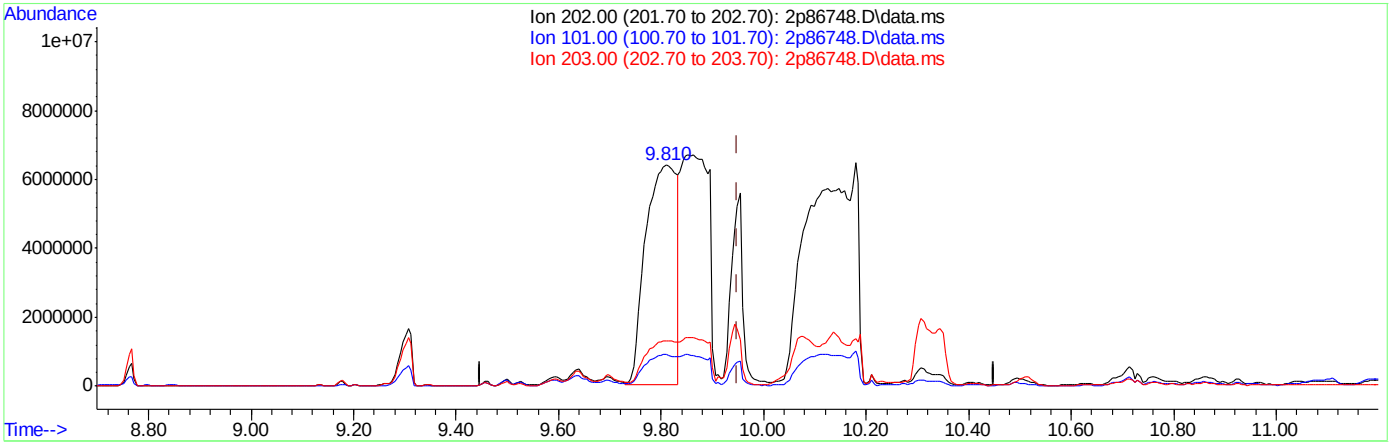
response 7182498

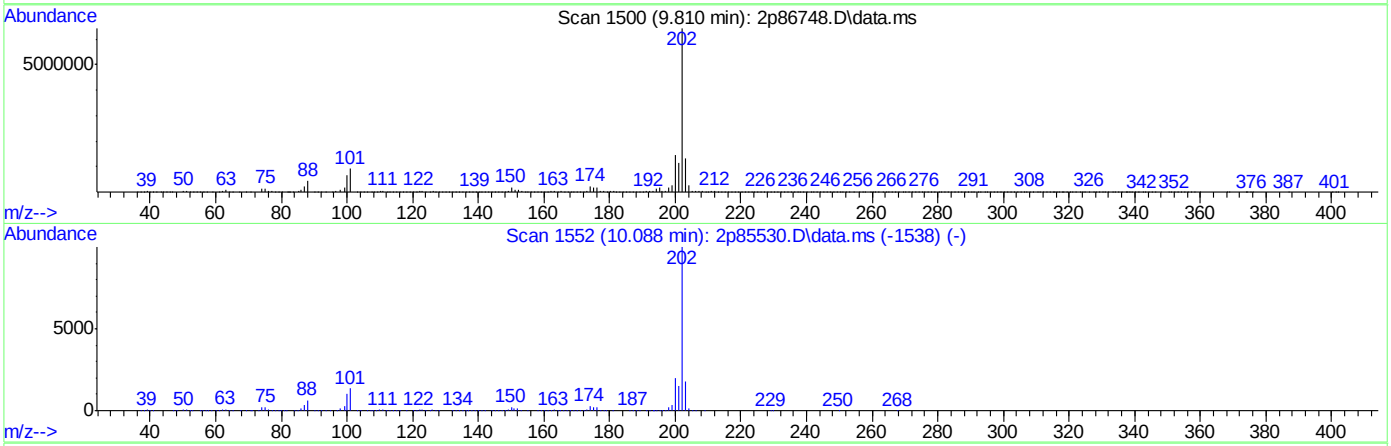
Ion	Exp%	Act%
167.00	100	100
166.10	20.80	21.74
139.00	14.20	11.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration





TIC: 2p86748.D\data.ms

(81) Fluoranthene (t)

9.810min (-0.139) 908.73ppm

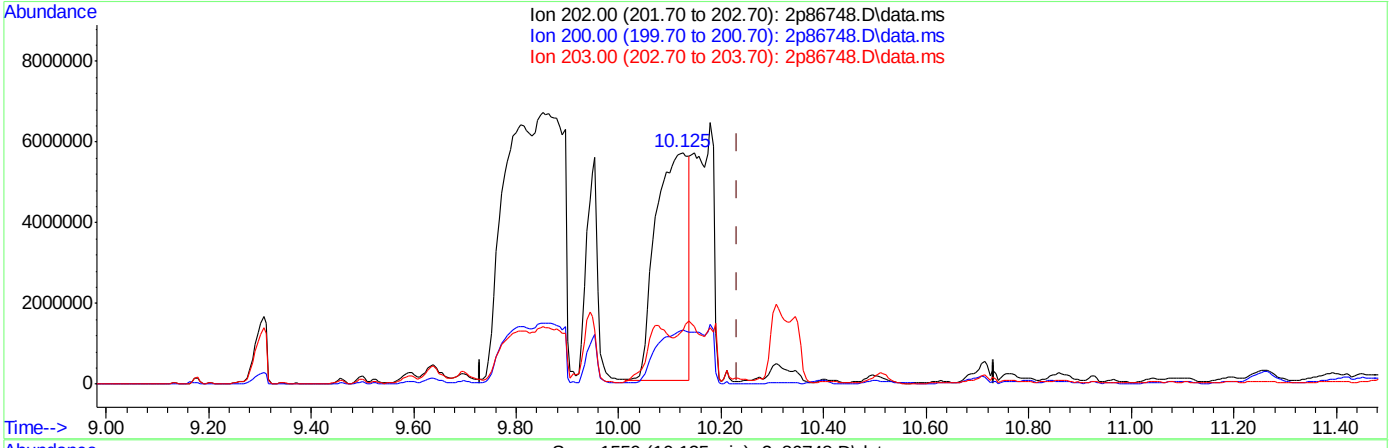
response 26429649

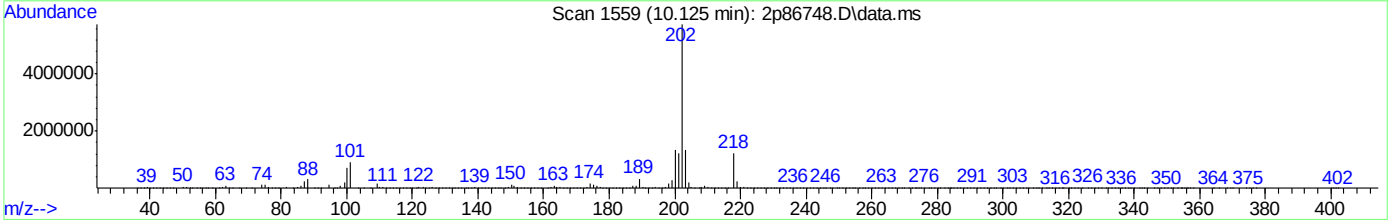
Ion	Exp%	Act%
202.00	100	100
101.00	13.70	14.05
203.00	18.60	18.65
0.00	0.00	0.00

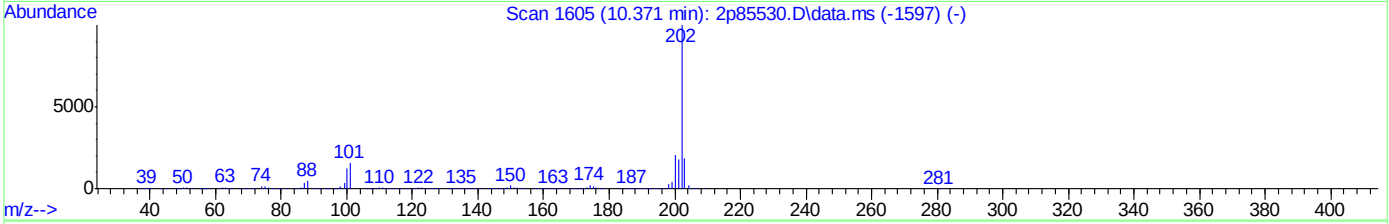
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(84) Pyrene (t)

10.125min (-0.107) 595.01ppm

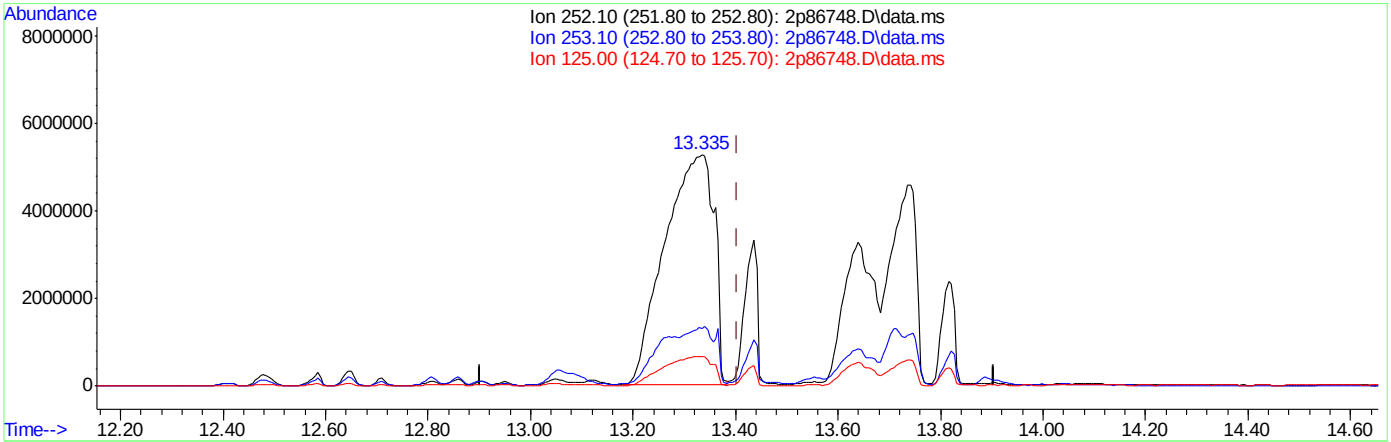
response 24652318

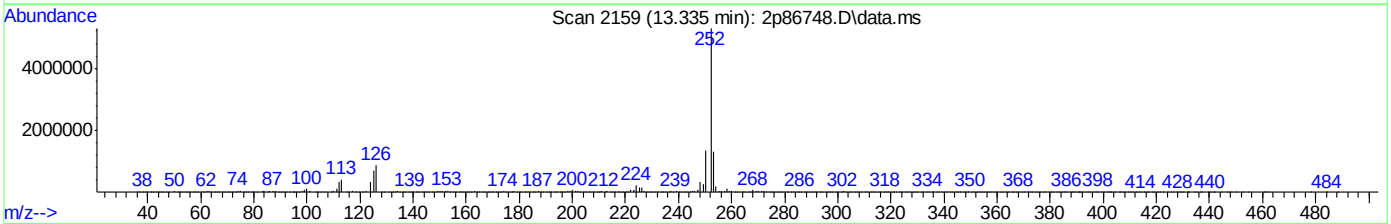
Ion	Exp%	Act%
202.00	100	100
200.00	20.10	23.66
203.00	17.40	18.84
0.00	0.00	0.00

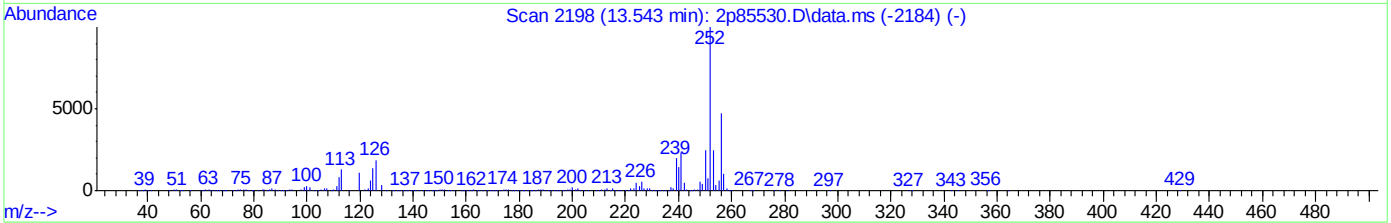
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.335min (-0.069) 1398.46ppm

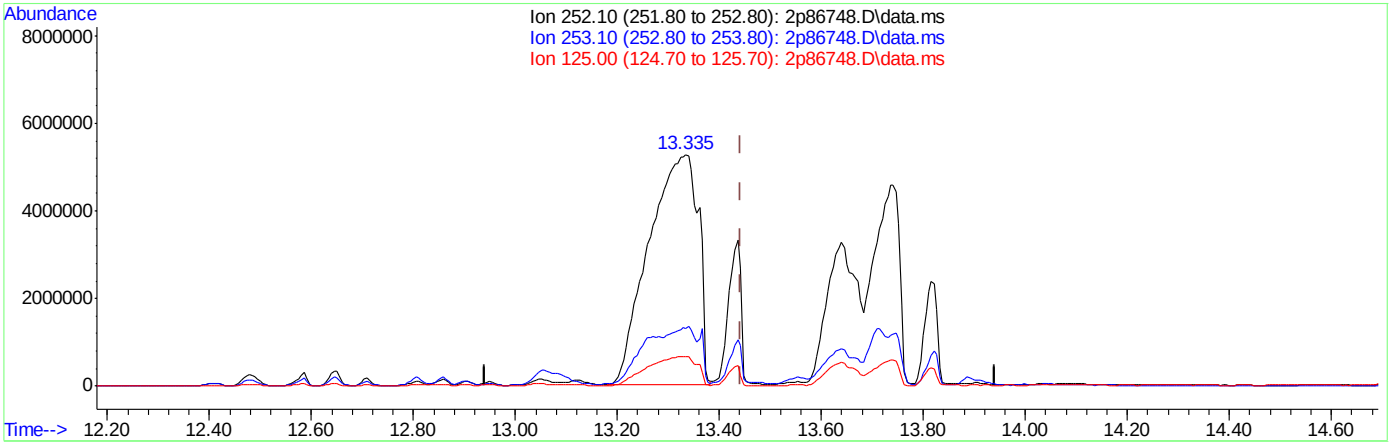
response 35058019

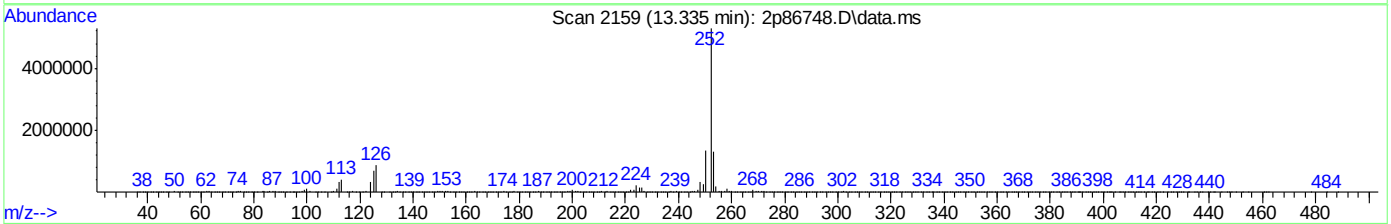
Ion	Exp%	Act%
252.10	100	100
253.10	24.90	24.15
125.00	12.50	12.64
0.00	0.00	0.00

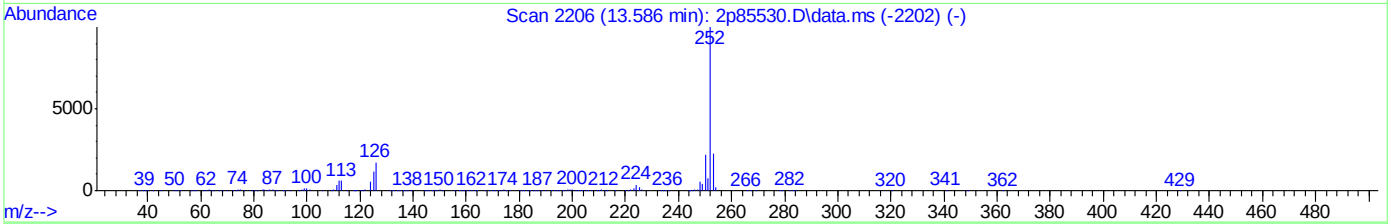
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:41:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86748.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.335min (-0.107) 1710.27ppm

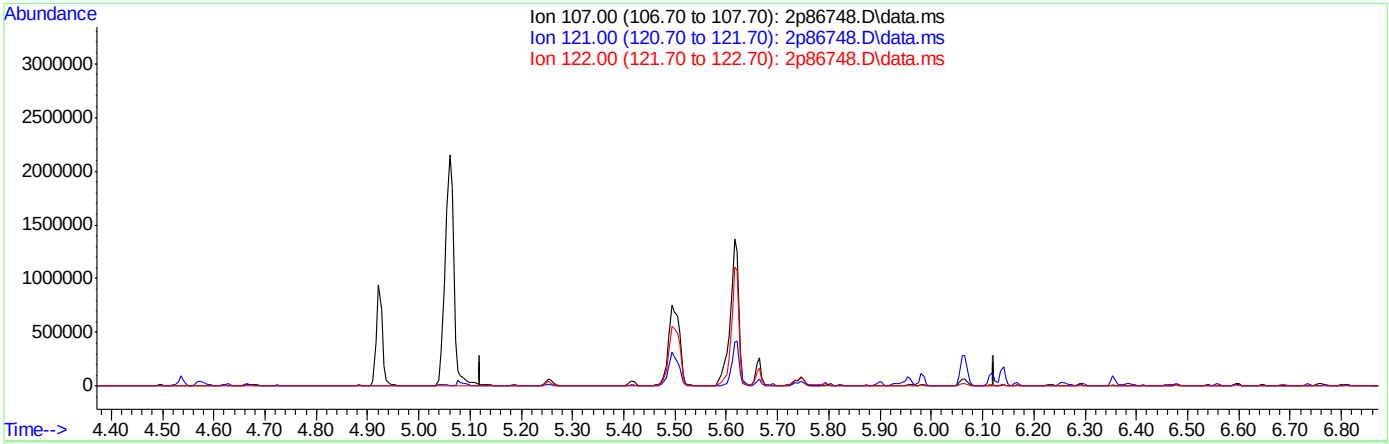
response 35058019

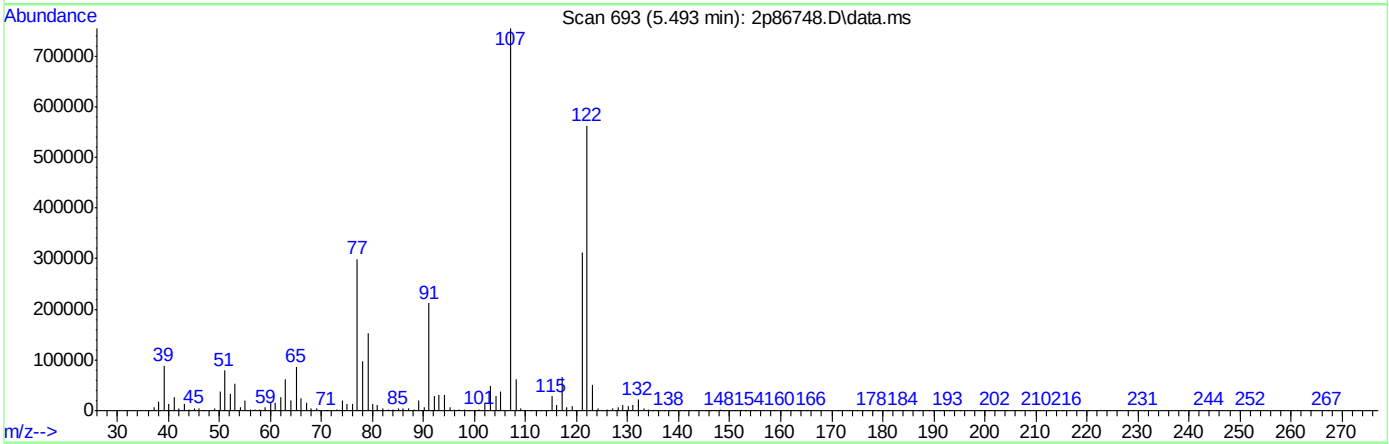
Ion	Exp%	Act%
252.10	100	100
253.10	22.40	24.15
125.00	10.80	12.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86748.D
Acq On : 19 Apr 2019 5:54 am
Operator : carolb
Sample : jc86406-5
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 19 11:51:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration





TIC: 2p86748.D\data.ms

(30) 2,4-Dimethylphenol (t)

5.622min 0.00ppm d

response 0

Ion	Exp%	Act%
107.00	100	0.00
121.00	43.30	0.00
122.00	71.50	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 11:20

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\04_apr\04-26-2019\michellc\ez6762\
Data File : z137270.d
Acq On : 25 Apr 2019 10:31 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6762,31.4,,,1,100
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 26 14:05:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	60732	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	243437	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	134767	40.00	ppm	0.00
69) Phenanthrene-d10	7.636	188	259471	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	248563	40.00	ppm	0.00
91) Perylene-d12	13.267	264	237023	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	60732	40.00	ppm	0.00
103) Phenanthrene-d10a	7.636	188	259471	40.00	ppm	0.00
107) Chrysene-d12a	11.231	240	248563	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	134767	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	243437	40.00	ppm	0.00
113) Phenanthrene-d10b	7.636	188	259471	40.00	ppm	0.00
115) Chrysene-d12b	11.231	240	248563	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
21) 3&4-Methylphenol	4.425	108	2528	1.27	ppm	# 73
38) Naphthalene	5.013	128	255085	40.18	ppm	99
44) 2-Methylnaphthalene	5.504	141	54639	15.47	ppm	99
53) Biphenyl	5.835	154	14660	2.83	ppm	99
56) Acenaphthylene	6.140	152	51940	8.15	ppm	99
59) Acenaphthene	6.274	153	6114	1.42	ppm	88
62) Dibenzofuran	6.412	168	77152	13.73	ppm	99
66) Fluorene	6.706	166	99501	21.27	ppm	99
77) Phenanthrene	7.668	178	445089	60.44	ppm	99
78) Anthracene	7.721	178	137002	18.66	ppm	100
79) Carbazole	7.924	167	58123	7.92	ppm	98
81) Fluoranthene	9.148	202	305618	38.13	ppm	97
84) Pyrene	9.447	202	218652	26.33	ppm	100
87) Benzo[a]anthracene	11.220	228	121888	15.75	ppm	99
89) Chrysene	11.269	228	99735	13.23	ppm	97
93) Benzo[b]fluoranthene	12.764	252	101601	13.50	ppm	96

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\04_apr\04-26-2019\michellc\ez6762\
Data File : z137270.d
Acq On : 25 Apr 2019 10:31 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6762,31.4,,,1,100
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 26 14:05:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	Benzo[k]fluoranthene	12.796	252	34814	5.21	ppm	94
95)	Benzo[a]pyrene	13.186	252	69656	11.32	ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.559	276	34976	6.07	ppm	86
98)	Dibenz[a,h]anthracene	14.591	278	7871m	1.31	ppm	
100)	Benzo[g,h,i]perylene	14.842	276	30592	5.64	ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

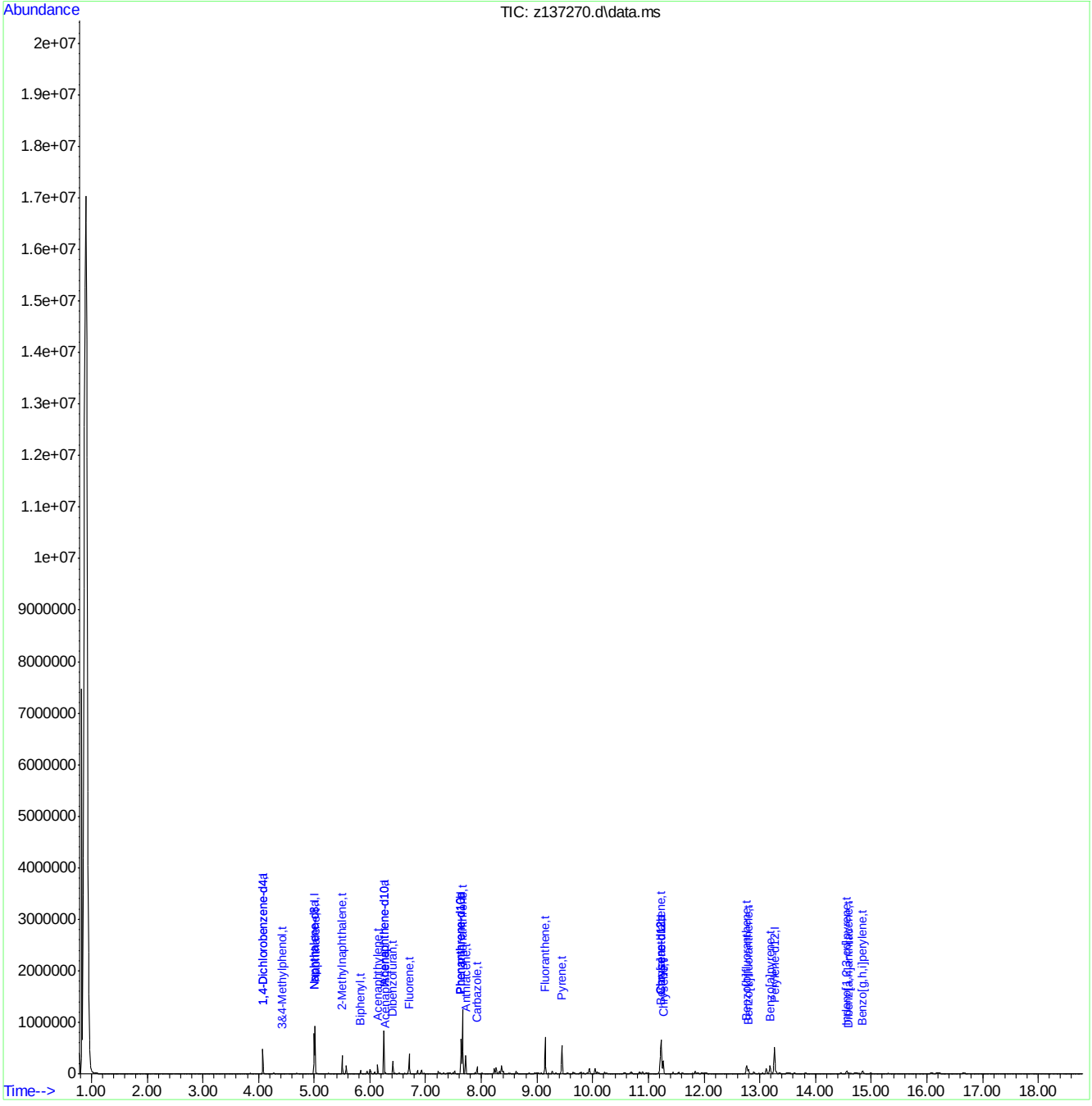
9.1.9

6

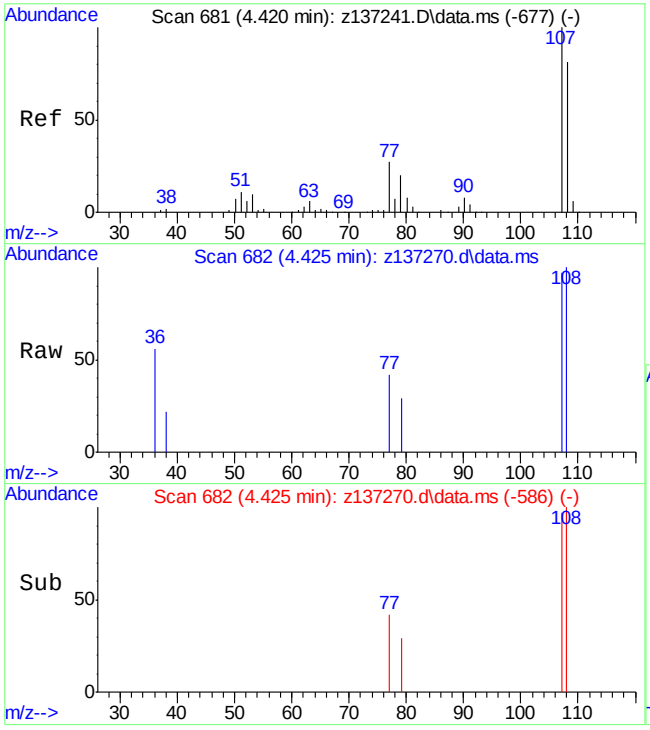
Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\04_apr\04-26-2019\michellc\ez6762\
Data File : z137270.d
Acq On : 25 Apr 2019 10:31 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6762,31.4,,,1,100
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 26 14:05:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration



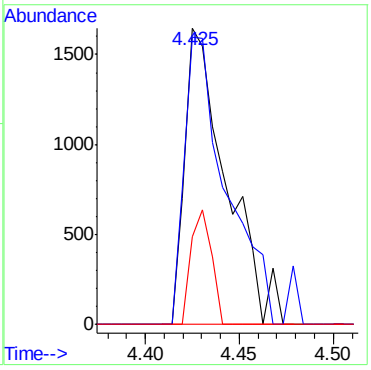
MZ6761.M Fri Apr 26 14:05:34 2019 MANAGER Page: 3

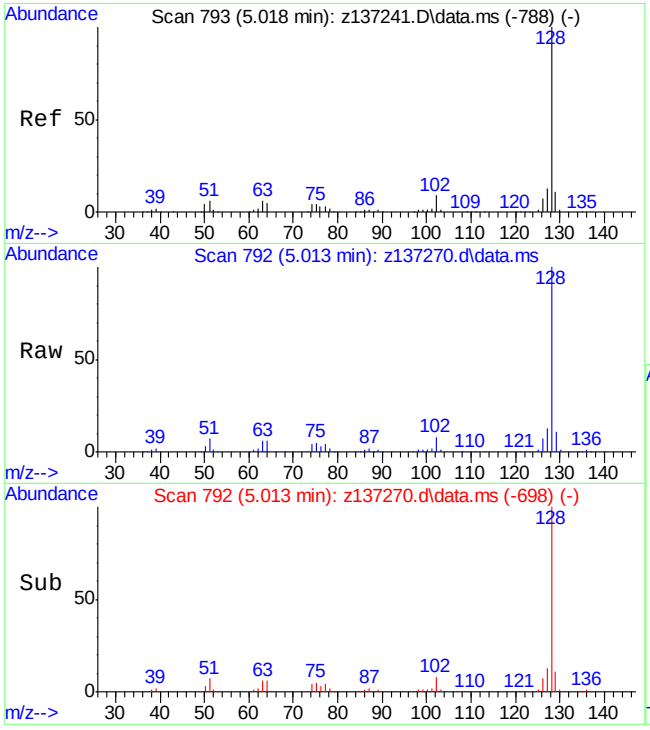


#21
3&4-Methylphenol
Concen: 1.27 ppm
RT: 4.425 min Scan# 682
Delta R.T. 0.011 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:108 Resp: 2528

Ion	Ratio	Lower	Upper
108	100		
107	87.1	93.0	153.0#
79	29.4	0.0	57.0

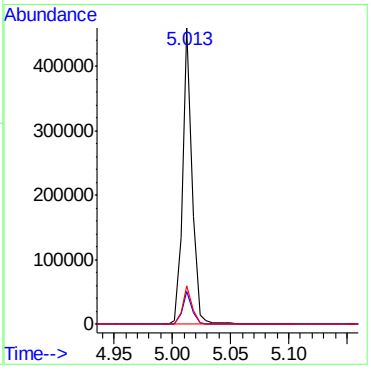


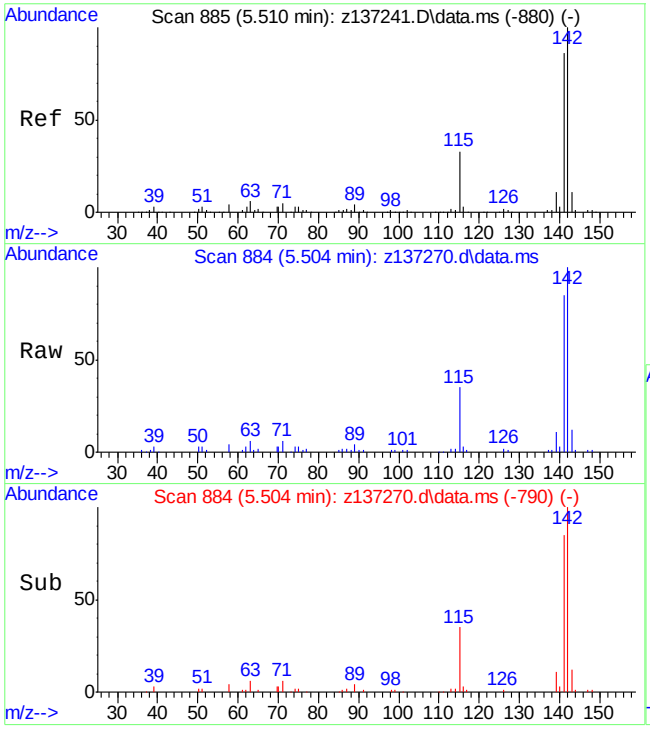


#38
Naphthalene
Concen: 40.18 ppm
RT: 5.013 min Scan# 792
Delta R.T. 0.000 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:128 Resp: 255085

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	41.4
127	12.8	0.0	42.7

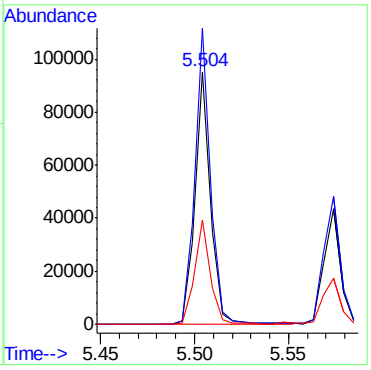


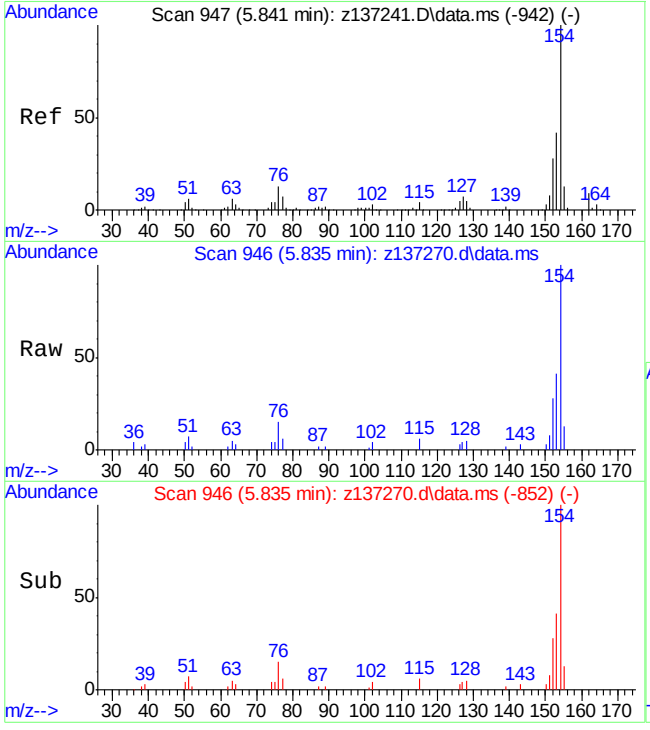


#44
2-Methylnaphthalene
Concen: 15.47 ppm
RT: 5.504 min Scan# 884
Delta R.T. 0.000 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:141 Resp: 54639

Ion	Ratio	Lower	Upper
141	100		
142	117.1	85.9	145.9
115	41.2	12.3	72.3

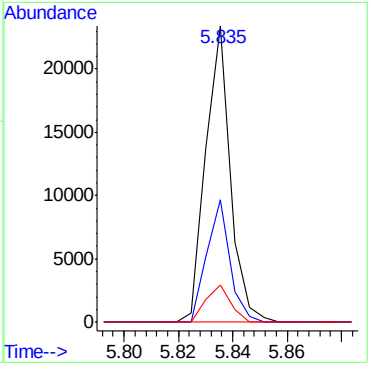


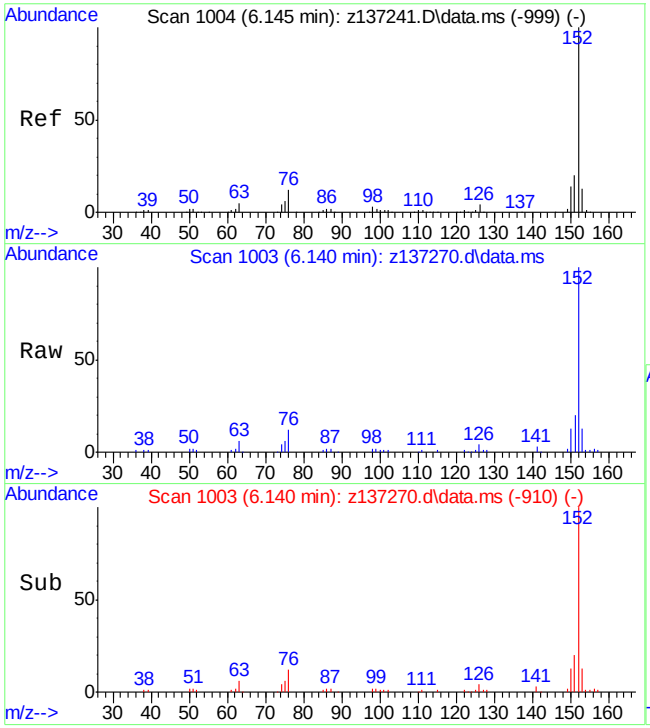


#53
Biphenyl
Concen: 2.83 ppm
RT: 5.835 min Scan# 946
Delta R.T. 0.000 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:154 Resp: 14660

Ion	Ratio	Lower	Upper
154	100		
153	41.2	11.1	71.1
155	12.6	0.0	43.2

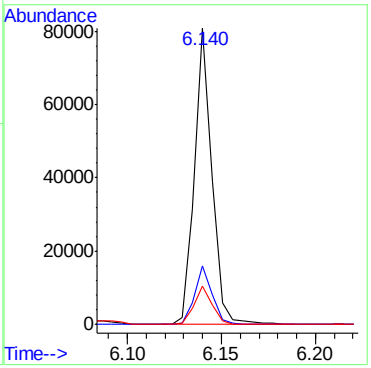


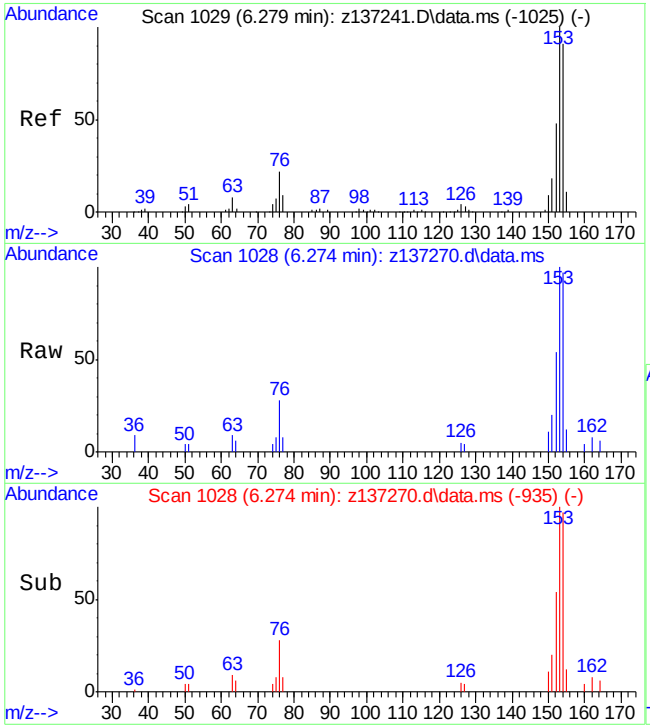


#56
Acenaphthylene
Concen: 8.15 ppm
RT: 6.140 min Scan# 1003
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:152 Resp: 51940

Ion	Ratio	Lower	Upper
152	100		
151	19.6	0.0	50.3
153	12.9	0.0	42.9

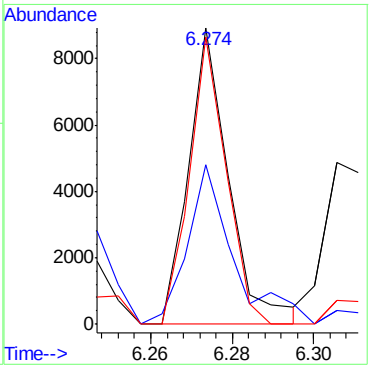


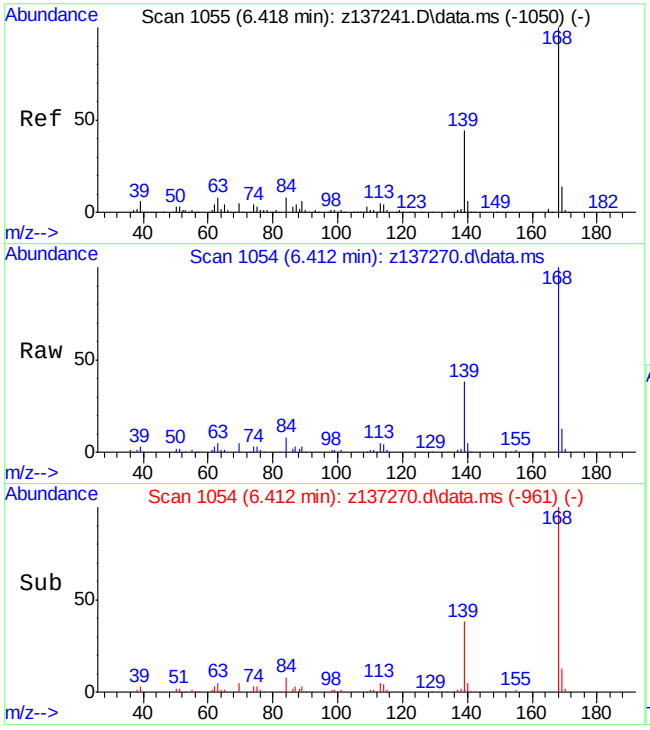


#59
Acenaphthene
Concen: 1.42 ppm
RT: 6.274 min Scan# 1028
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:153 Resp: 6114

Ion	Ratio	Lower	Upper
153	100		
152	50.2	16.7	76.7
154	99.9	55.0	115.0

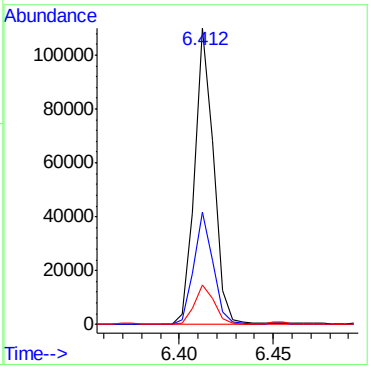


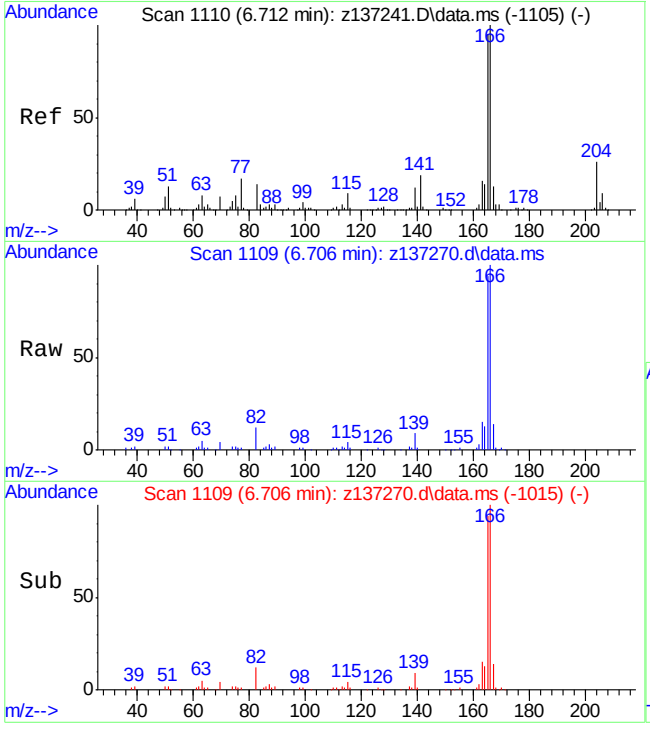


#62
Dibenzofuran
Concen: 13.73 ppm
RT: 6.412 min Scan# 1054
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:168 Resp: 77152

Ion	Ratio	Lower	Upper
168	100		
139	37.9	9.0	69.0
169	13.5	0.0	43.4

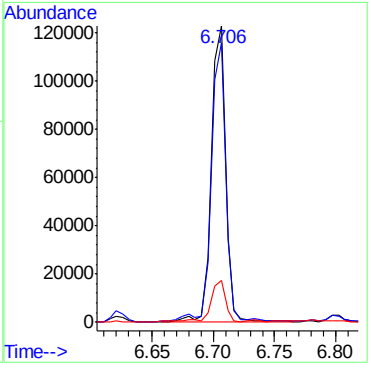


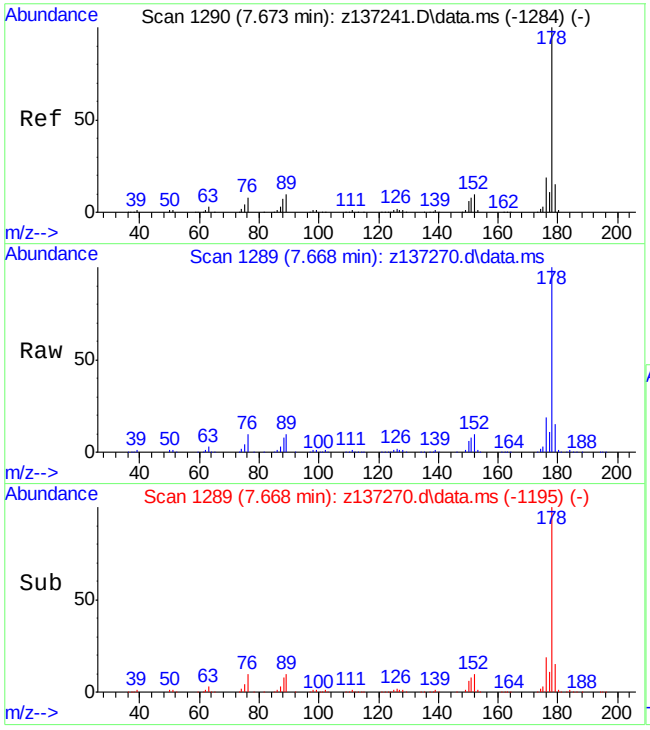


#66
Fluorene
Concen: 21.27 ppm
RT: 6.706 min Scan# 1109
Delta R.T. 0.000 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:166 Resp: 99501

Ion	Ratio	Lower	Upper
166	100		
165	93.9	65.1	125.1
167	13.7	0.0	43.6

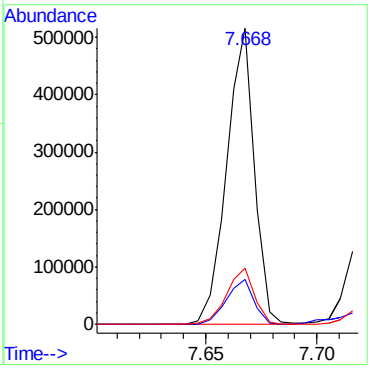


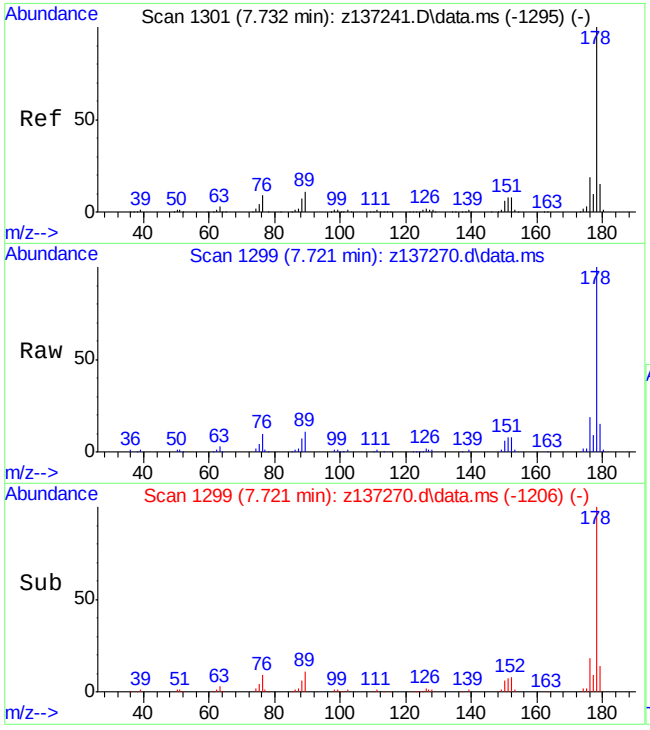


#77
Phenanthrene
Concen: 60.44 ppm
RT: 7.668 min Scan# 1289
Delta R.T. 0.000 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:178 Resp: 445089

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	44.7
176	19.1	0.0	49.0

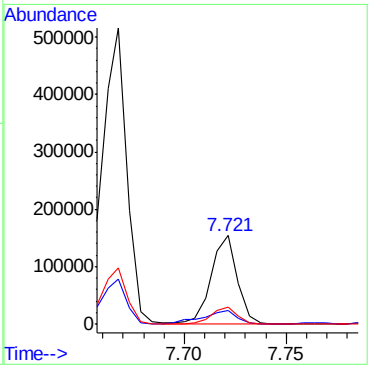


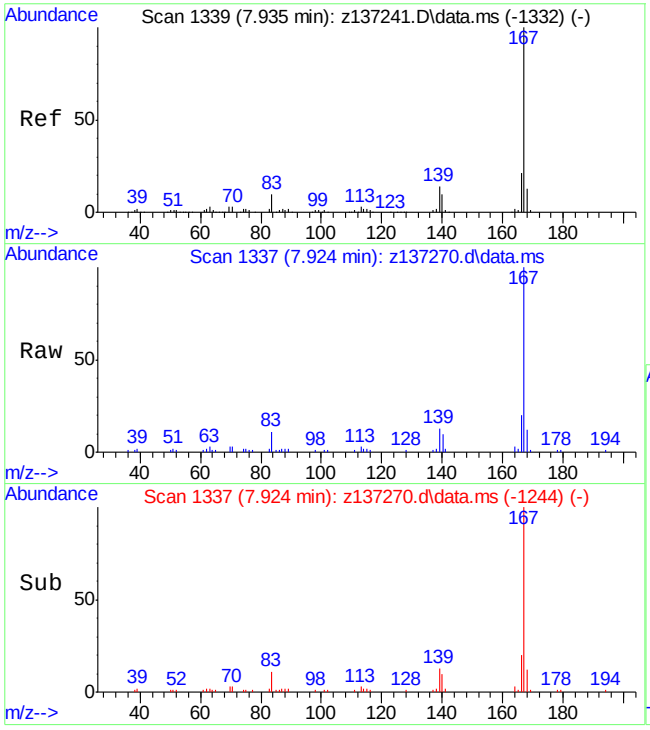


#78
Anthracene
Concen: 18.66 ppm
RT: 7.721 min Scan# 1299
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:178 Resp: 137002

Ion	Ratio	Lower	Upper
178	100		
179	14.7	0.0	44.9
176	18.8	0.0	48.7

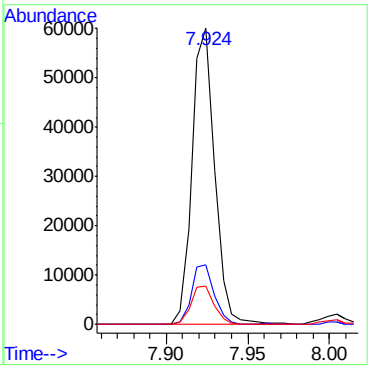


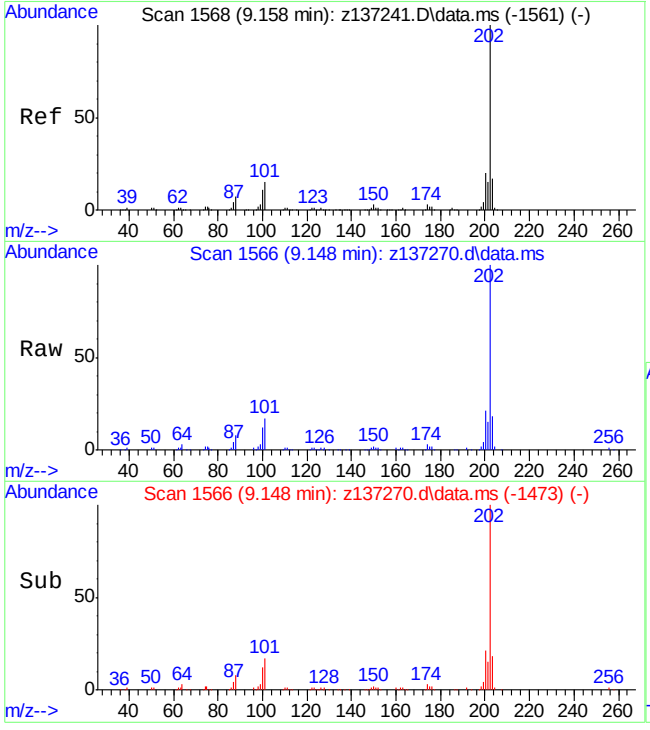


#79
Carbazole
Concen: 7.92 ppm
RT: 7.924 min Scan# 1337
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:167 Resp: 58123

Ion	Ratio	Lower	Upper
167	100		
166	20.3	0.0	51.1
139	12.9	0.0	43.4

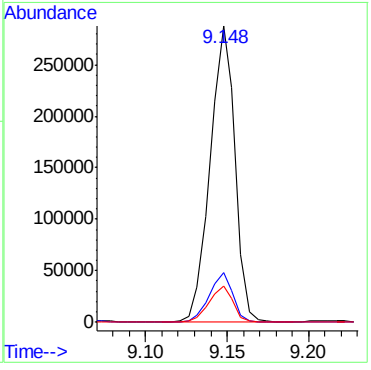


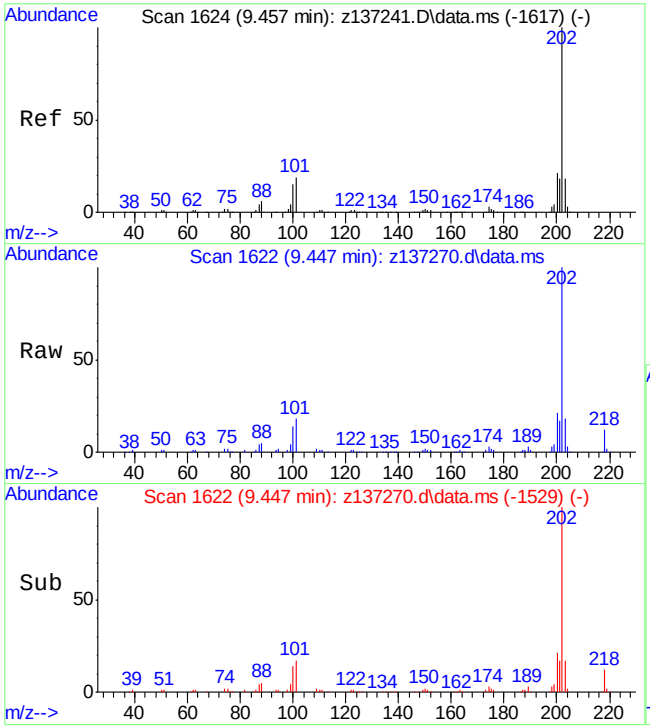


#81
Fluoranthene
Concen: 38.13 ppm
RT: 9.148 min Scan# 1566
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:202 Resp: 305618

Ion	Ratio	Lower	Upper
202	100		
101	16.7	0.0	45.3
100	12.2	0.0	40.9

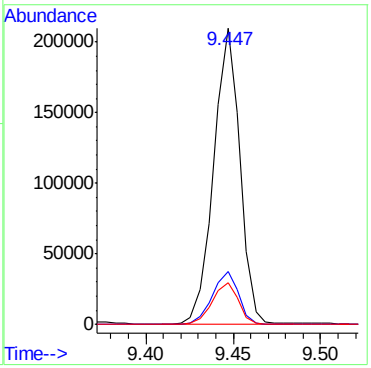


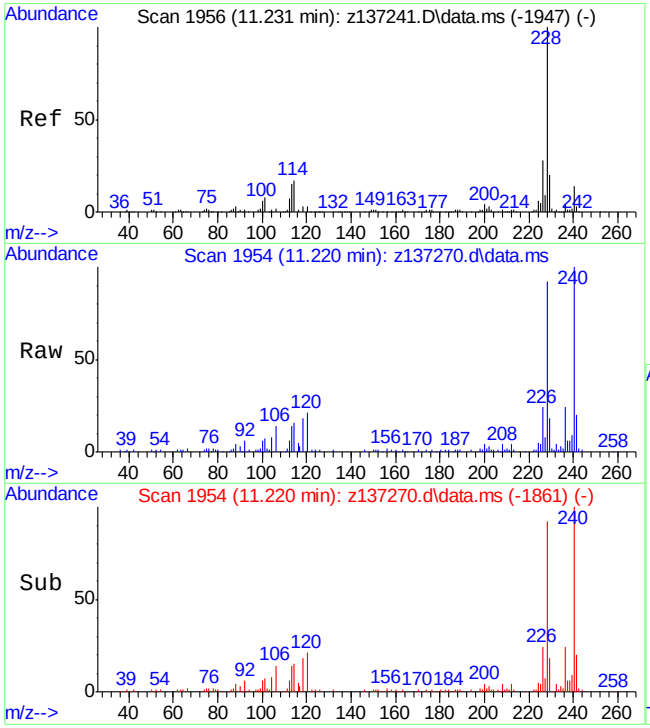


#84
Pyrene
Concen: 26.33 ppm
RT: 9.447 min Scan# 1622
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:202 Resp: 218652

Ion	Ratio	Lower	Upper
202	100		
101	17.7	0.0	47.8
100	14.2	0.0	44.2

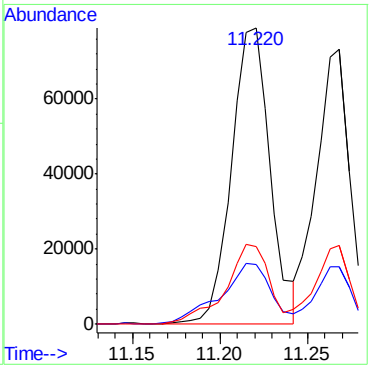


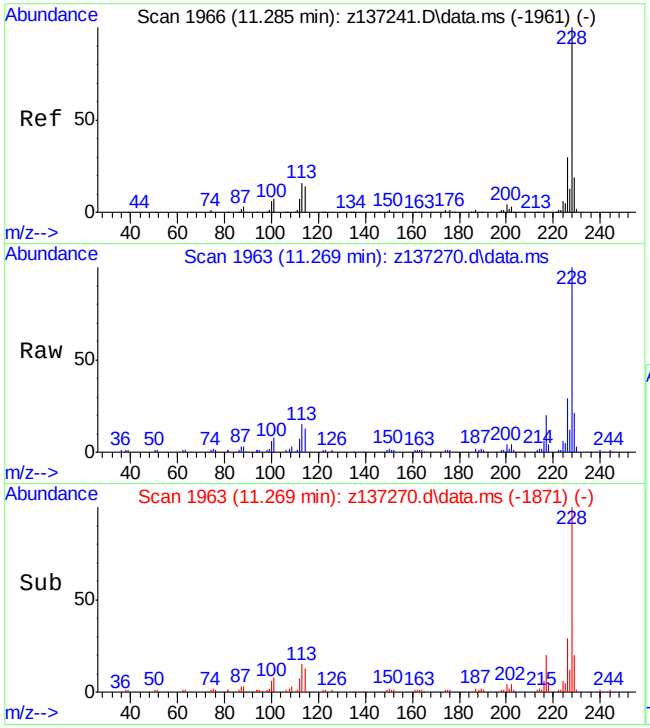


#87
Benzo[a]anthracene
Concen: 15.75 ppm
RT: 11.220 min Scan# 1954
Delta R.T. -0.005 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:228 Resp: 121888

Ion	Ratio	Lower	Upper
228	100		
229	19.5	0.0	49.8
226	25.7	0.0	56.7

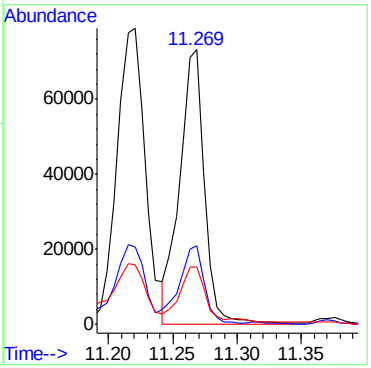


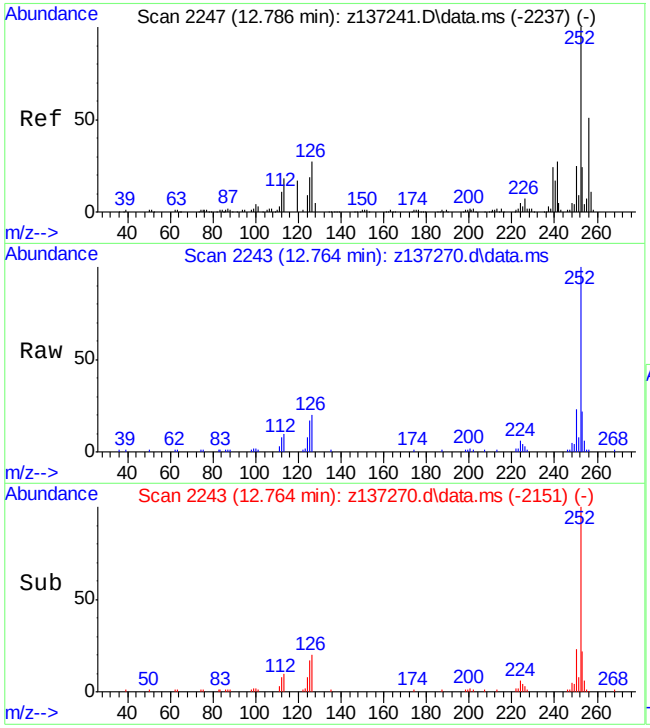


#89
Chrysene
Concen: 13.23 ppm
RT: 11.269 min Scan# 1963
Delta R.T. -0.011 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:228 Resp: 99735

Ion	Ratio	Lower	Upper
228	100		
226	28.1	0.0	59.5
229	20.3	0.0	49.0

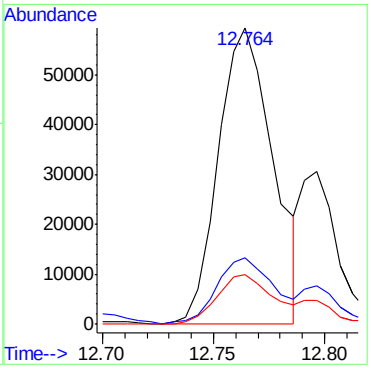


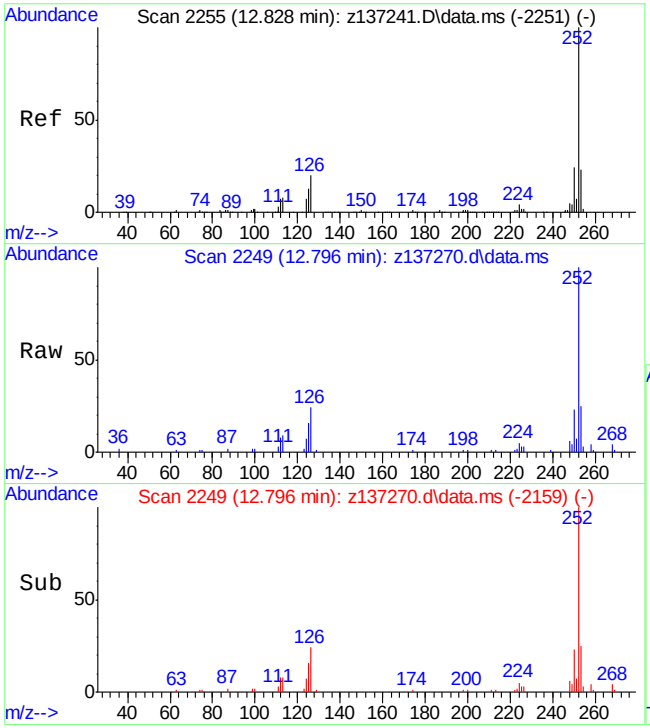


#93
Benzo[b]fluoranthene
Concen: 13.50 ppm
RT: 12.764 min Scan# 2243
Delta R.T. -0.011 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:252 Resp: 101601

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	54.0
125	16.3	0.0	48.3

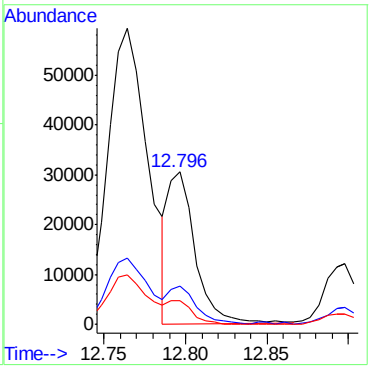


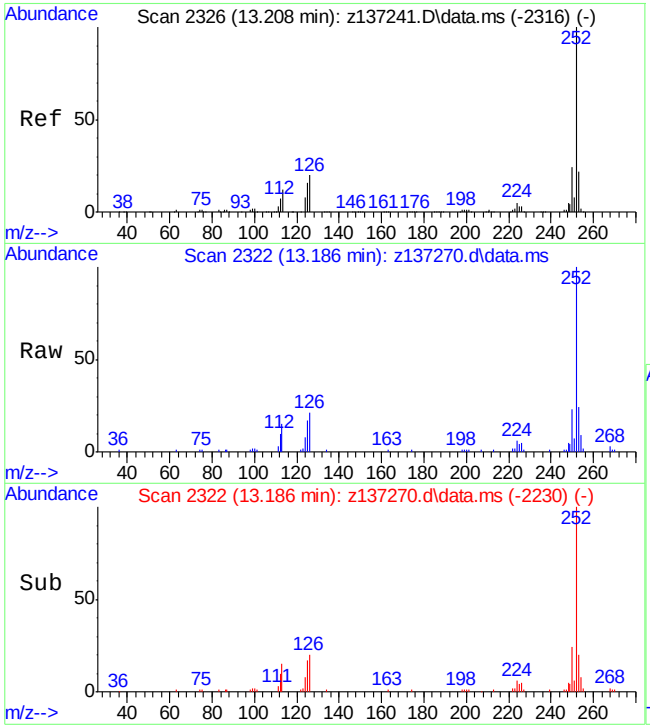


#94
Benzo[k]fluoranthene
Concen: 5.21 ppm
RT: 12.796 min Scan# 2249
Delta R.T. -0.021 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:252 Resp: 34814

Ion	Ratio	Lower	Upper
252	100		
253	26.5	0.0	51.7
125	14.5	0.0	44.4

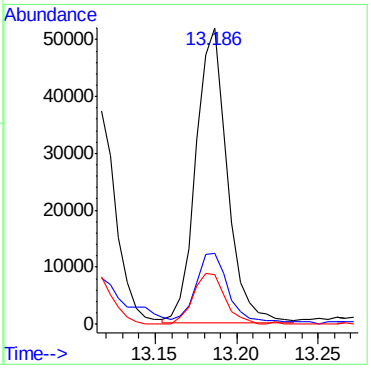


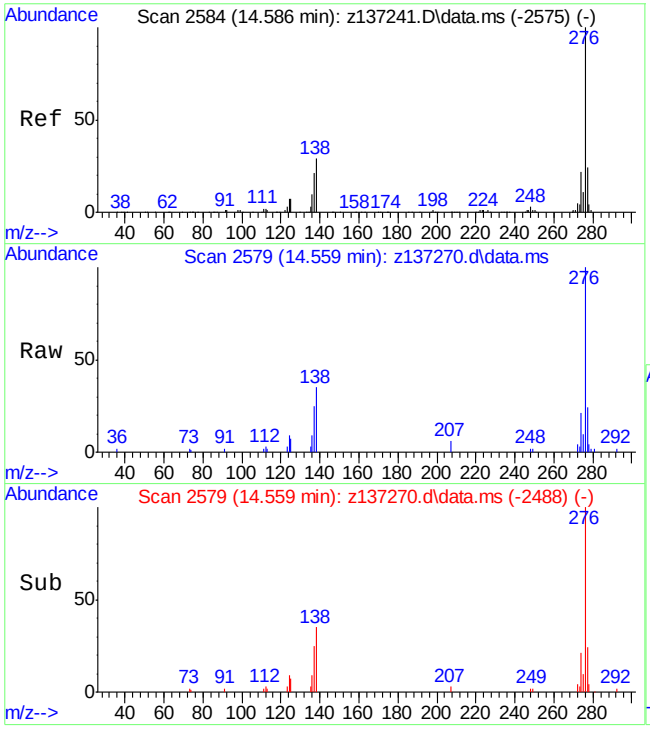


#95
Benzo[a]pyrene
Concen: 11.32 ppm
RT: 13.186 min Scan# 2322
Delta R.T. -0.011 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:252 Resp: 69656

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.9
125	16.9	0.0	45.6

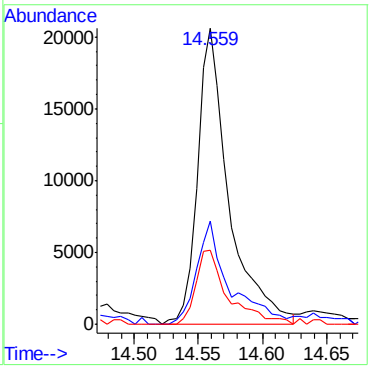


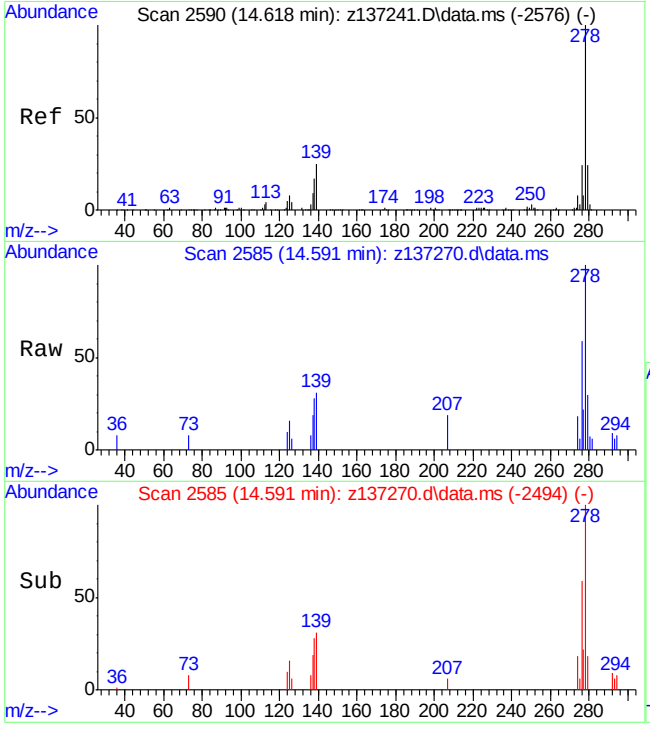


#96
Indeno[1,2,3-cd]pyrene
Concen: 6.07 ppm
RT: 14.559 min Scan# 2579
Delta R.T. -0.016 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:276 Resp: 34976

Ion	Ratio	Lower	Upper
276	100		
138	34.1	0.0	56.2
137	25.5	0.0	50.0

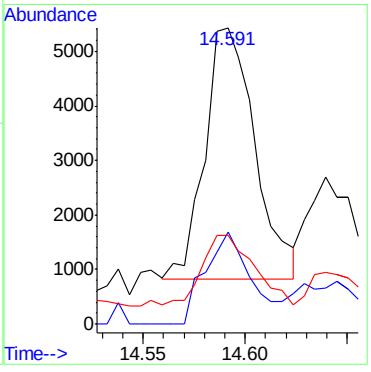


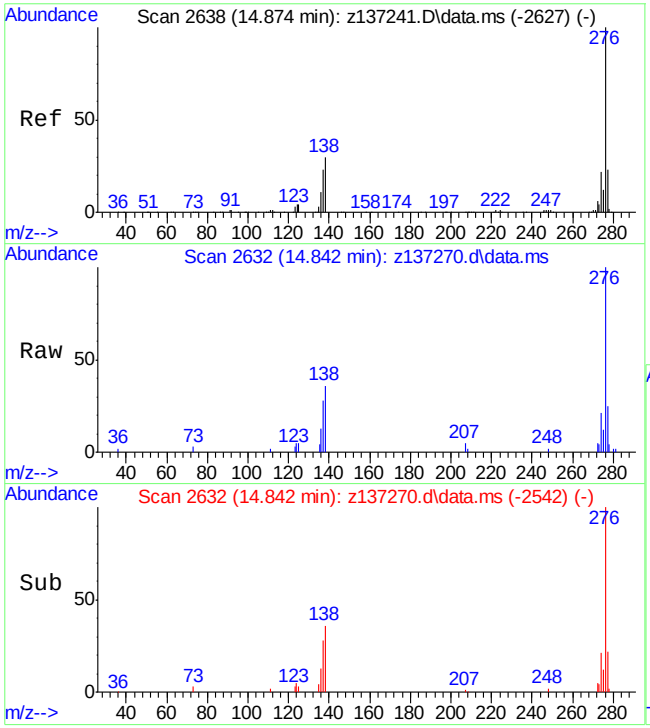


#98
Dibenz[a,h]anthracene
Concen: 1.31 ppm m
RT: 14.591 min Scan# 2585
Delta R.T. -0.016 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:278 Resp: 7871

Ion	Ratio	Lower	Upper
278	100		
139	31.0	0.0	55.5
279	30.1	0.0	53.4

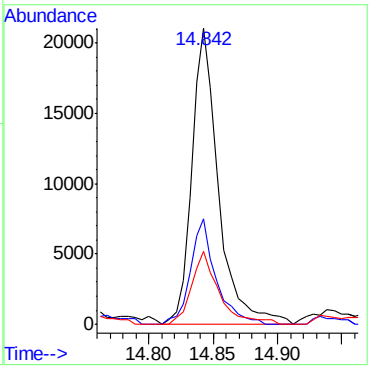




#100
Benzo[g,h,i]perylene
Concen: 5.64 ppm
RT: 14.842 min Scan# 2632
Delta R.T. -0.021 min
Lab File: z137270.d
Acq: 25 Apr 2019 10:31 pm

Tgt Ion:276 Resp: 30592

Ion	Ratio	Lower	Upper
276	100		
138	35.8	0.2	60.2
277	24.8	0.0	53.7



Manual Integration Approval Summary

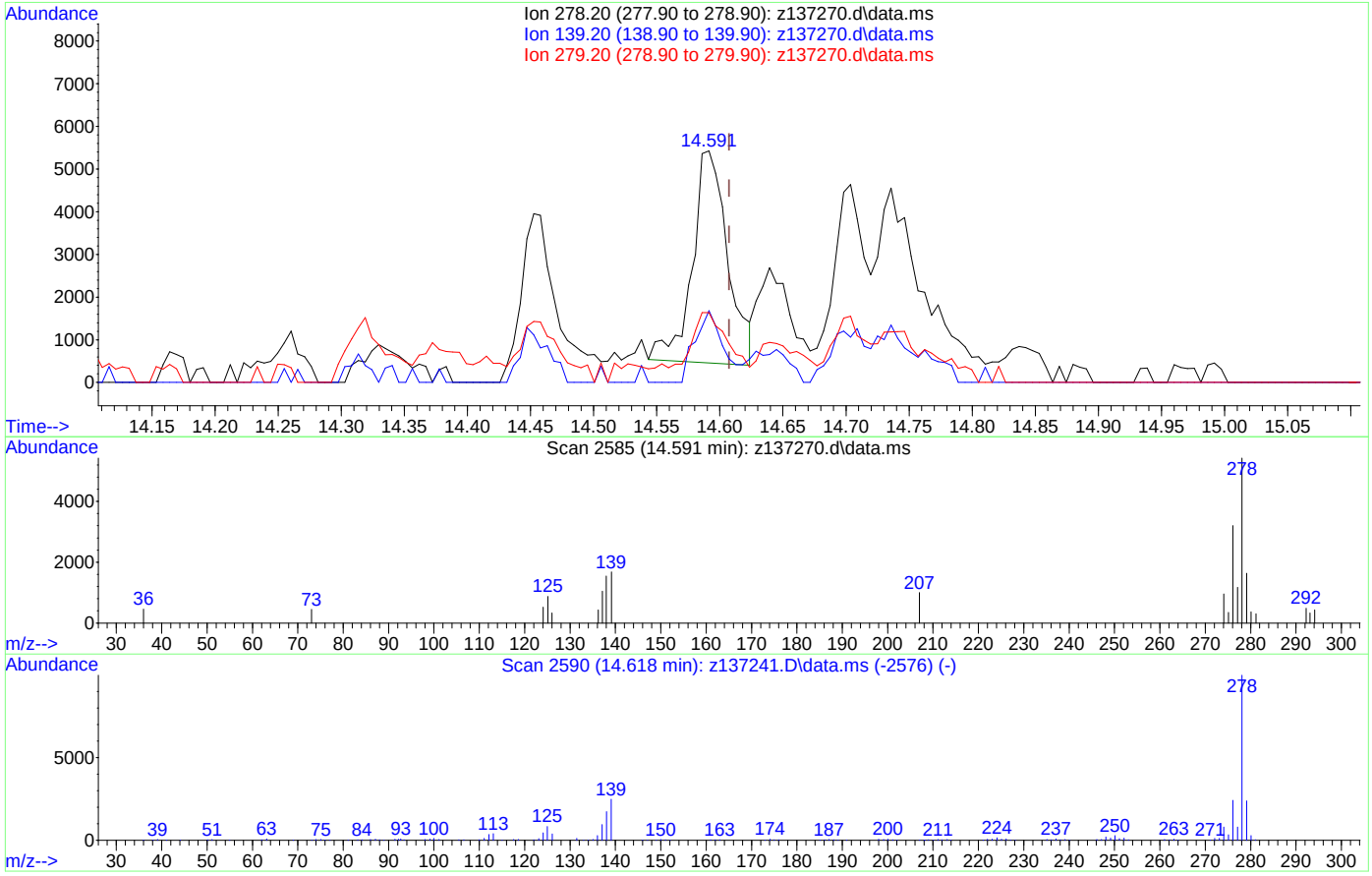
Sample Number:	JC86406-5	**Method:**	SW846 8270D
Lab FileID:	Z137270.D	**Analyst approved:**	04/26/19 14:10 Kristi Schollenberger
Injection Time:	04/25/19 22:31	**Supervisor approved:**	04/29/19 11:20 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		14.59	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137270.d
Acq On : 25 Apr 2019 10:31 pm
Operator : angelar
Sample : jc86406-5 Inst : GCMSZ
Misc : op19810,ez6762,31.4,,,1,100
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:15:25 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration



TIC: z137270.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.591min (-0.016) 1.61ppm

response 9668

Ion	Exp%	Act%
278.20	100	100
139.20	25.50	31.66
279.20	23.40	29.10
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137310.D
Acq On : 26 Apr 2019 9:07 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6764,31.4,,,1,5
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 29 10:56:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	69120	40.00	ppm	-0.02
24) Naphthalene-d8	4.986	136	254304	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	128449	40.00	ppm	-0.02
69) Phenanthrene-d10	7.630	188	221803	40.00	ppm	-0.02
83) Chrysene-d12	11.236	240	191665	40.00	ppm	-0.01
91) Perylene-d12	13.261	264	196321	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.062	152	69120	40.00	ppm	0.00
103) Phenanthrene-d10a	7.630	188	221803	40.00	ppm	0.02
107) Chrysene-d12a	11.236	240	191665	40.00	ppm	0.04
109) Acenaphthene-d10a	6.231	164	128449	40.00	ppm	0.00
111) Naphthalene-d8a	4.986	136	254304	40.00	ppm	0.00
113) Phenanthrene-d10b	7.630	188	221803	40.00	ppm	0.02
115) Chrysene-d12b	11.236	240	191665	40.00	ppb	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.068	112	10497	5.27	ppm	-0.01
Spiked Amount 50.000			Recovery = 10.54%			
8) Phenol-d5	3.832	99	13683	4.87	ppm	-0.02
Spiked Amount 50.000			Recovery = 9.74%			
25) Nitrobenzene-d5	4.473	82	12481	5.30	ppm	-0.02
Spiked Amount 50.000			Recovery = 10.60%			
51) 2-Fluorobiphenyl	5.750	172	22883	5.27	ppm	-0.02
Spiked Amount 50.000			Recovery = 10.54%			
73) 2,4,6-Tribromophenol	6.914	330	2624	4.45	ppm	-0.02
Spiked Amount 50.000			Recovery = 8.90%			
85) Terphenyl-d14	9.719	244	22300	5.60	ppm	-0.03
Spiked Amount 50.000			Recovery = 11.20%			
104) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
9) Phenol	3.843	94	48262	15.72	ppm	99
19) 2-Methylphenol	4.281	108	21444	9.47	ppm	98
21) 3&4-Methylphenol	4.398	108	58614	25.89	ppm	81
30) 2,4-Dimethylphenol	4.772	107	22079	12.48	ppm	98
38) Naphthalene	5.013	128	3509758	529.25	ppm	100
44) 2-Methylnaphthalene	5.493	141	834159	226.14	ppm	99
53) Biphenyl	5.819	154	234991	47.61	ppm	98
56) Acenaphthylene	6.129	152	858654	141.41	ppm	99
59) Acenaphthene	6.257	153	102943	25.06	ppm	93
62) Dibenzofuran	6.402	168	1149871	214.74	ppm	91
66) Fluorene	6.701	166	1399371	313.84	ppm	98
77) Phenanthrene	7.684	178	5257921	835.23	ppm	97
78) Anthracene	7.732	178	2013402	320.81	ppm	97
79) Carbazole	7.919	167	890136	141.93	ppm	98
81) Fluoranthene	9.169	202	3776106	551.19	ppm	95
84) Pyrene	9.457	202	2798332	437.05	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137310.D
Acq On : 26 Apr 2019 9:07 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6764,31.4,,,1,5
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 29 10:56:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

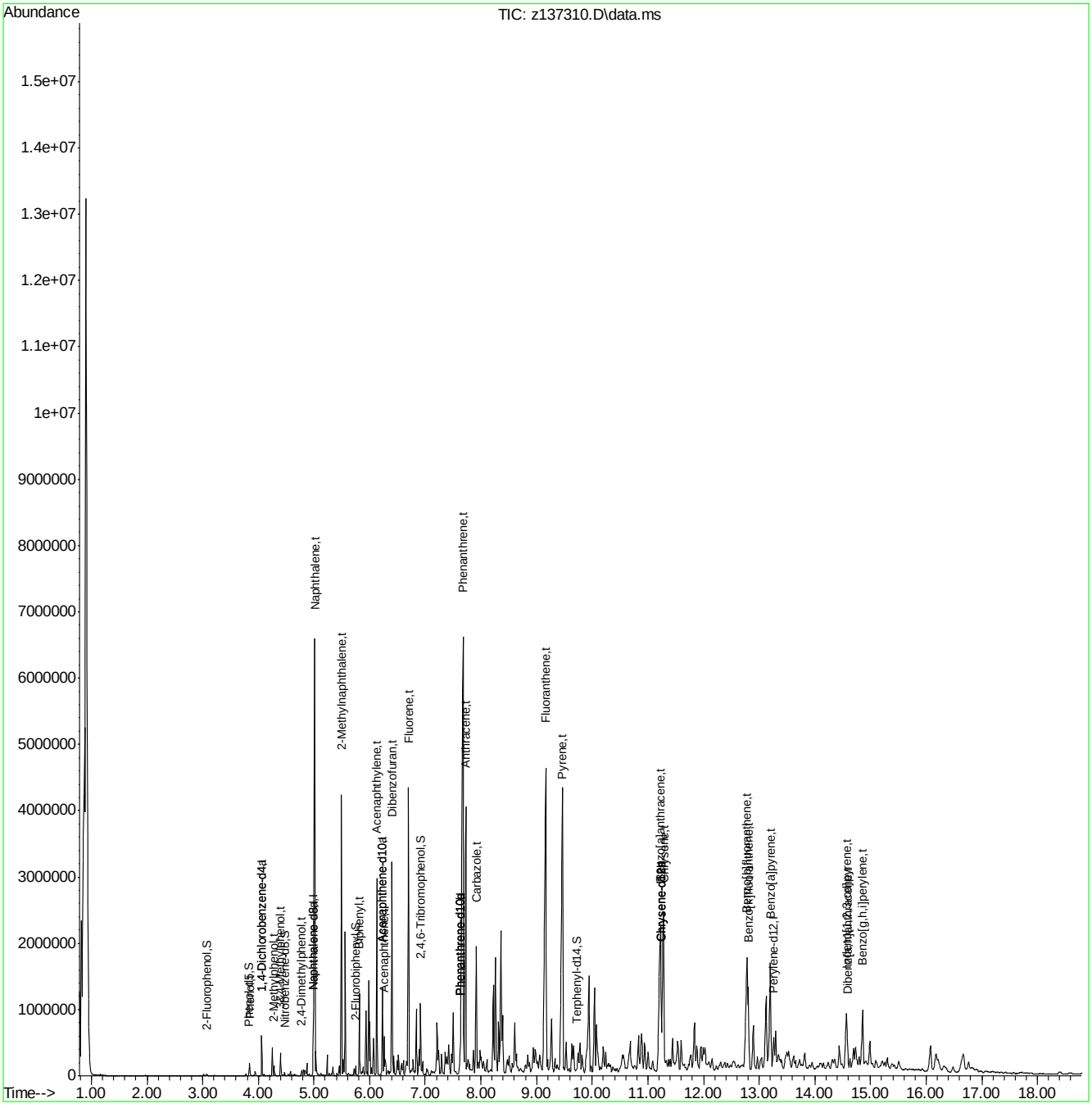
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
87) Benzo[a]anthracene	11.226	228	1536215	257.43	ppm	98
89) Chrysene	11.284	228	1267598	218.04	ppm	94
93) Benzo[b]fluoranthene	12.780	252	1355315	217.47	ppm	96
94) Benzo[k]fluoranthene	12.807	252	423822	76.59	ppm	96
95) Benzo[a]pyrene	13.202	252	957210	187.80	ppm	96
96) Indeno[1,2,3-cd]pyrene	14.570	276	511975	107.25	ppm	95
98) Dibenz[a,h]anthracene	14.586	278	190962	38.49	ppm	94
100) Benzo[g,h,i]perylene	14.858	276	462674	102.96	ppm	95

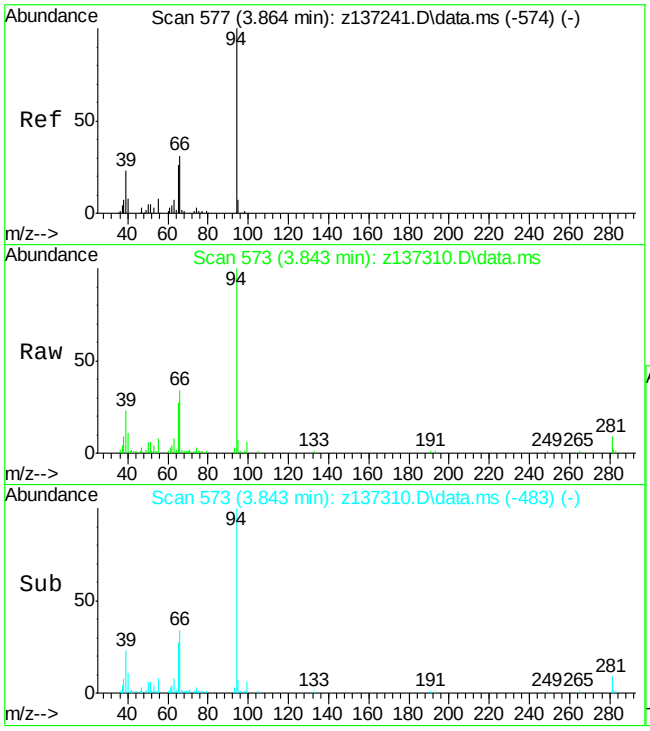
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137310.D
Acq On : 26 Apr 2019 9:07 pm
Operator : angelar
Sample : jc86406-5
Misc : op19810,ez6764,31.4,,,1,5
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 29 10:56:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

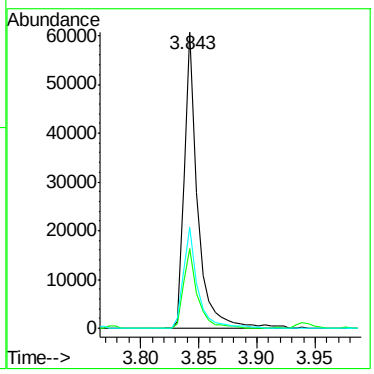


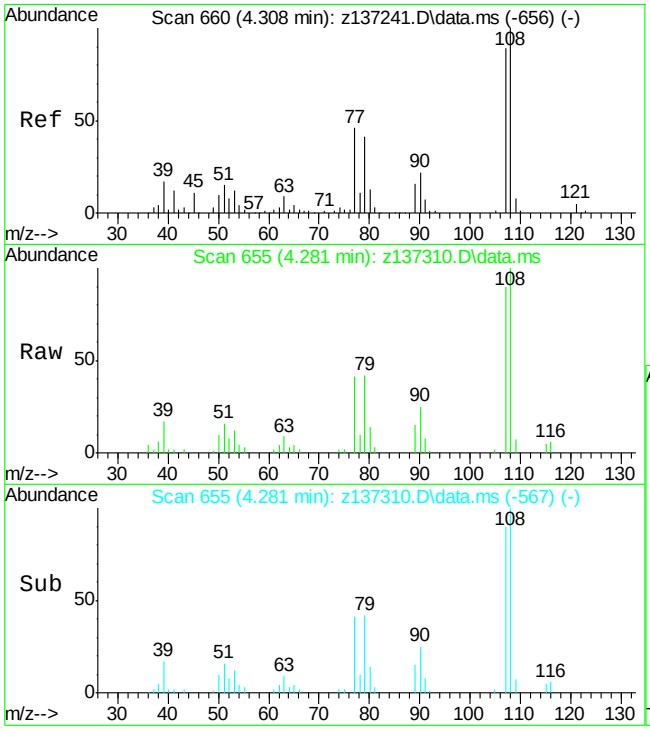


#9
Phenol
Concen: 15.72 ppm
RT: 3.843 min Scan# 573
Delta R.T. -0.021 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion: 94 Resp: 48262

Ion	Ratio	Lower	Upper
94	100		
65	26.4	0.0	56.0
66	34.1	4.3	64.3

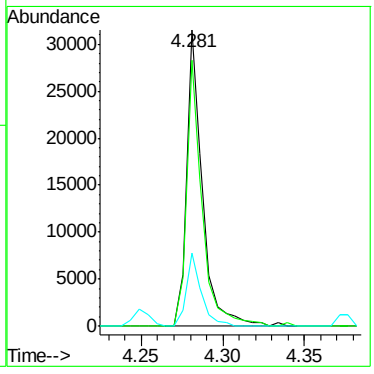


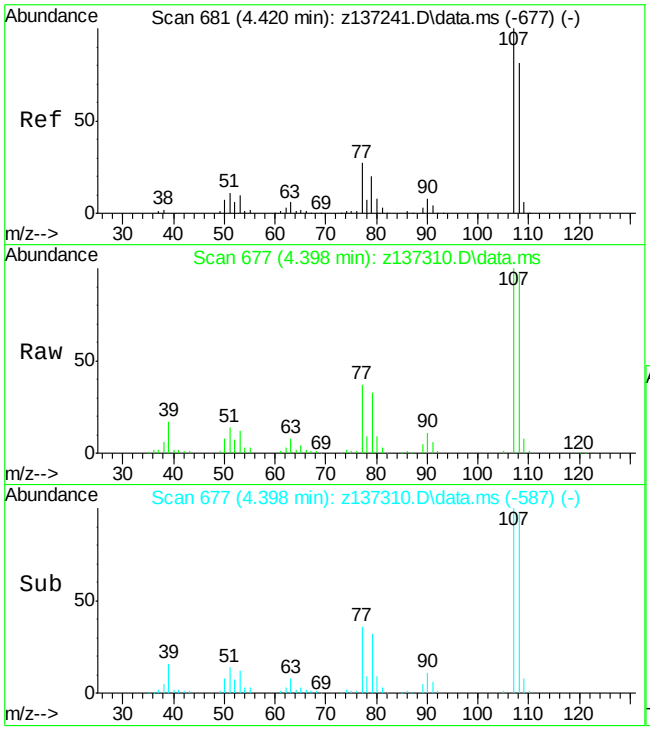


#19
2-Methylphenol
Concen: 9.47 ppm
RT: 4.281 min Scan# 655
Delta R.T. -0.027 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:108 Resp: 21444

Ion	Ratio	Lower	Upper
108	100		
107	89.9	59.0	119.0
90	24.7	0.0	51.8

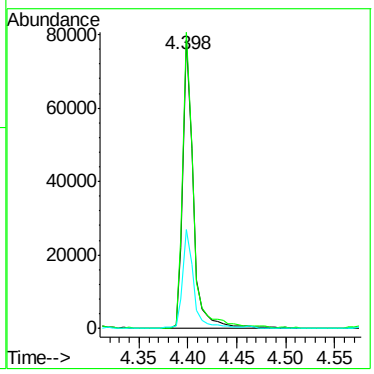


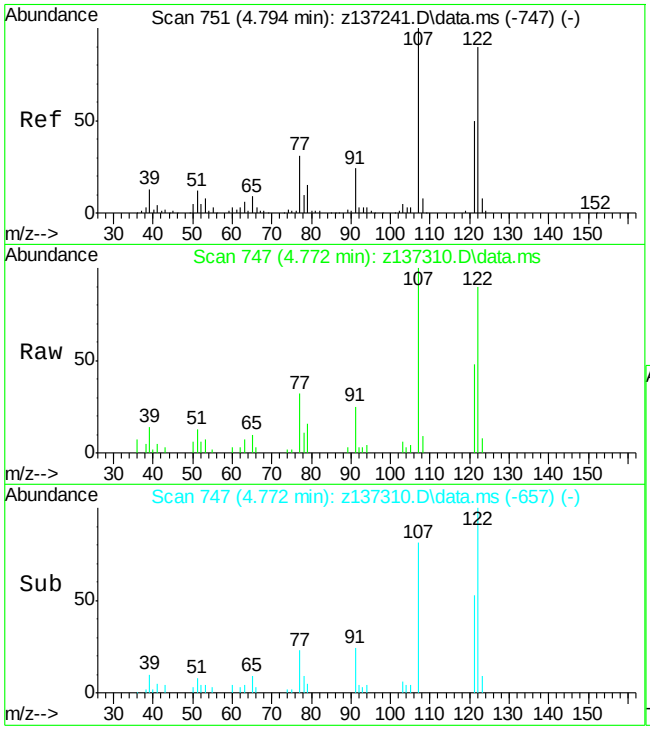


#21
3&4-Methylphenol
Concen: 25.89 ppm
RT: 4.398 min Scan# 677
Delta R.T. -0.022 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:108 Resp: 58614

Ion	Ratio	Lower	Upper
108	100		
107	102.5	93.8	153.8
79	34.0	0.0	55.2

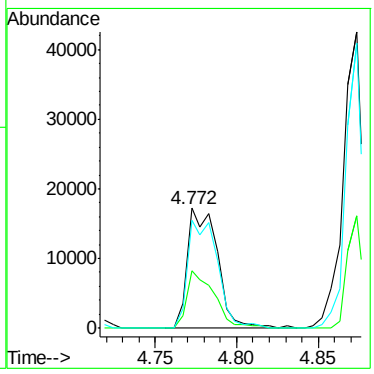


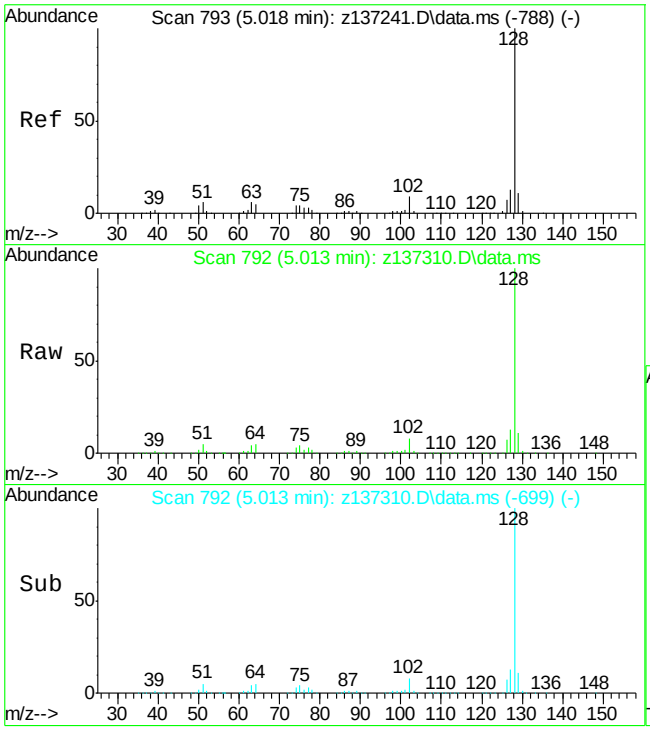


#30
2,4-Dimethylphenol
Concen: 12.48 ppm
RT: 4.772 min Scan# 747
Delta R.T. -0.022 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:107 Resp: 22079

Ion	Ratio	Lower	Upper
107	100		
121	48.1	19.9	79.9
122	90.0	58.9	118.9

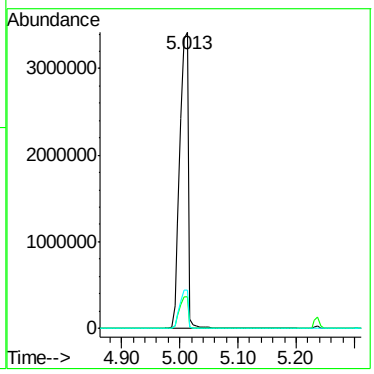


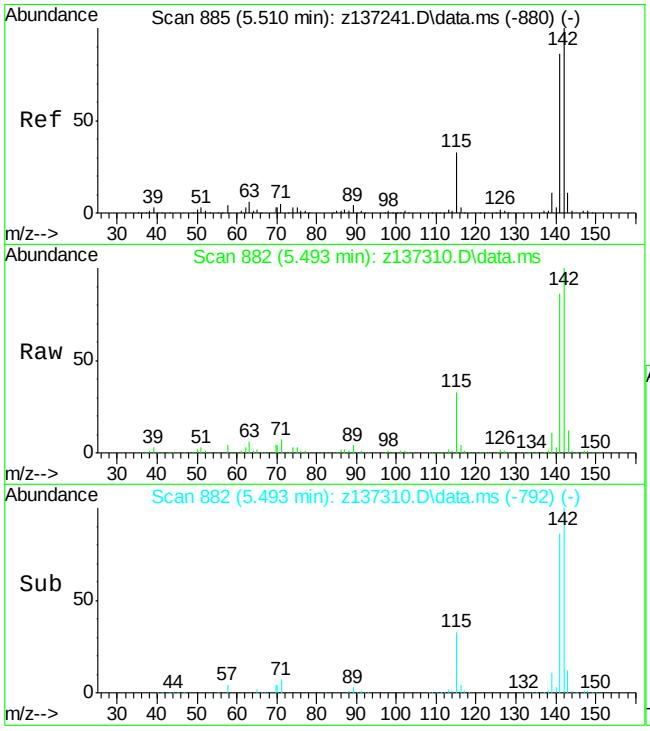


#38
Naphthalene
Concen: 529.25 ppm
RT: 5.013 min Scan# 792
Delta R.T. -0.005 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:128 Resp: 3509758

Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	40.7
127	12.9	0.0	42.9

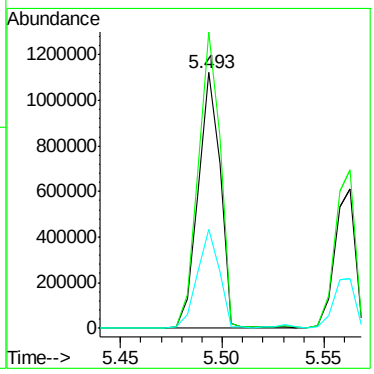


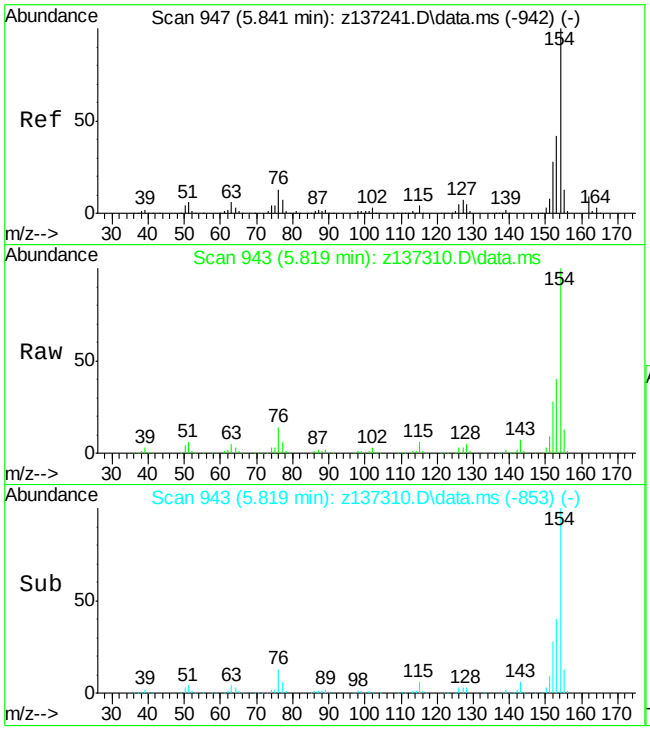


#44
2-Methylnaphthalene
Concen: 226.14 ppm
RT: 5.493 min Scan# 882
Delta R.T. -0.017 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:141 Resp: 834159

Ion	Ratio	Lower	Upper
141	100		
142	115.8	86.4	146.4
115	38.2	8.8	68.8

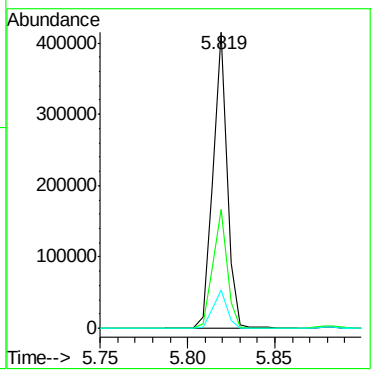


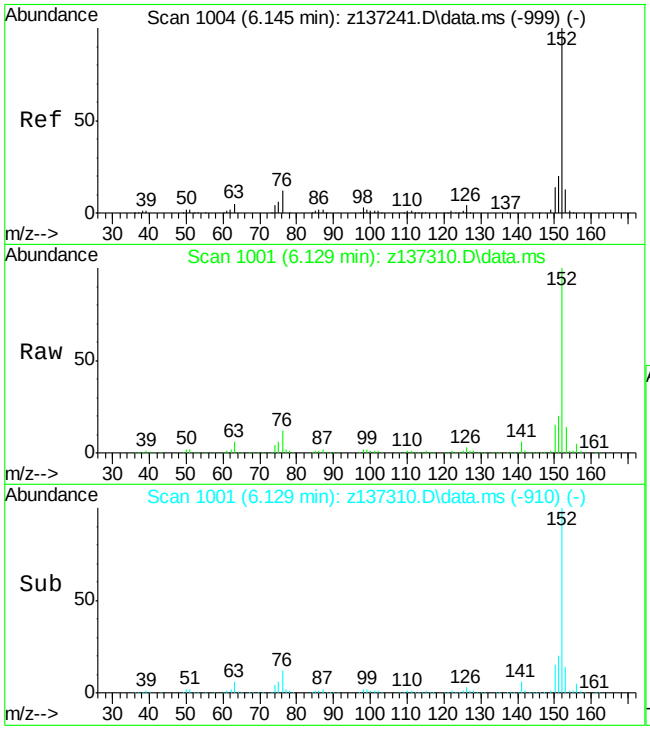


#53
Biphenyl
Concen: 47.61 ppm
RT: 5.819 min Scan# 943
Delta R.T. -0.022 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:154 Resp: 234991

Ion	Ratio	Lower	Upper
154	100		
153	40.3	11.8	71.8
155	12.9	0.0	42.7

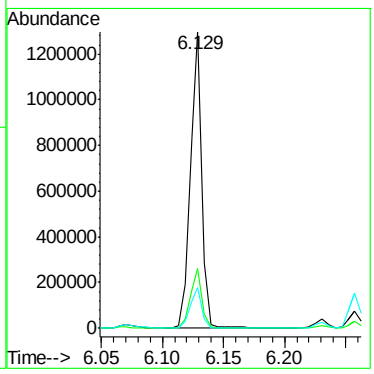


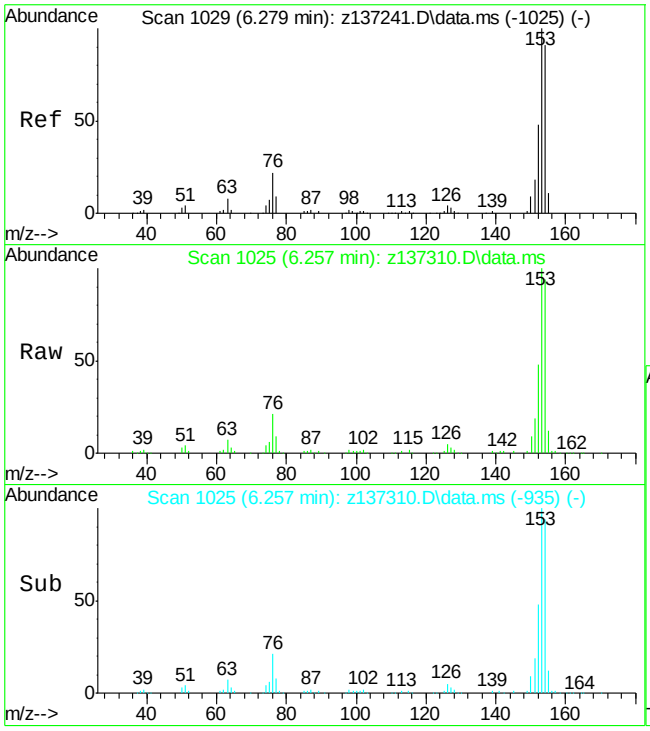


#56
Acenaphthylene
Concen: 141.41 ppm
RT: 6.129 min Scan# 1001
Delta R.T. -0.016 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:152 Resp: 858654

Ion	Ratio	Lower	Upper
152	100		
151	20.1	0.0	50.1
153	13.7	0.0	42.8

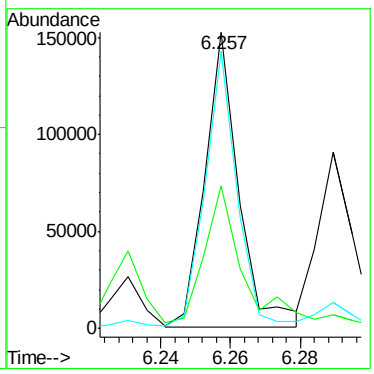


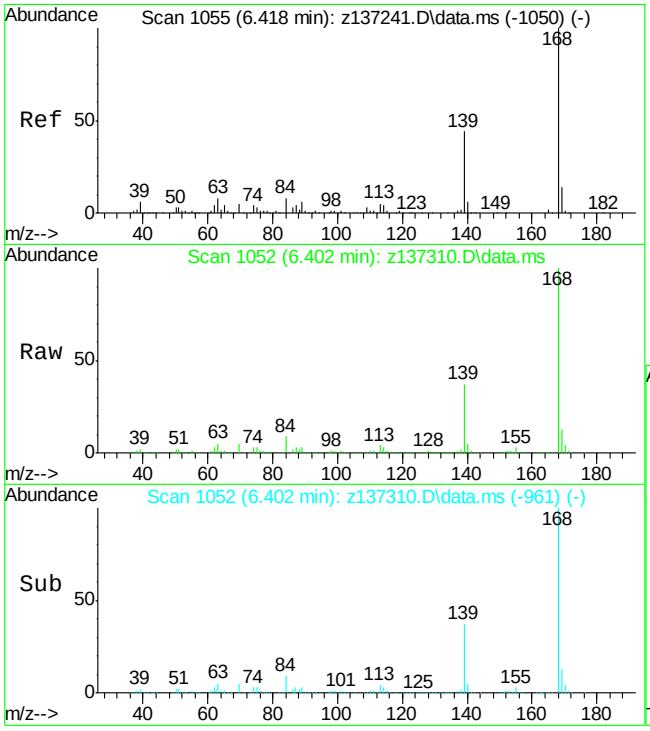


#59
Acenaphthene
Concen: 25.06 ppm
RT: 6.257 min Scan# 1025
Delta R.T. -0.022 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:153 Resp: 102943

Ion	Ratio	Lower	Upper
153	100		
152	46.1	17.7	77.7
154	95.2	56.7	116.7

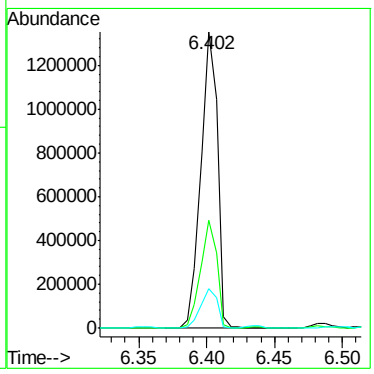


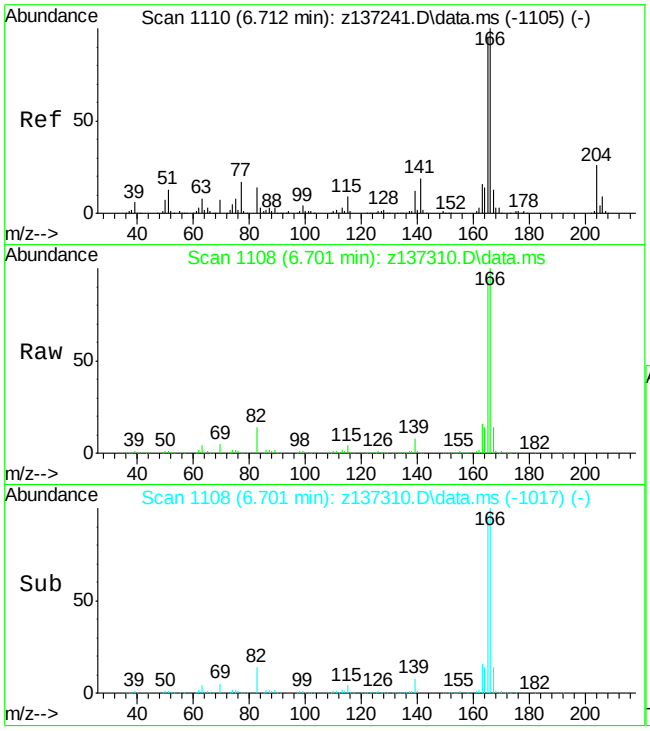


#62
Dibenzofuran
Concen: 214.74 ppm
RT: 6.402 min Scan# 1052
Delta R.T. -0.016 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:168 Resp: 1149871

Ion	Ratio	Lower	Upper
168	100		
139	36.6	14.1	74.1
169	13.5	0.0	43.7

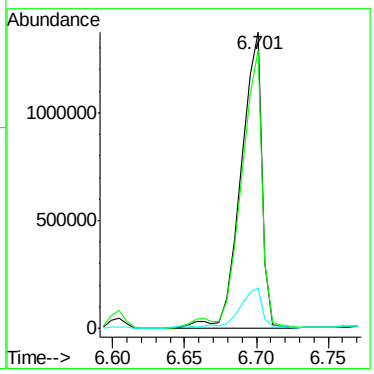


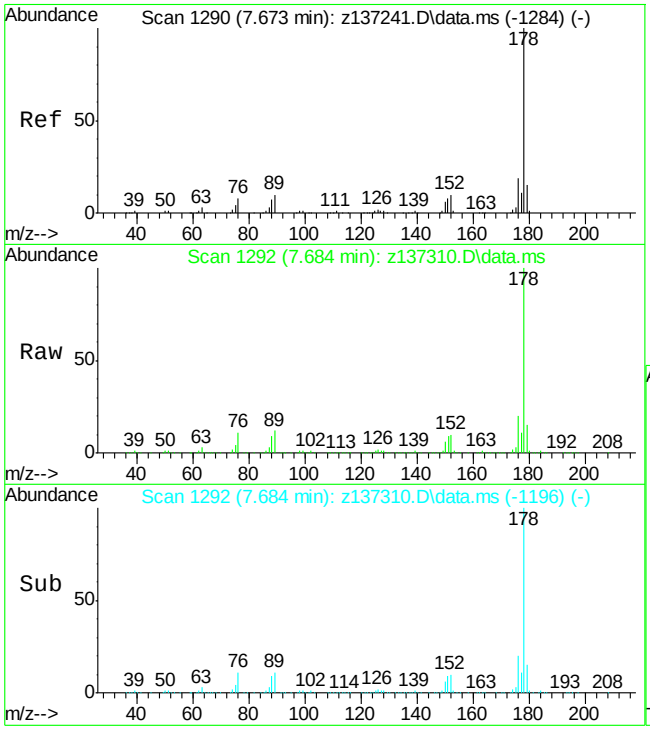


#66
Fluorene
Concen: 313.84 ppm
RT: 6.701 min Scan# 1108
Delta R.T. -0.011 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:166 Resp: 1399371

Ion	Ratio	Lower	Upper
166	100		
165	94.0	65.5	125.5
167	13.6	0.0	43.1

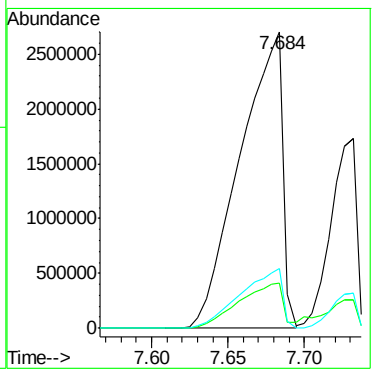


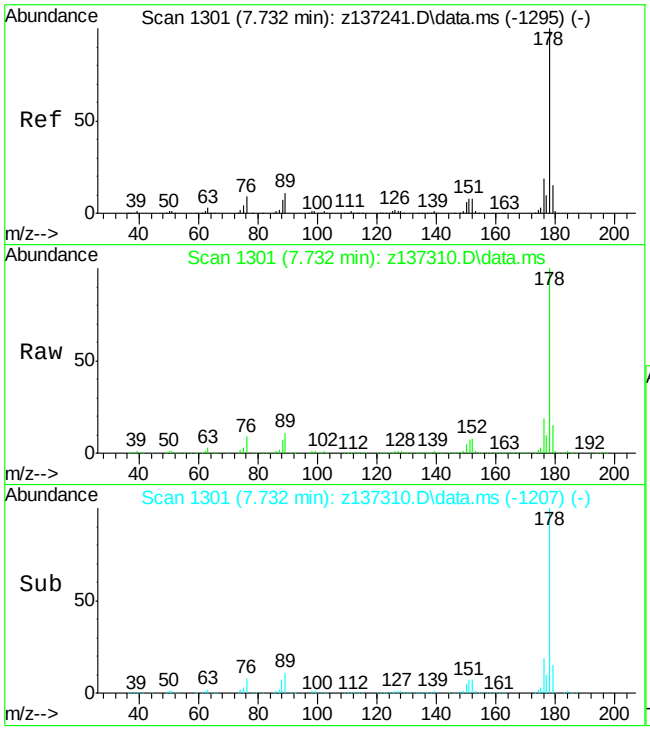


#77
Phenanthrene
Concen: 835.23 ppm
RT: 7.684 min Scan# 1292
Delta R.T. 0.011 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:178 Resp: 5257921

Ion	Ratio	Lower	Upper
178	100		
179	14.3	0.0	45.3
176	20.2	0.0	49.0

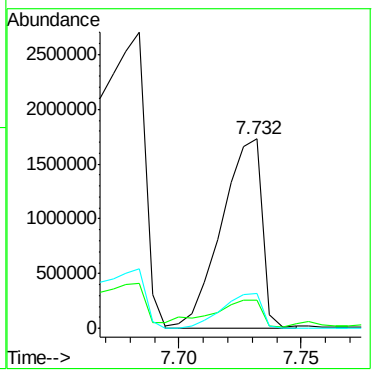


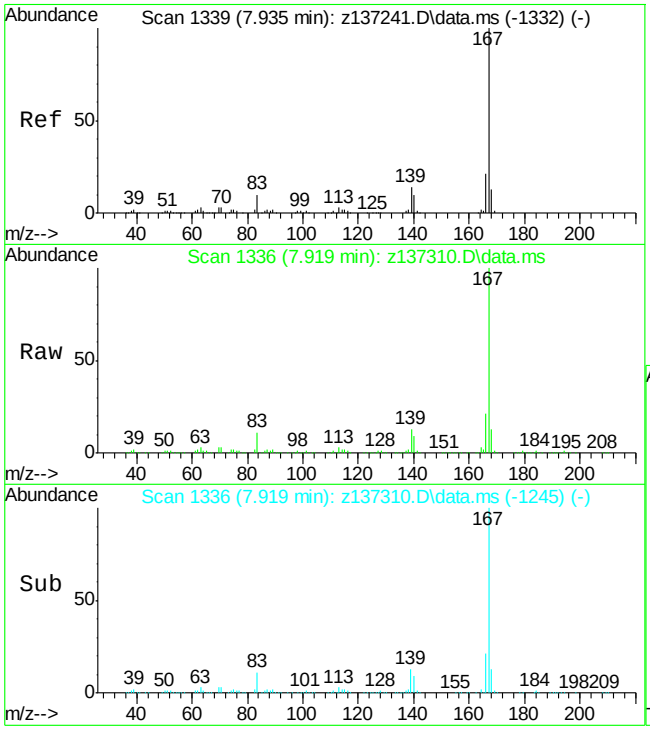


#78
Anthracene
Concen: 320.81 ppm
RT: 7.732 min Scan# 1301
Delta R.T. -0.000 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:178 Resp: 2013402

Ion	Ratio	Lower	Upper
178	100		
179	12.2	0.0	44.8
176	18.8	0.0	48.9

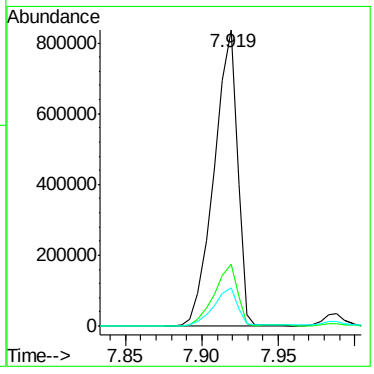


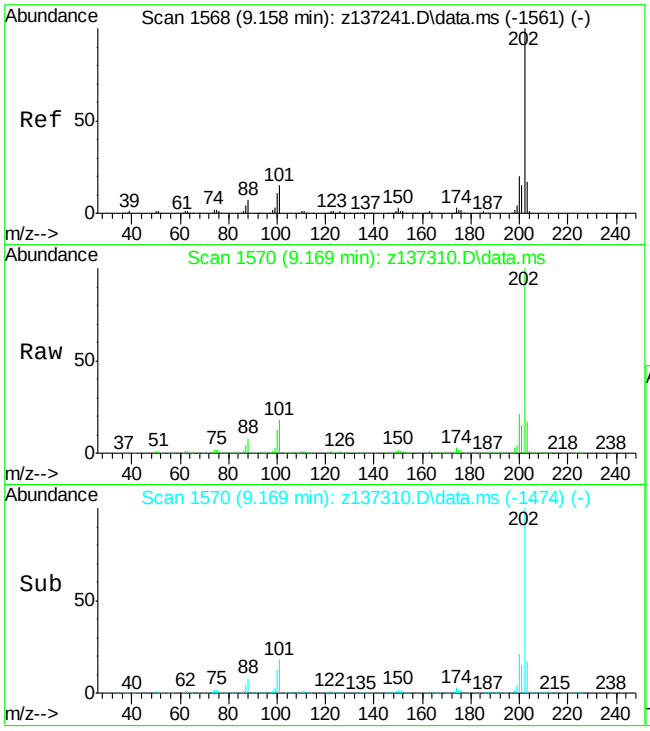


#79
Carbazole
Concen: 141.93 ppm
RT: 7.919 min Scan# 1336
Delta R.T. -0.016 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:167 Resp: 890136

Ion	Ratio	Lower	Upper
167	100		
166	20.7	0.0	51.2
139	12.7	0.0	43.7

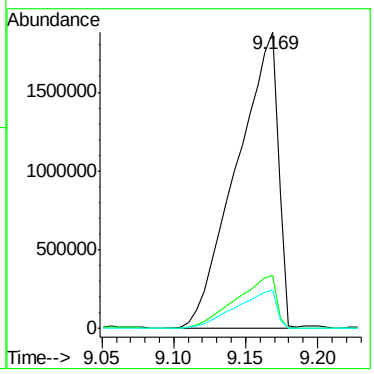


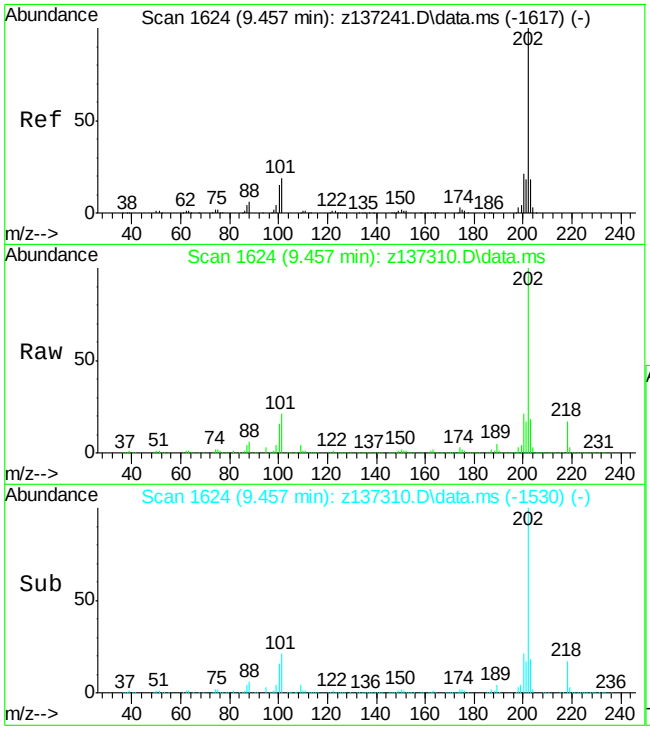


#81
Fluoranthene
Concen: 551.19 ppm
RT: 9.169 min Scan# 1570
Delta R.T. 0.011 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:202 Resp: 3776106

Ion	Ratio	Lower	Upper
202	100		
101	17.9	0.0	45.0
100	12.8	0.0	41.4

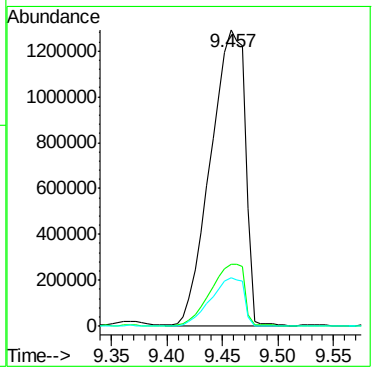


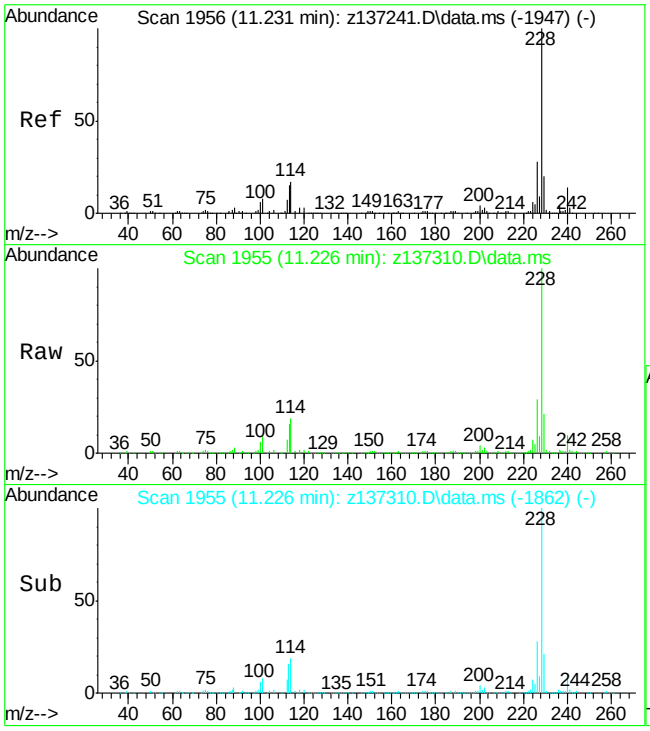


#84
Pyrene
Concen: 437.05 ppm
RT: 9.457 min Scan# 1624
Delta R.T. 0.000 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:202 Resp: 2798332

Ion	Ratio	Lower	Upper
202	100		
101	20.9	0.0	49.1
100	16.3	0.0	45.4

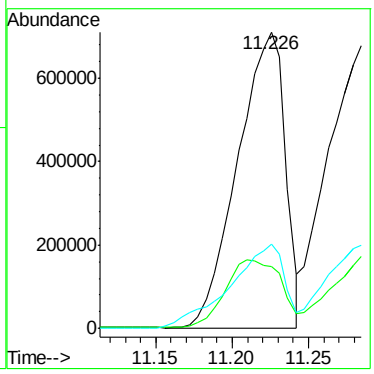


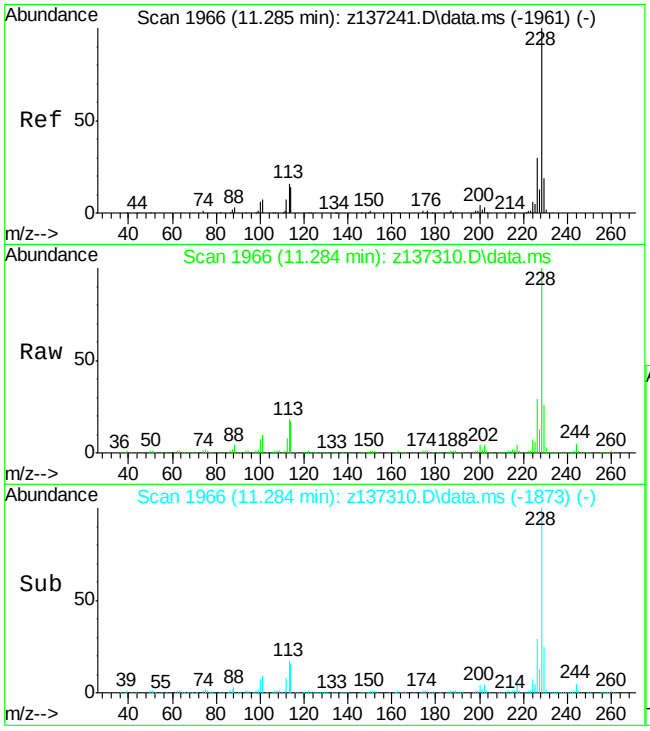


#87
Benzo[a]anthracene
Concen: 257.43 ppm
RT: 11.226 min Scan# 1955
Delta R.T. -0.005 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:228 Resp: 1536215

Ion	Ratio	Lower	Upper
228	100		
229	20.3	0.0	49.7
226	28.1	0.0	57.2

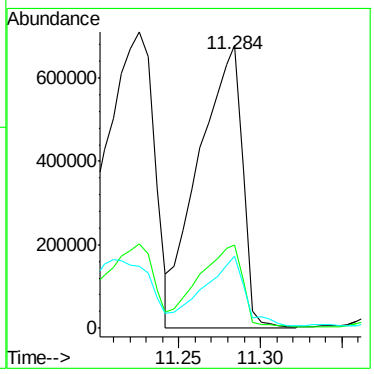


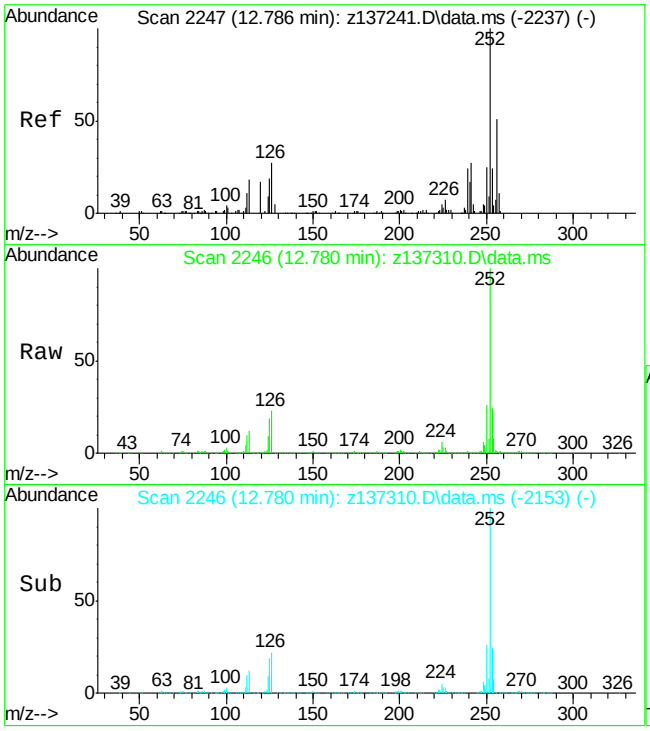


#89
Chrysene
Concen: 218.04 ppm
RT: 11.284 min Scan# 1966
Delta R.T. -0.001 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:228 Resp: 1267598

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.9
229	25.1	0.0	49.4

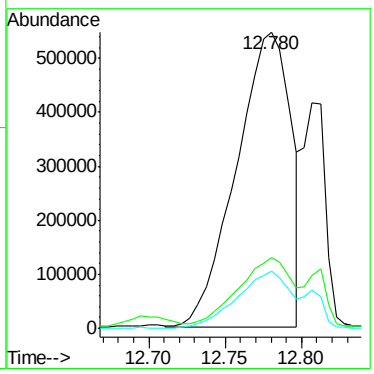


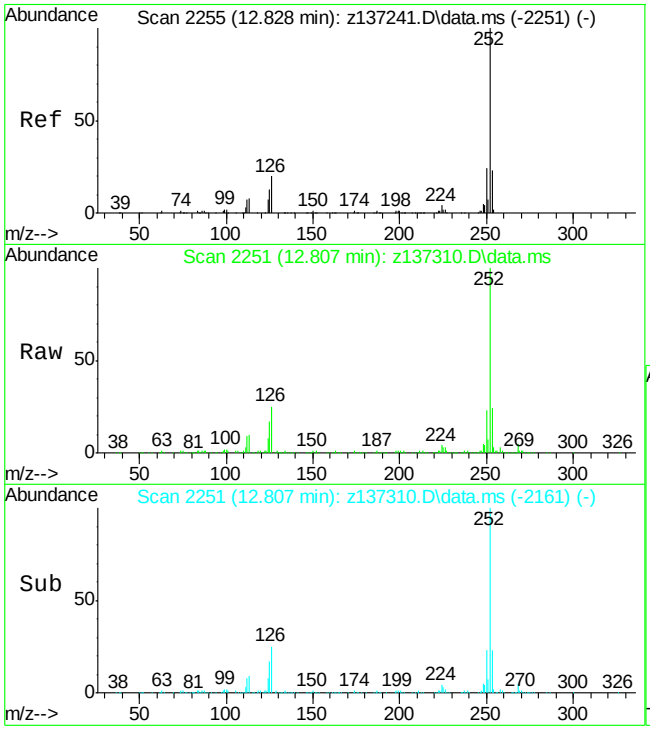


#93
Benzo[b]fluoranthene
Concen: 217.47 ppm
RT: 12.780 min Scan# 2246
Delta R.T. -0.006 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:252 Resp: 1355315

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	54.8
125	20.3	0.0	49.4

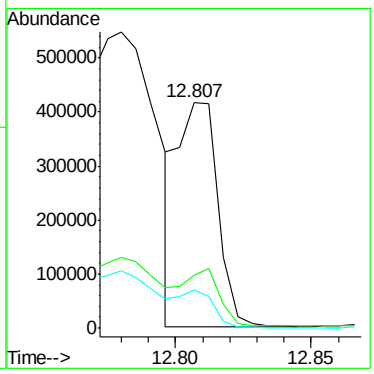


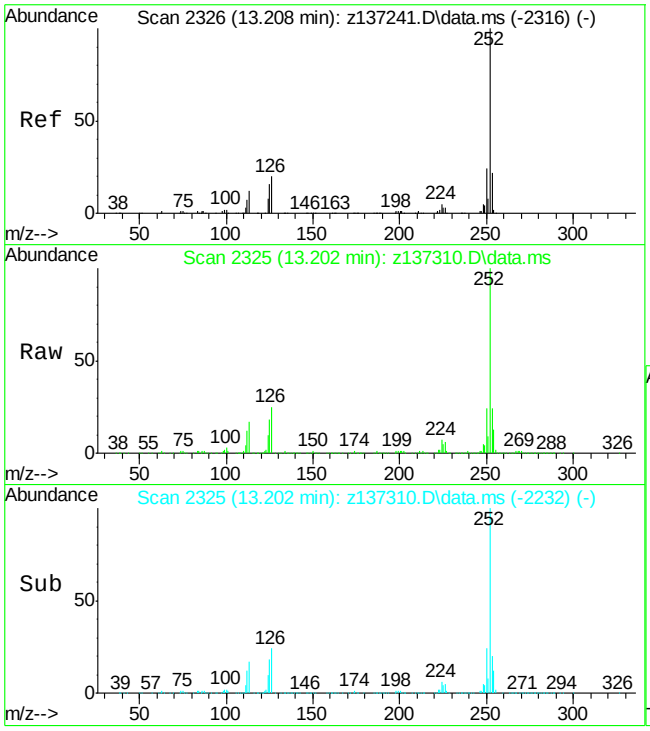


#94
Benzo[k]fluoranthene
Concen: 76.59 ppm
RT: 12.807 min Scan# 2251
Delta R.T. -0.021 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:252 Resp: 423822

Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	52.7
125	17.0	0.0	43.8

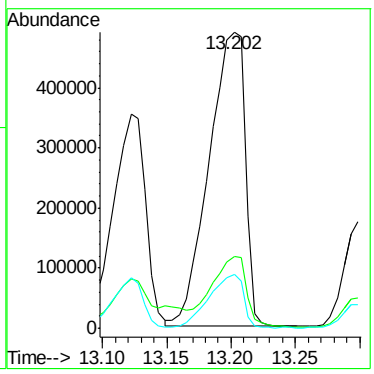


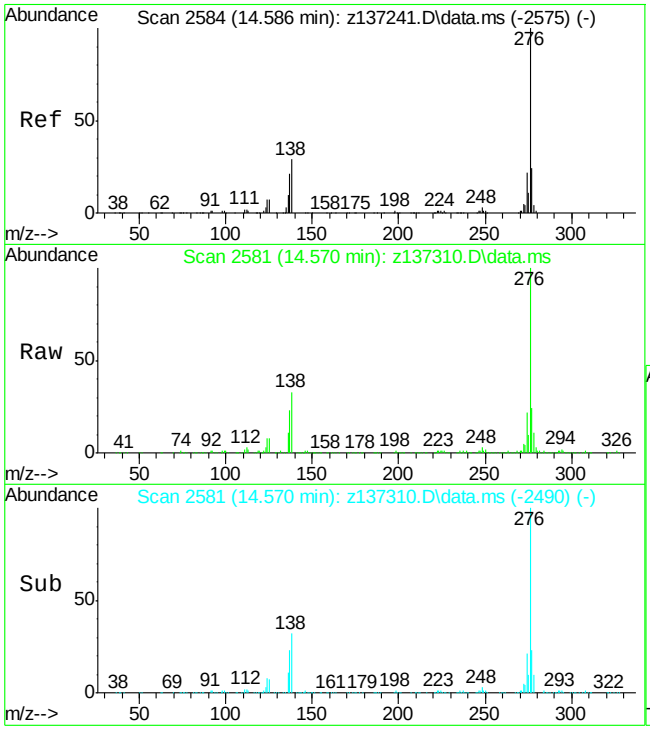


#95
Benzo[a]pyrene
Concen: 187.80 ppm
RT: 13.202 min Scan# 2325
Delta R.T. -0.006 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:252 Resp: 957210

Ion	Ratio	Lower	Upper
252	100		
253	20.5	0.0	51.8
125	18.0	0.0	45.9

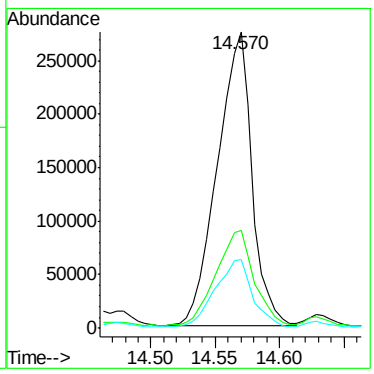


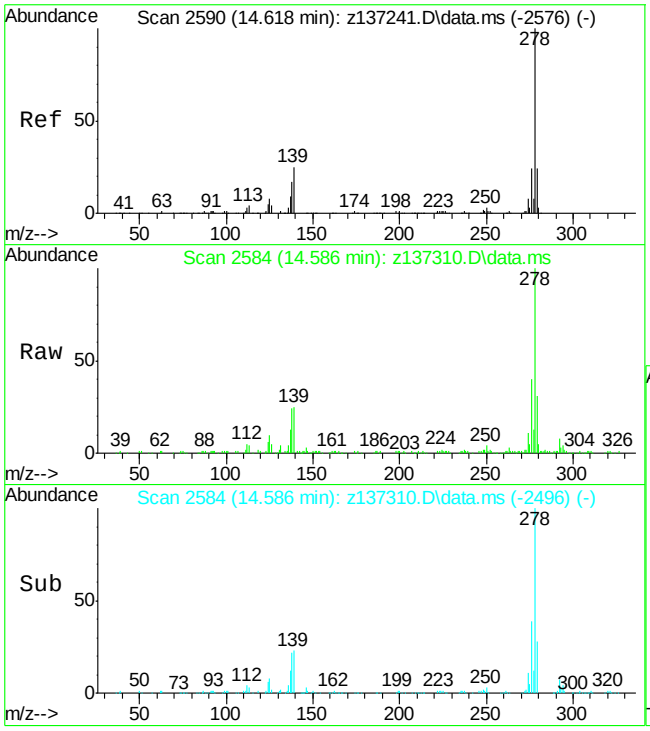


#96
Indeno[1,2,3-cd]pyrene
Concen: 107.25 ppm
RT: 14.570 min Scan# 2581
Delta R.T. -0.016 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:276 Resp: 511975

Ion	Ratio	Lower	Upper
276	100		
138	32.3	0.0	59.0
137	23.0	0.0	51.4

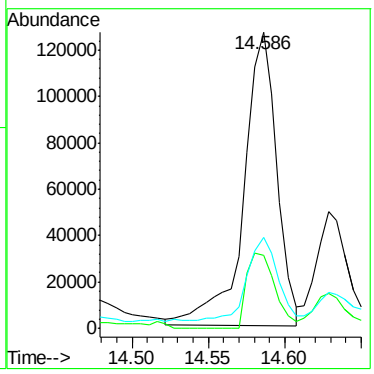


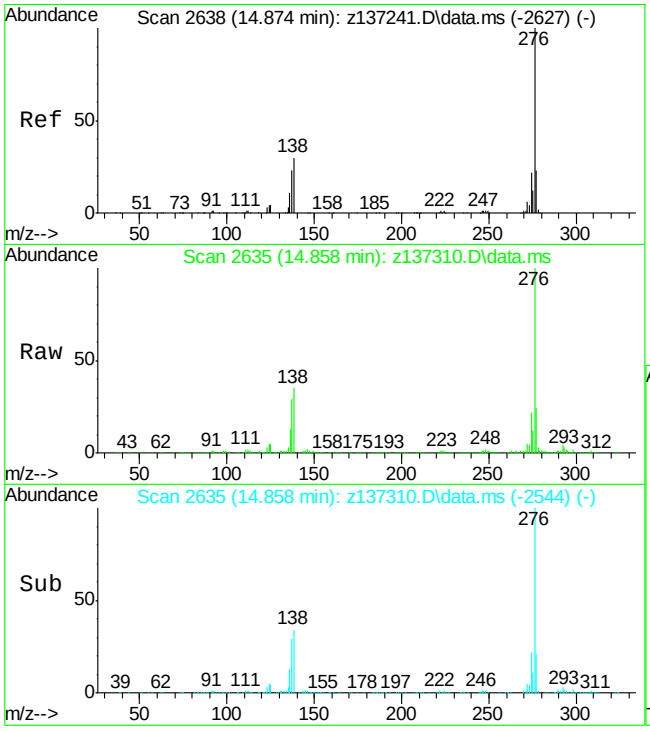


#98
Dibenz[a,h]anthracene
Concen: 38.49 ppm
RT: 14.586 min Scan# 2584
Delta R.T. -0.032 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:278 Resp: 190962

Ion	Ratio	Lower	Upper
278	100		
139	23.9	0.0	54.9
279	29.0	0.0	53.8

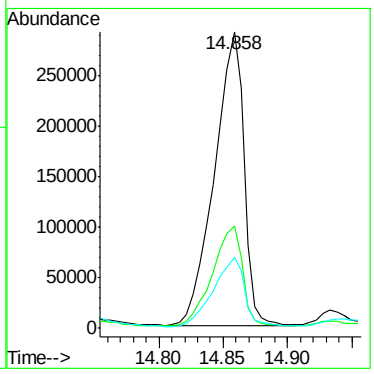




#100
Benzo[g,h,i]perylene
Concen: 102.96 ppm
RT: 14.858 min Scan# 2635
Delta R.T. -0.016 min
Lab File: z137310.D
Acq: 26 Apr 2019 9:07 pm

Tgt Ion:276 Resp: 462674

Ion	Ratio	Lower	Upper
276	100		
138	34.2	0.0	59.6
277	23.4	0.0	53.6



Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/19/19 14:21

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86733.D
Acq On : 19 Apr 2019 12:27 am
Operator : carolb
Sample : jc86406-6
Misc : op19810,e2p3831,31.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 19 10:33:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	813148	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2707531	40.00	ppm	-0.17
47) Acenaphthene-d10	7.135	164	1305203	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	2001671	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	1968401	40.00	ppm	-0.28
91) Perylene-d12	13.597	264	1726155	40.00	ppm	-0.30
101) 1,4-Dichlorobenzene-d4a	4.670	152	813148	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2707531	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.135	164	1305203	40.00	ppm	-0.18
108) Chrysene-d12a	11.612	240	1968401	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	2001671	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1186386	28.99	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 57.98%			
8) Phenol-d5	4.429	99	1510197	33.67	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 67.34%#			
25) Nitrobenzene-d5	5.124	82	1358227	37.32	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 74.64%#			
51) 2-Fluorobiphenyl	6.590	172	1717171	38.01	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 76.02%#			
73) 2,4,6-Tribromophenol	7.788	330	218554	31.13	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 62.26%			
85) Terphenyl-d14	10.200	244	1531246	31.26	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 62.52%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
38) Naphthalene	5.718	128	68492	1.06	ppm	99
44) 2-Methylnaphthalene	6.285	141	16613	0.40	ppm	94
53) Biphenyl	6.670	154	7819	0.15	ppm	95
56) Acenaphthylene	7.018	152	16203	0.25	ppm	98
62) Dibenzofuran	7.301	168	15995	0.31	ppm	96
66) Fluorene	7.585	166	18519m	0.42	ppm	
77) Phenanthrene	8.414	178	87344	1.75	ppm	98
78) Anthracene	8.462	178	29124	0.57	ppm	97
79) Carbazole	8.638	167	11539	0.22	ppm	99
81) Fluoranthene	9.708	202	71332	1.01	ppm	94
84) Pyrene	9.965	202	64196	0.84	ppm	96
87) Benzo[a]anthracene	11.591	228	54261	0.73	ppm	97
89) Chrysene	11.639	228	40257	0.77	ppm	97
93) Benzo[b]fluoranthene	13.088	252	53675	0.95	ppm	89
94) Benzo[k]fluoranthene	13.126	252	19173	0.41	ppm	89
95) Benzo[a]pyrene	13.511	252	37046	0.78	ppm	88
96) Indeno[1,2,3-cd]pyrene	14.918	276	22424	0.41	ppm	86
100) Benzo[g,h,i]perylene	15.265	276	24228	0.56	ppm	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86733.D
Acq On : 19 Apr 2019 12:27 am
Operator : carolb
Sample : jc86406-6
Misc : op19810,e2p3831,31.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 19 10:33:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

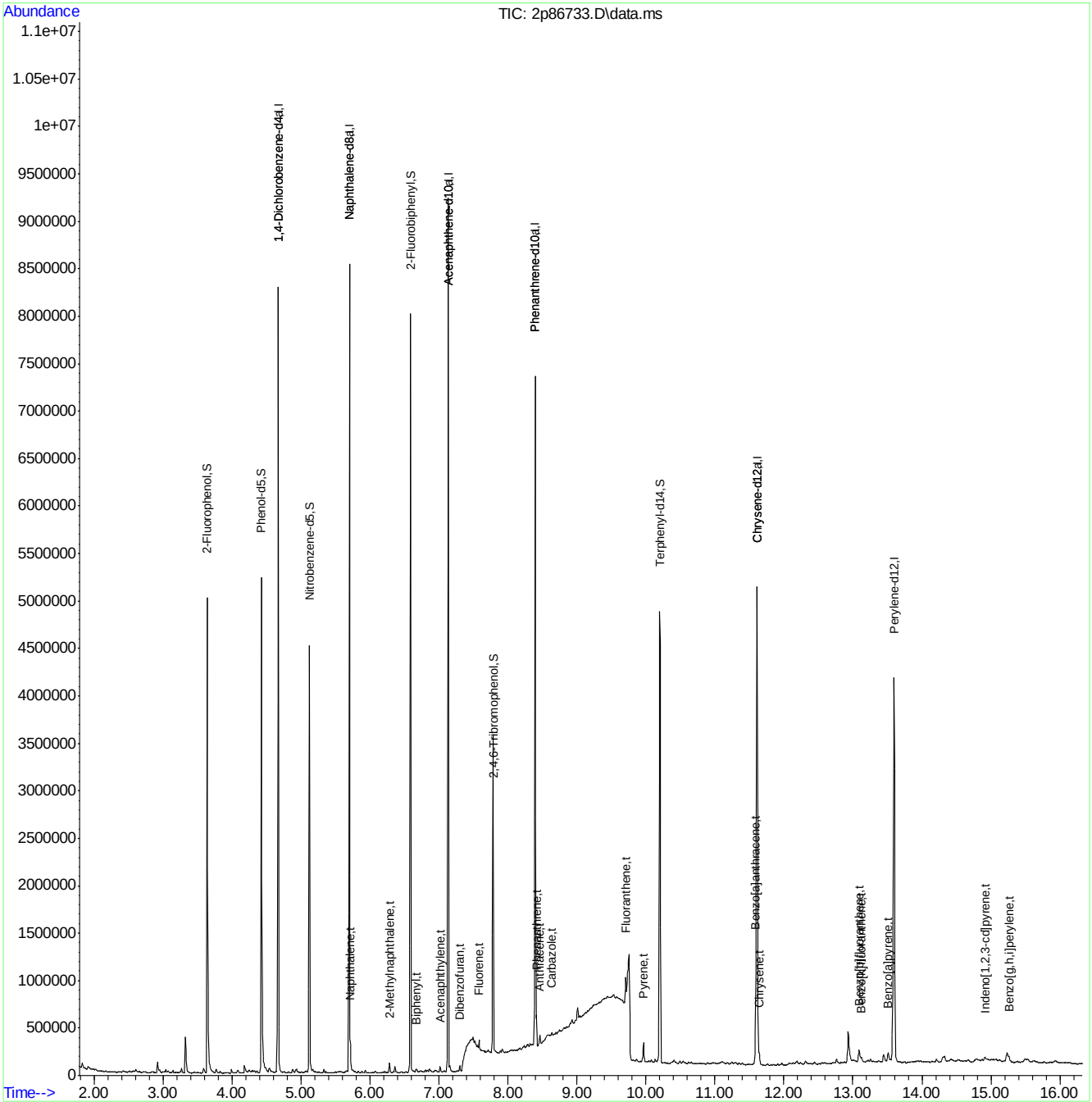
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

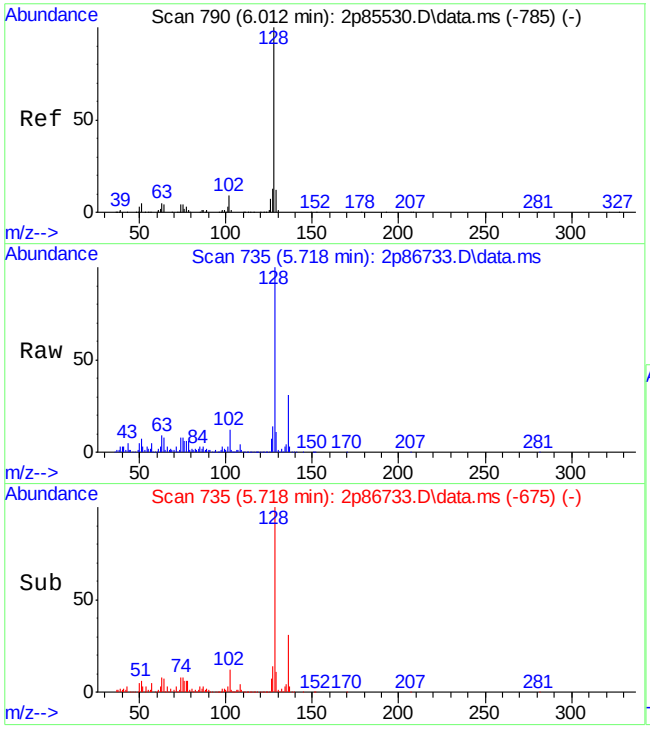
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86733.D
Acq On : 19 Apr 2019 12:27 am
Operator : carolb
Sample : jc86406-6
Misc : op19810,e2p3831,31.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 19 10:33:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

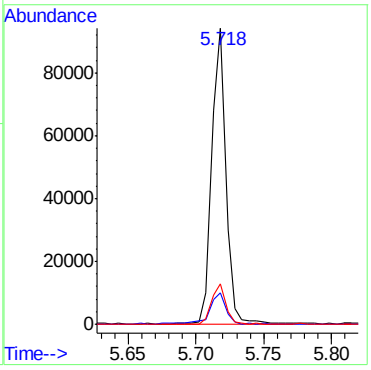


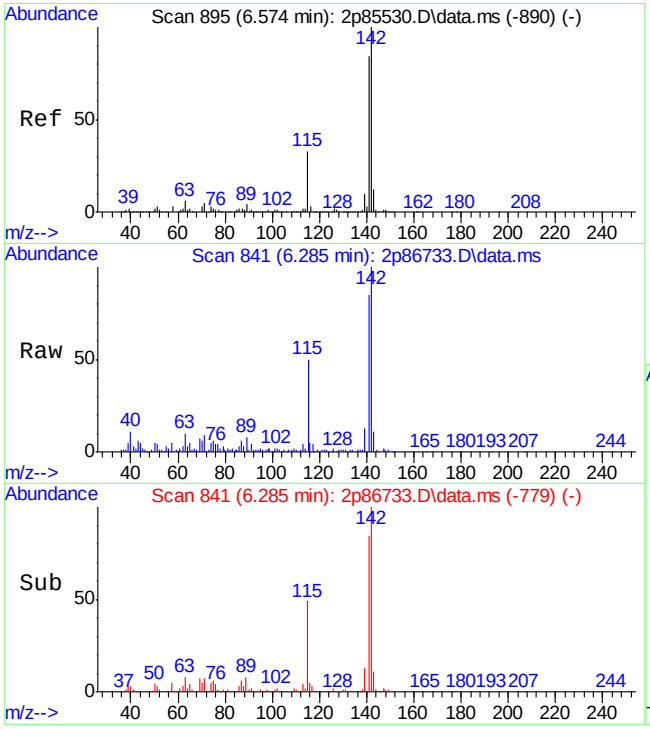


#38
Naphthalene
Concen: 1.06 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:128 Resp: 68492

Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	41.2
127	13.6	0.0	43.7

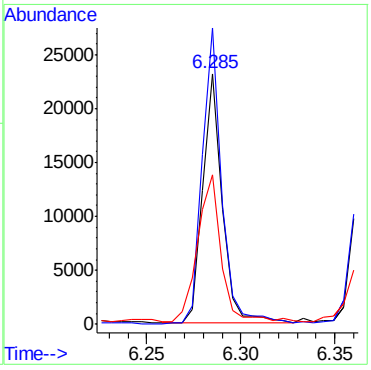


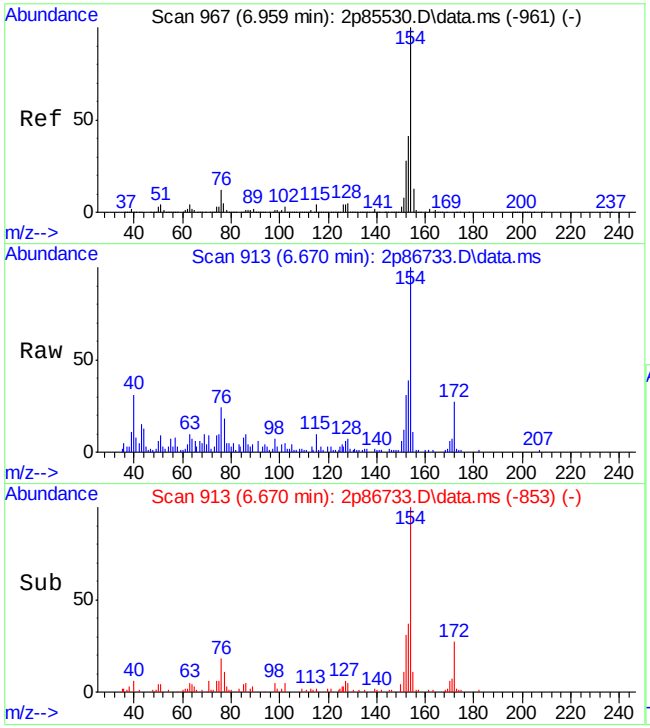


#44
2-Methylnaphthalene
Concen: 0.40 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:141 Resp: 16613

Ion	Ratio	Lower	Upper
141	100		
142	118.7	90.7	150.7
115	58.7	18.7	78.7

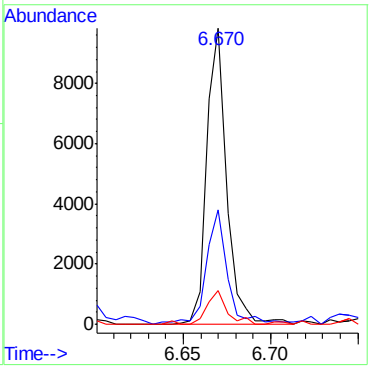


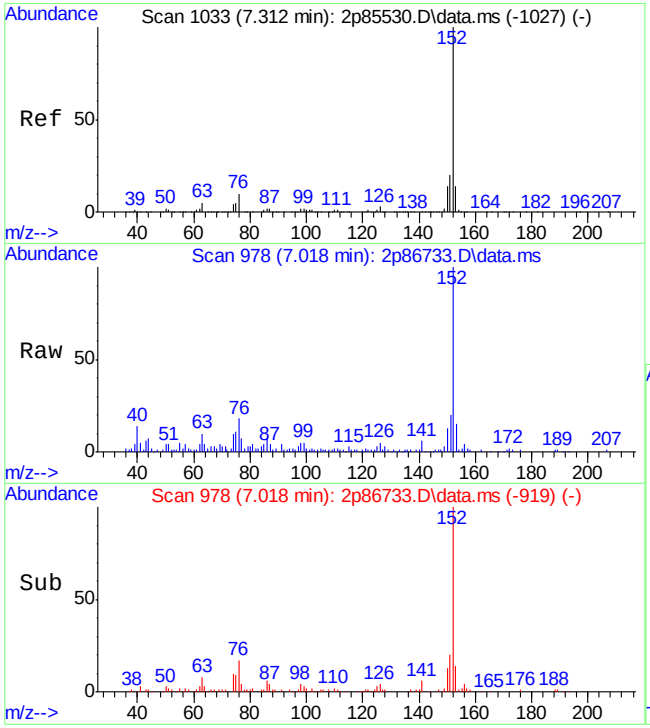


#53
Biphenyl
Concen: 0.15 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:154 Resp: 7819

Ion	Ratio	Lower	Upper
154	100		
153	37.8	11.1	71.1
155	11.5	0.0	43.4

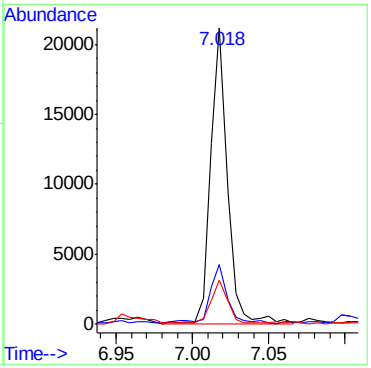


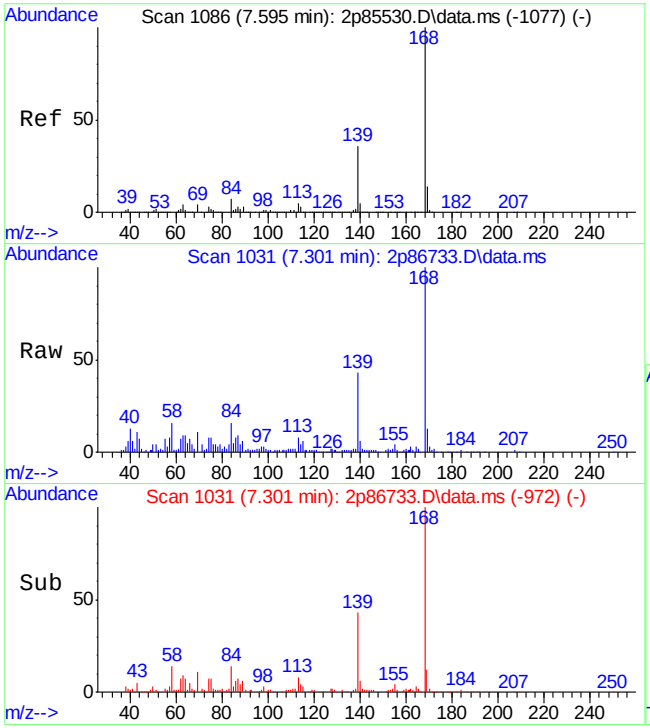


#56
Acenaphthylene
Concen: 0.25 ppm
RT: 7.018 min Scan# 978
Delta R.T. -0.182 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:152 Resp: 16203

Ion	Ratio	Lower	Upper
152	100		
151	19.3	0.0	50.3
153	14.0	0.0	43.6

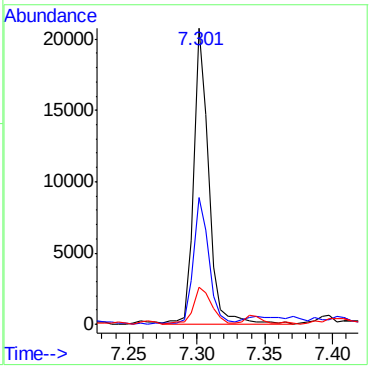


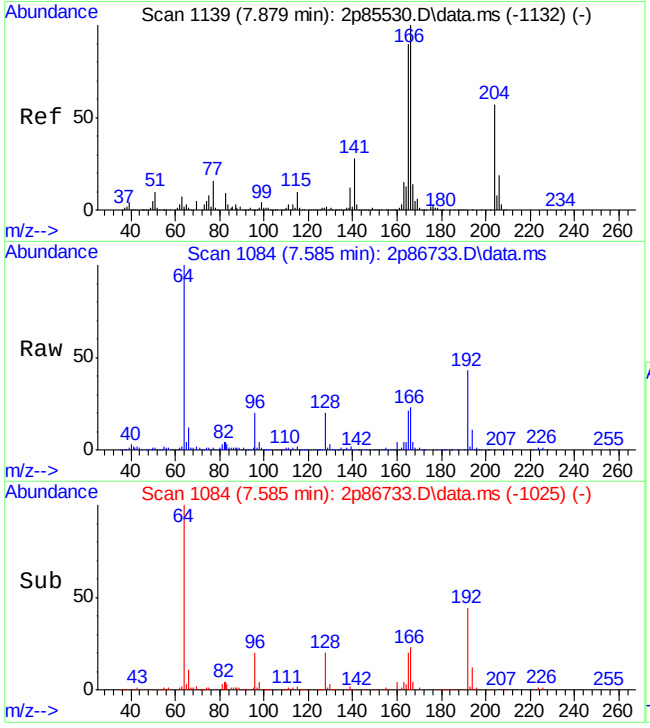


#62
Dibenzofuran
Concen: 0.31 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:168 Resp: 15995

Ion	Ratio	Lower	Upper
168	100		
139	41.4	9.2	69.2
169	12.5	0.0	44.1

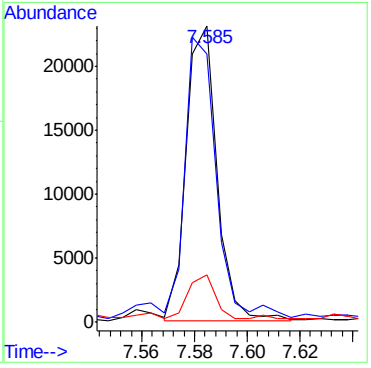


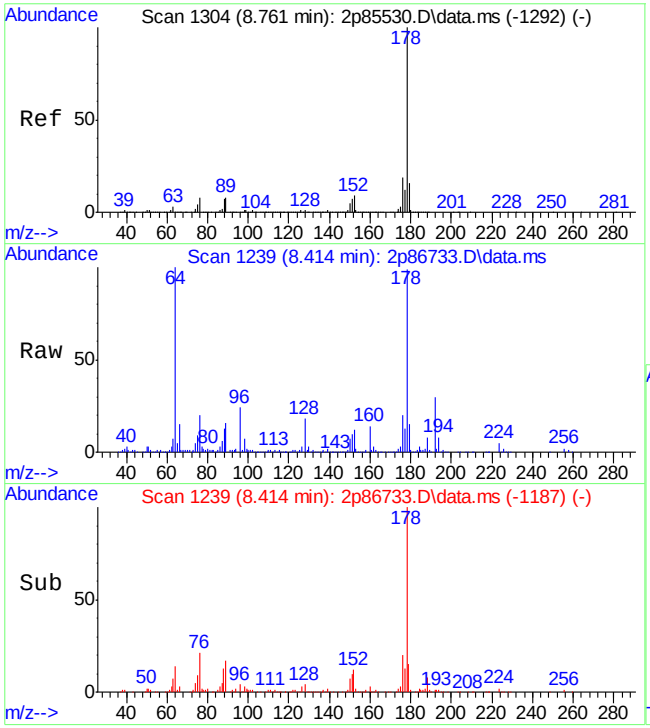


#66
Fluorene
Concen: 0.42 ppm m
RT: 7.585 min Scan# 1084
Delta R.T. -0.182 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:166 Resp: 18519

Ion	Ratio	Lower	Upper
166	100		
165	90.6	60.6	120.6
167	16.1	0.0	44.1

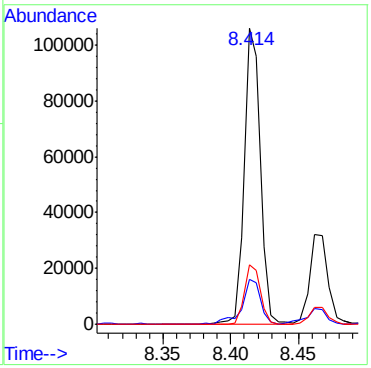


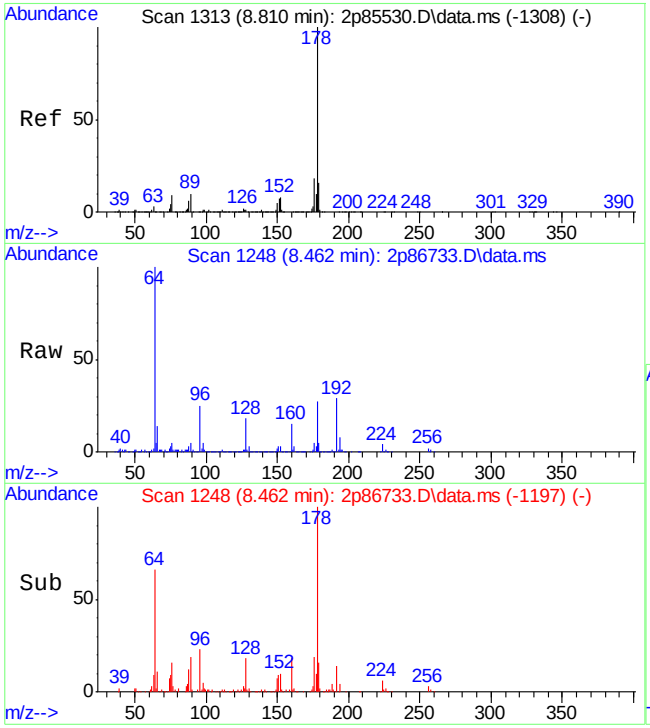


#77
Phenanthrene
Concen: 1.75 ppm
RT: 8.414 min Scan# 1239
Delta R.T. -0.219 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:178 Resp: 87344

Ion	Ratio	Lower	Upper
178	100		
179	14.7	0.0	46.0
176	20.0	0.0	49.2

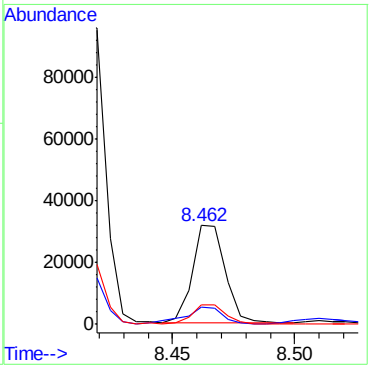


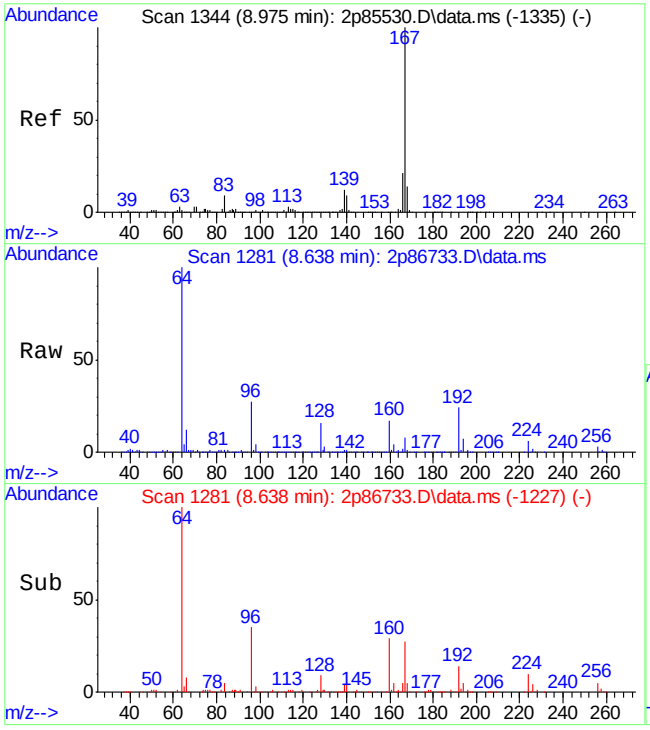


#78
Anthracene
Concen: 0.57 ppm
RT: 8.462 min Scan# 1248
Delta R.T. -0.225 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:178 Resp: 29124

Ion	Ratio	Lower	Upper
178	100		
179	14.1	0.0	45.7
176	19.4	0.0	48.6

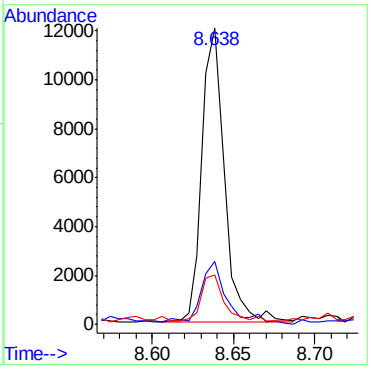


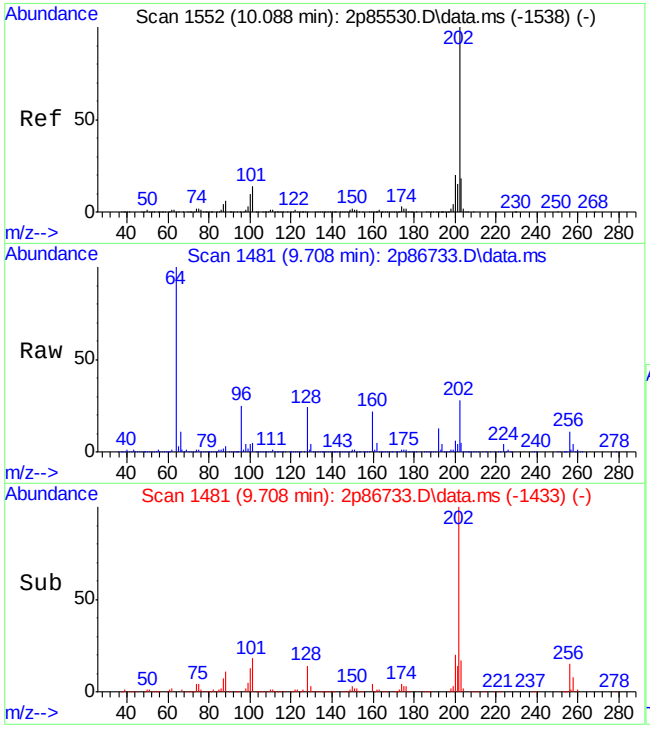


#79
Carbazole
Concen: 0.22 ppm
RT: 8.638 min Scan# 1281
Delta R.T. -0.214 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:167 Resp: 11539

Ion	Ratio	Lower	Upper
167	100		
166	21.1	0.0	50.8
139	14.4	0.0	44.2

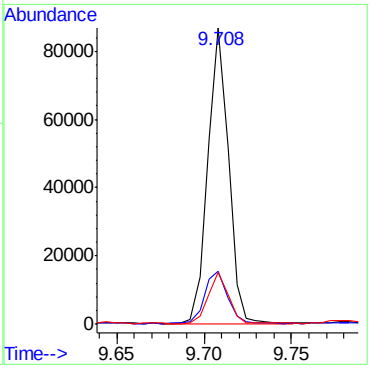


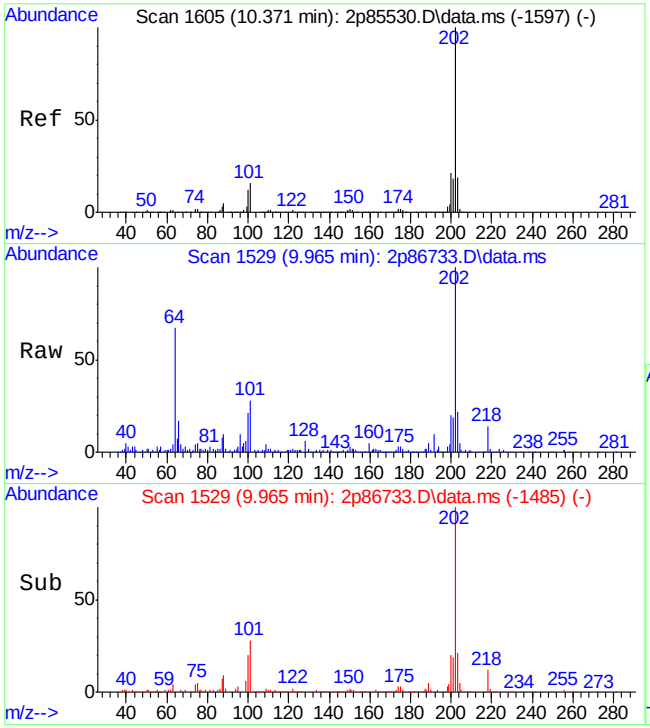


#81
Fluoranthene
Concen: 1.01 ppm
RT: 9.708 min Scan# 1481
Delta R.T. -0.241 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:202 Resp: 71332

Ion	Ratio	Lower	Upper
202	100		
101	17.6	0.0	43.7
203	17.2	0.0	48.6

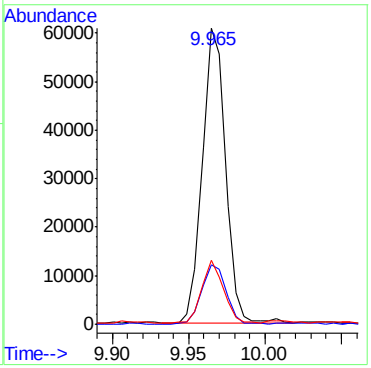


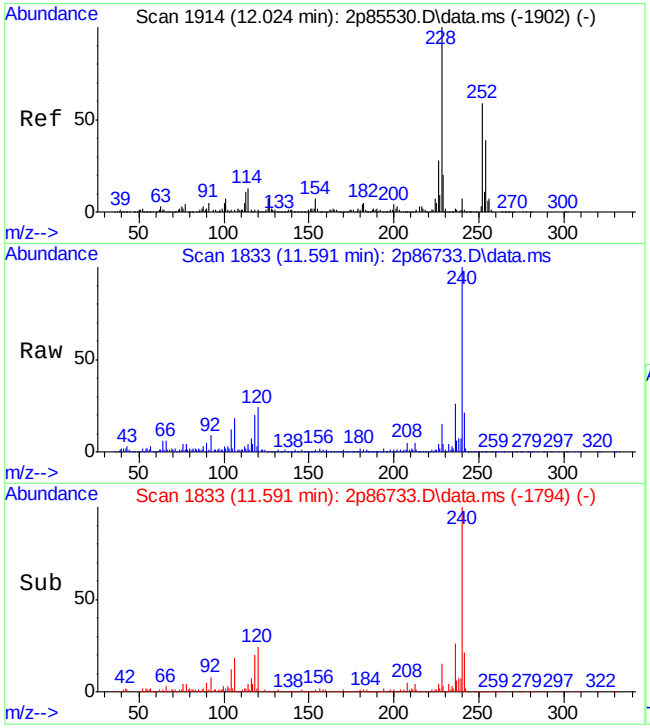


#84
Pyrene
Concen: 0.84 ppm
RT: 9.965 min Scan# 1529
Delta R.T. -0.267 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:202 Resp: 64196

Ion	Ratio	Lower	Upper
202	100		
200	19.9	0.0	50.1
203	21.1	0.0	47.4

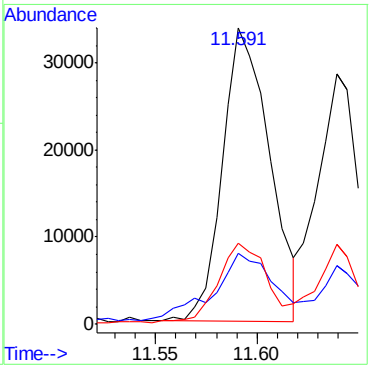


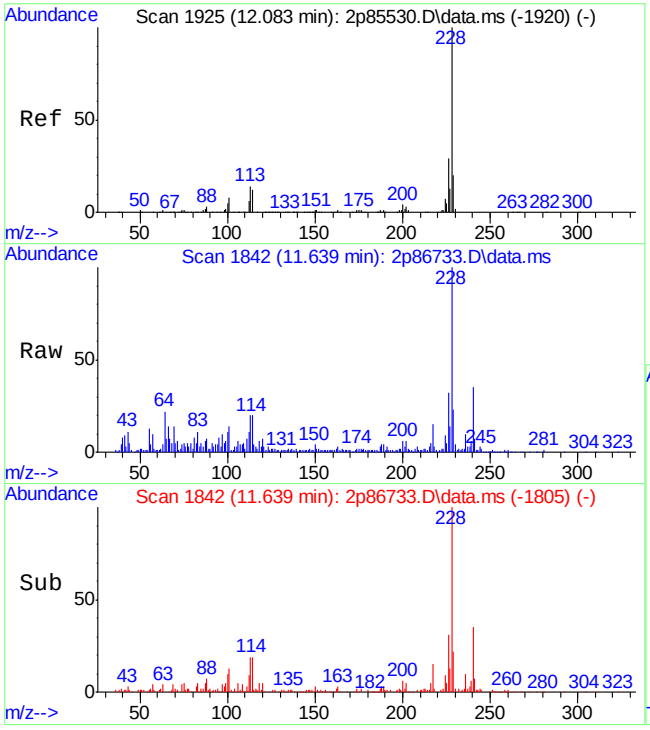


#87
Benzo[a]anthracene
Concen: 0.73 ppm
RT: 11.591 min Scan# 1833
Delta R.T. -0.289 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:228 Resp: 54261

Ion	Ratio	Lower	Upper
228	100		
229	21.5	0.0	50.3
226	26.5	0.0	57.9

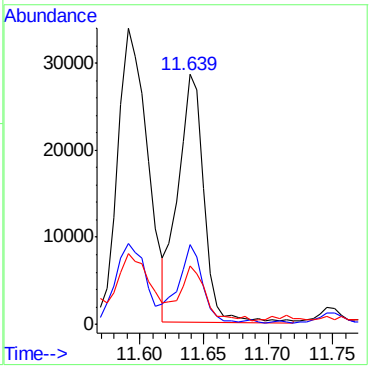


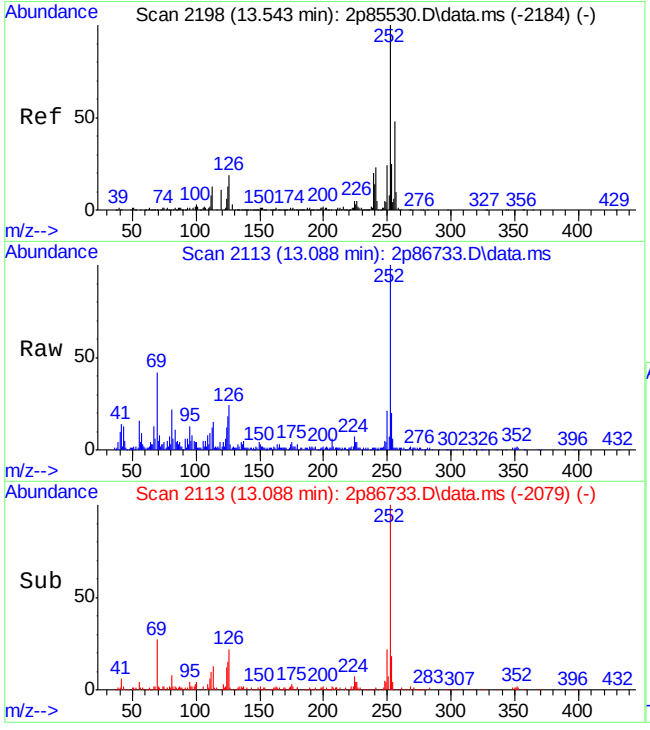


#89
Chrysene
Concen: 0.77 ppm
RT: 11.639 min Scan# 1842
Delta R.T. -0.300 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:228 Resp: 40257

Ion	Ratio	Lower	Upper
228	100		
226	31.8	0.0	59.2
229	20.6	0.0	50.2

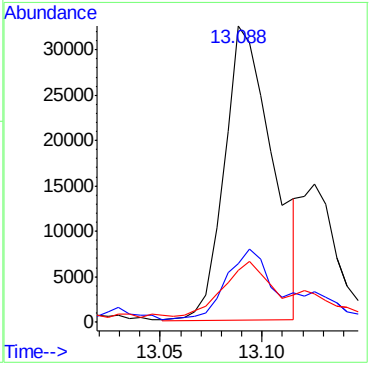


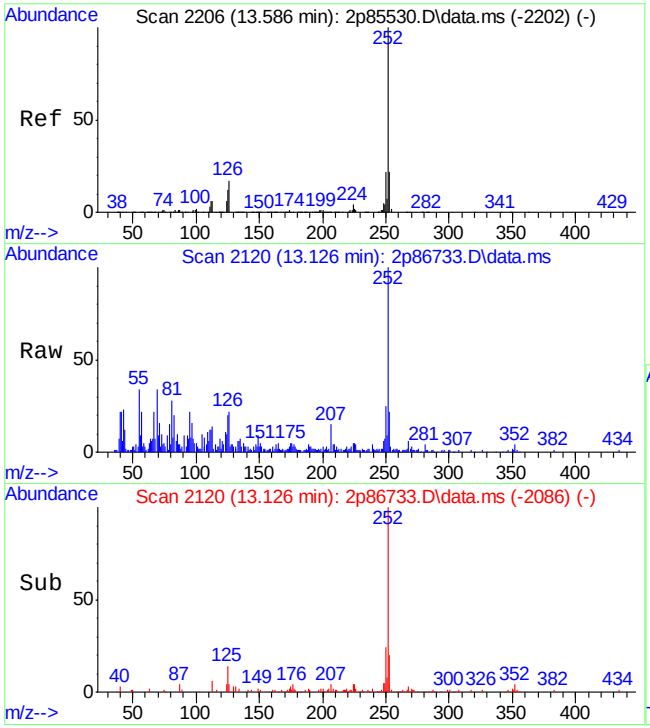


#93
Benzo[b]fluoranthene
Concen: 0.95 ppm
RT: 13.088 min Scan# 2113
Delta R.T. -0.316 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:252 Resp: 53675

Ion	Ratio	Lower	Upper
252	100		
253	18.0	0.0	54.9
125	15.2	0.0	42.5

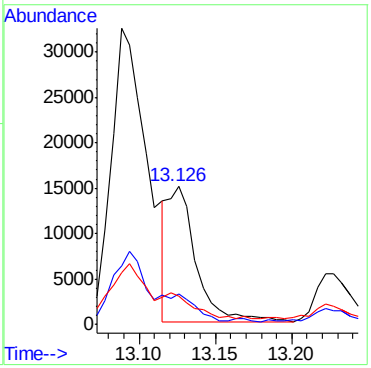


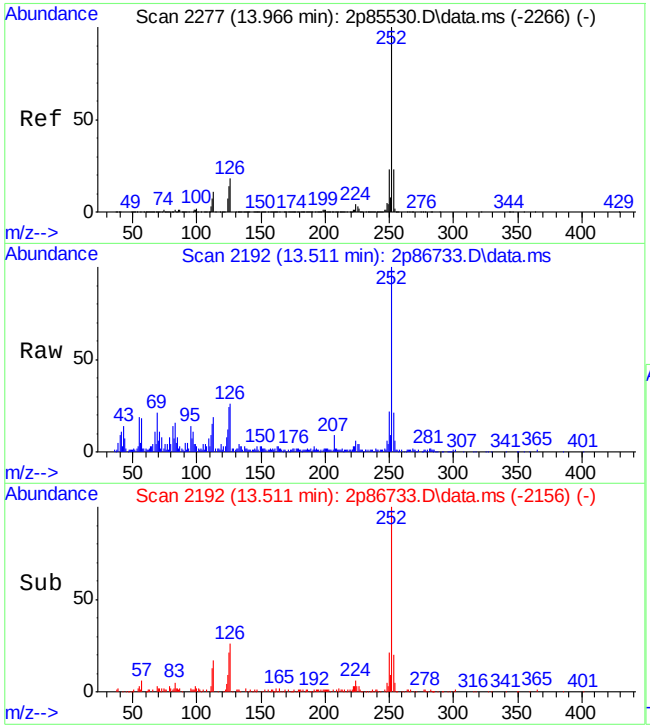


#94
Benzo[k]fluoranthene
Concen: 0.41 ppm
RT: 13.126 min Scan# 2120
Delta R.T. -0.316 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:252 Resp: 19173

Ion	Ratio	Lower	Upper
252	100		
253	17.1	0.0	52.4
125	14.8	0.0	40.8

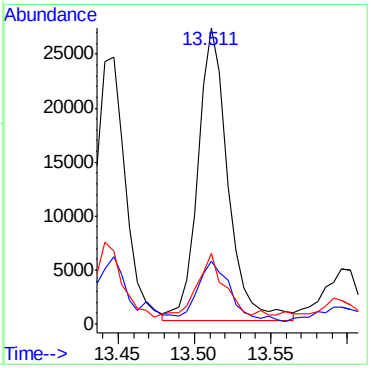


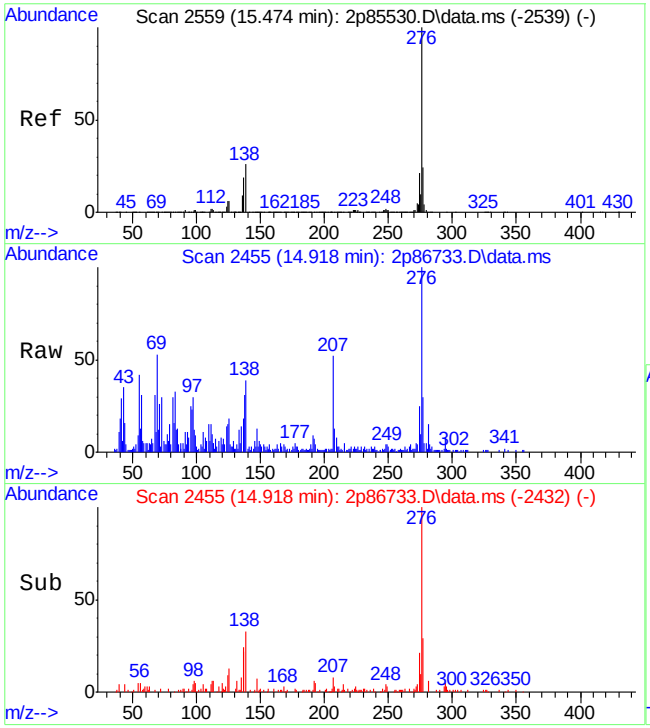


#95
Benzo[a]pyrene
Concen: 0.78 ppm
RT: 13.511 min Scan# 2192
Delta R.T. -0.310 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:252 Resp: 37046

Ion	Ratio	Lower	Upper
252	100		
253	19.5	0.0	52.1
125	21.3	0.0	42.5

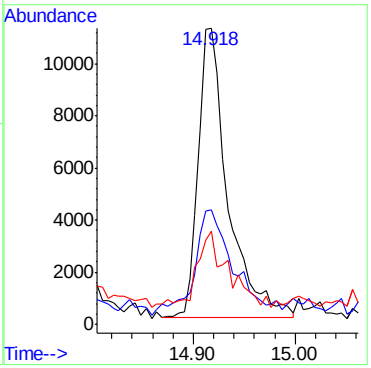


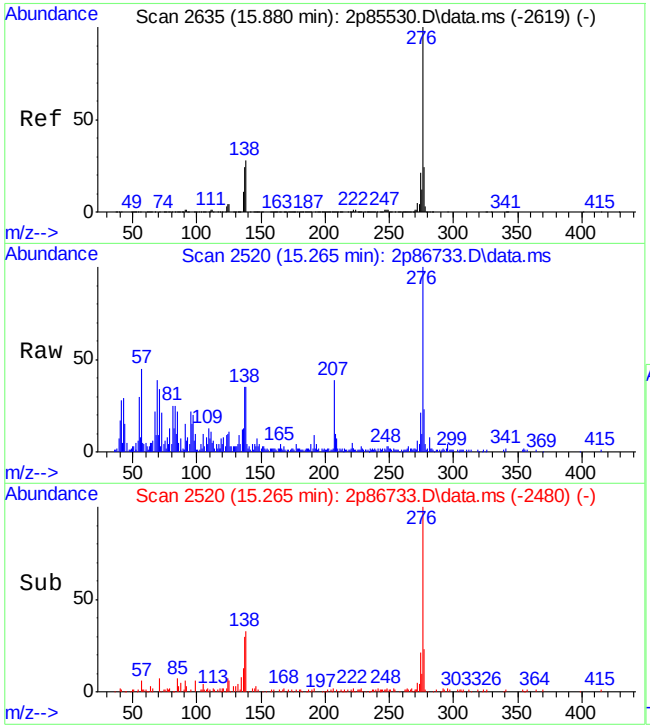


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.41 ppm
RT: 14.918 min Scan# 2455
Delta R.T. -0.374 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:276 Resp: 22424

Ion	Ratio	Lower	Upper
276	100		
138	32.1	0.0	55.3
137	24.6	0.0	48.5

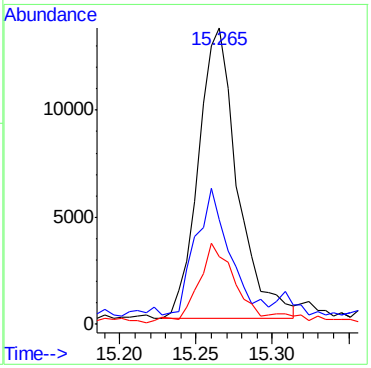




#100
Benzo[g,h,i]perylene
Concen: 0.56 ppm
RT: 15.265 min Scan# 2520
Delta R.T. -0.285 min
Lab File: 2p86733.D
Acq: 19 Apr 2019 12:27 am

Tgt Ion:276 Resp: 24228

Ion	Ratio	Lower	Upper
276	100		
138	31.9	0.0	57.9
277	21.2	0.0	54.0



Manual Integration Approval Summary

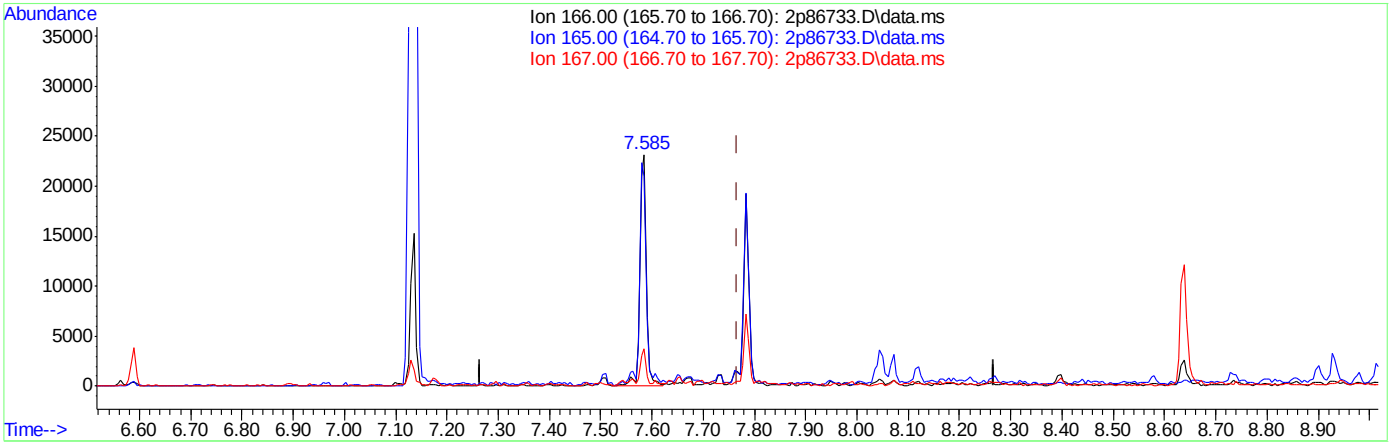
Sample Number:	JC86406-6	**Method:**	SW846 8270D
Lab FileID:	2P86733.D	**Analyst approved:**	04/19/19 12:30 Dipa Patel
Injection Time:	04/19/19 00:27	**Supervisor approved:**	04/19/19 14:21 Nancy Ma

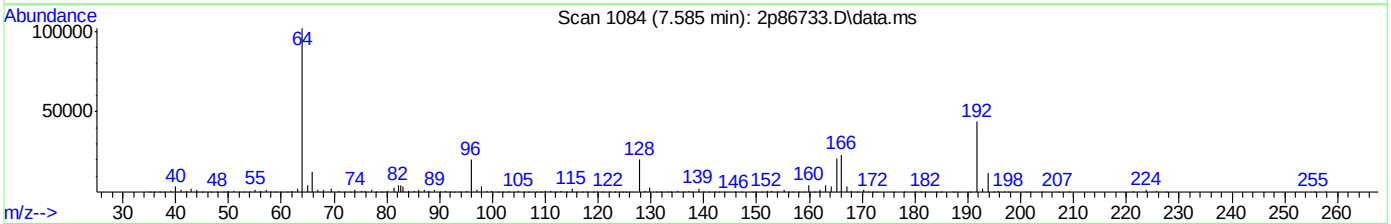
Parameter	CAS	Sig#	R.T. (min.)	Reason
Fluorene	86-73-7		7.58	Poor instrument integration

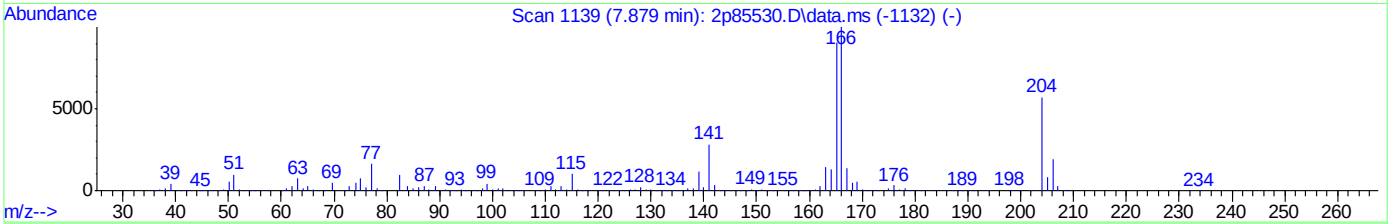
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86733.D
Acq On : 19 Apr 2019 12:27 am
Operator : carolb
Sample : jc86406-6
Misc : op19810,e2p3831,31.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 19 10:26:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86733.D\data.ms

(66) Fluorene (t)

7.585min (-0.182) 0.45ppm

response 19894

Ion	Exp%	Act%
166.00	100	100
165.00	90.60	88.86
167.00	14.10	15.28
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/19/19 14:21

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	788604	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2406624	40.00	ppm	-0.17
47) Acenaphthene-d10	7.135	164	1054952	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	1554342	40.00	ppm	-0.21
83) Chrysene-d12	11.628	240	1323114	40.00	ppm	-0.27
91) Perylene-d12	13.623	264	1434757	40.00	ppm	-0.27
101) 1,4-Dichlorobenzene-d4a	4.670	152	788604	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2407523	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.135	164	1054952	40.00	ppm	-0.18
108) Chrysene-d12a	11.628	240	1323114	40.00	ppm	0.01
110) Phenanthrene-d10a	8.398	188	1554342	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	909741	22.92	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 45.84%			
8) Phenol-d5	4.429	99	1218067	28.01	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 56.02%			
25) Nitrobenzene-d5	5.124	82	1033114	31.94	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 63.88%#			
51) 2-Fluorobiphenyl	6.590	172	1311963	35.93	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 71.86%#			
73) 2,4,6-Tribromophenol	7.788	330	155901	28.60	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 57.20%			
85) Terphenyl-d14	10.211	244	1022431	31.05	ppm	-0.25
Spiked Amount 50.000	Range 16 - 65		Recovery = 62.10%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.440	94	429854	9.47	ppm	98
19) 2-Methylphenol	4.916	108	87321	3.77	ppm	98
21) 3&4-Methylphenol	5.044	108	273584	11.66	ppm	83
30) 2,4-Dimethylphenol	5.472	107	58317	2.54	ppm	92
38) Naphthalene	5.718	128	658578	11.44	ppm	100
44) 2-Methylnaphthalene	6.285	141	131558	3.59	ppm	96
53) Biphenyl	6.665	154	45767	1.08	ppm	98
56) Acenaphthylene	7.018	152	92429	1.79	ppm	98
59) Acenaphthene	7.162	153	127057	4.20	ppm	97
62) Dibenzofuran	7.301	168	115572	2.77	ppm	94
66) Fluorene	7.585	166	119610m	3.34	ppm	
77) Phenanthrene	8.419	178	683829	17.66	ppm	99
78) Anthracene	8.467	178	498376	12.66	ppm	99
79) Carbazole	8.638	167	80501	1.98	ppm	98
81) Fluoranthene	9.724	202	740656	13.46	ppm	96
84) Pyrene	9.986	202	729540	14.17	ppm	96
87) Benzo[a]anthracene	11.618	228	356858	7.18	ppm	99
89) Chrysene	11.660	228	326271	9.25	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

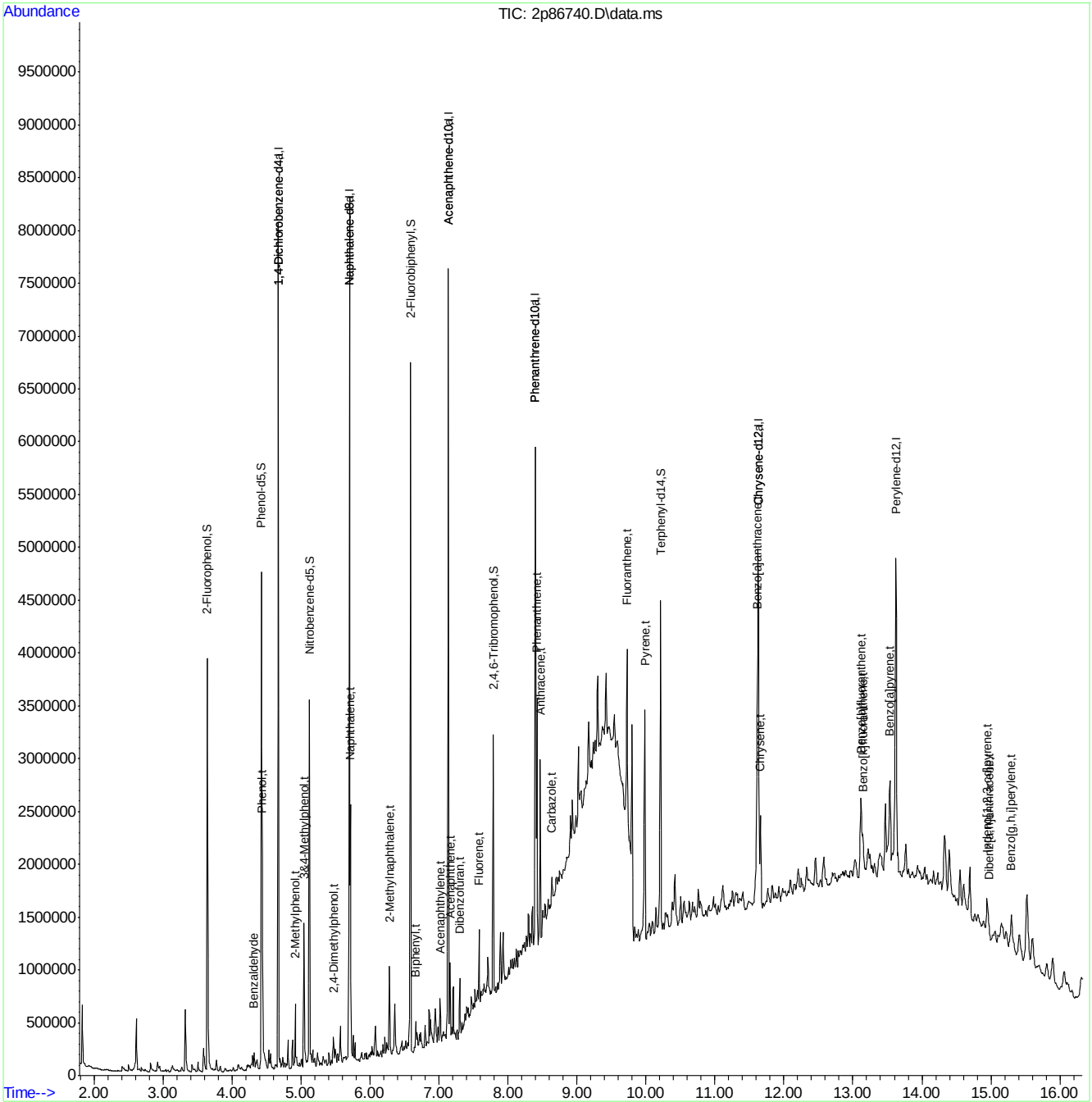
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	13.115	252	416407	8.86	ppm	95
94)	Benzo[k]fluoranthene	13.147	252	139108	3.62	ppm	96
95)	Benzo[a]pyrene	13.538	252	311309	7.88	ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.944	276	194930	4.33	ppm	97
98)	Dibenz[a,h]anthracene	14.971	278	41674m	1.19	ppm	
100)	Benzo[g,h,i]perylene	15.297	276	180973	5.08	ppm	97
102)	Benzaldehyde	4.322	105	27822m	0.98	ppm	

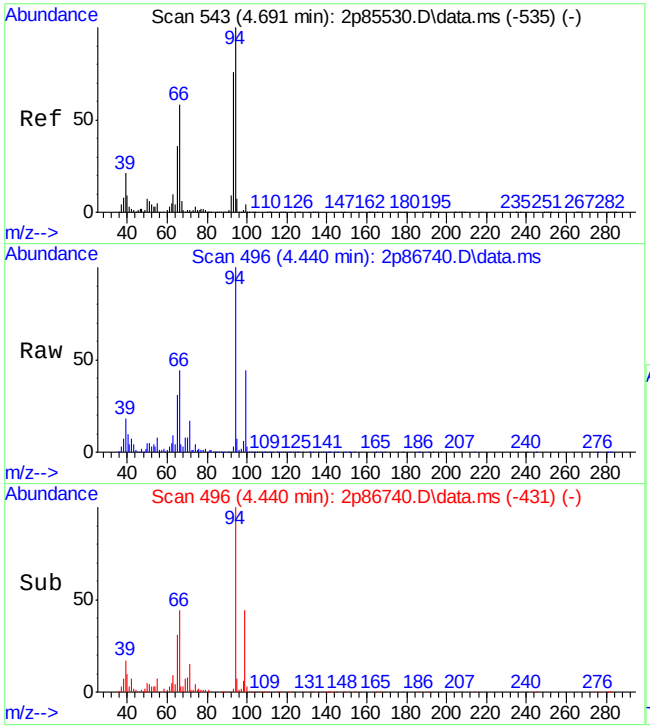
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

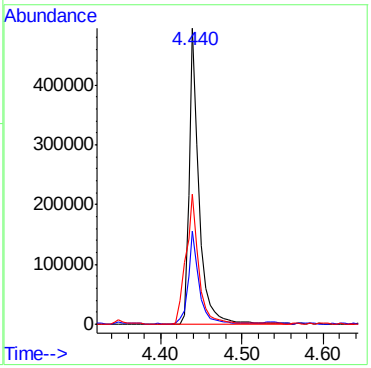


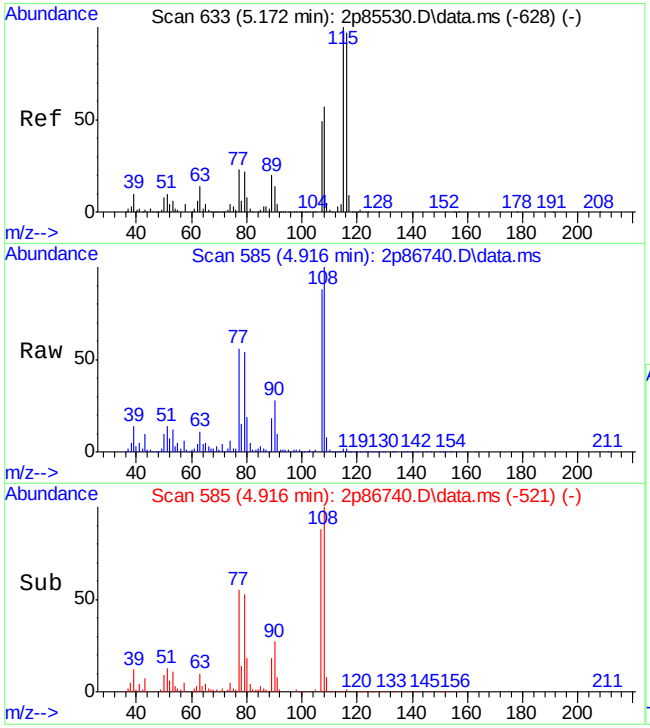


#9
Phenol
Concen: 9.47 ppm
RT: 4.440 min Scan# 496
Delta R.T. -0.150 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion: 94 Resp: 429854

Ion	Ratio	Lower	Upper
94	100		
65	31.3	1.5	61.5
66	43.6	15.3	75.3

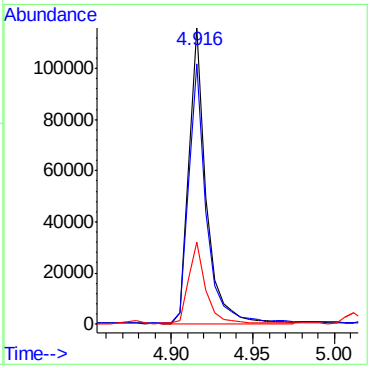


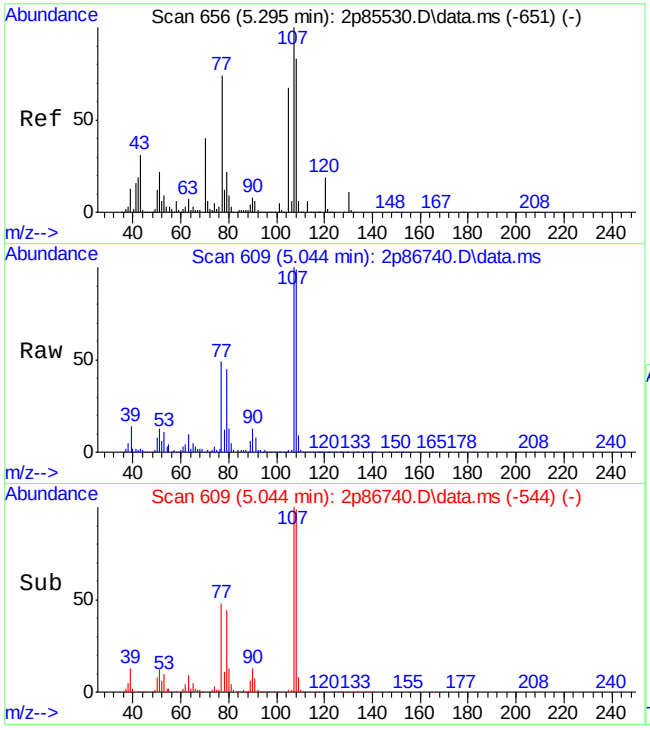


#19
2-Methylphenol
Concen: 3.77 ppm
RT: 4.916 min Scan# 585
Delta R.T. -0.155 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:108 Resp: 87321

Ion	Ratio	Lower	Upper
108	100		
107	87.7	58.4	118.4
90	27.5	0.0	53.9

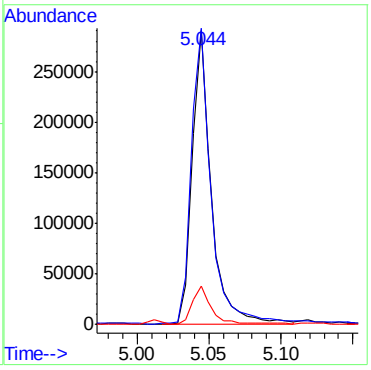


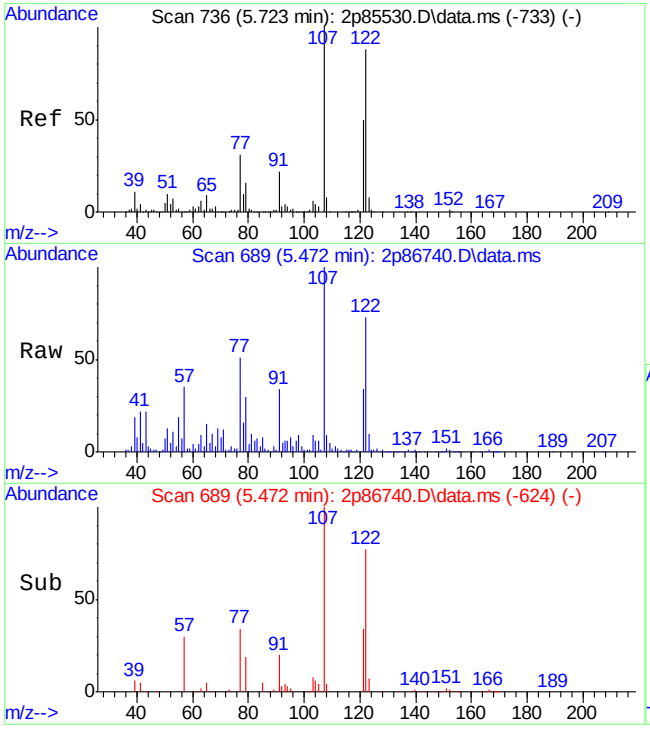


#21
3&4-Methylphenol
Concen: 11.66 ppm
RT: 5.044 min Scan# 609
Delta R.T. -0.155 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:108 Resp: 273584

Ion	Ratio	Lower	Upper
108	100		
107	100.4	90.6	150.6
90	12.5	0.0	39.9

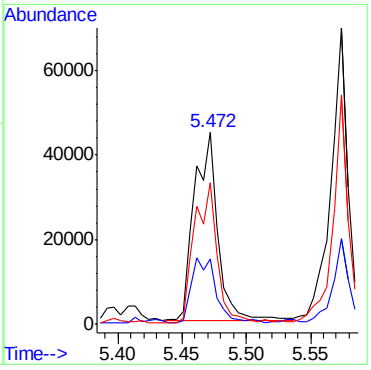


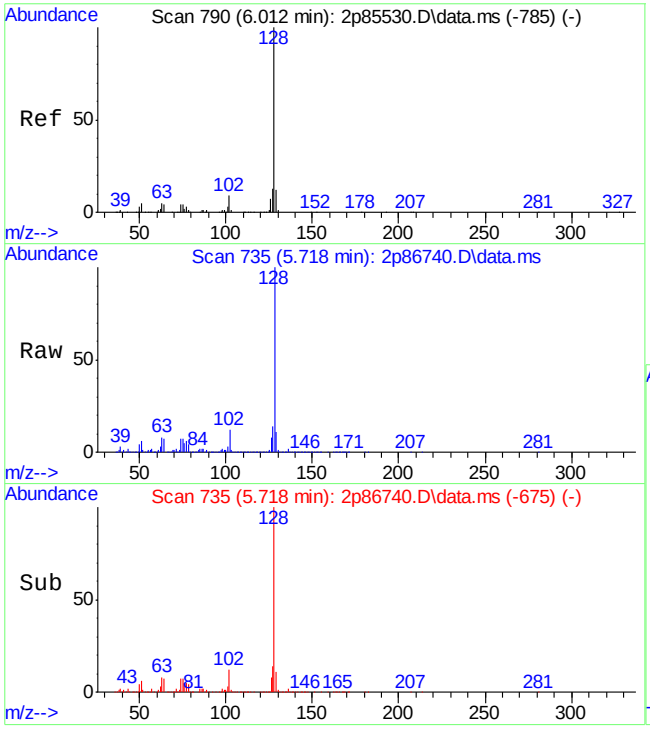


#30
2,4-Dimethylphenol
Concen: 2.54 ppm
RT: 5.472 min Scan# 689
Delta R.T. -0.150 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:107 Resp: 58317

Ion	Ratio	Lower	Upper
107	100		
121	32.5	13.3	73.3
122	74.1	41.5	101.5

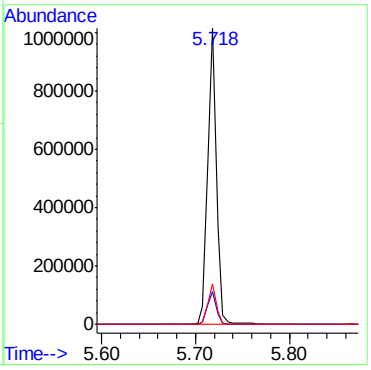


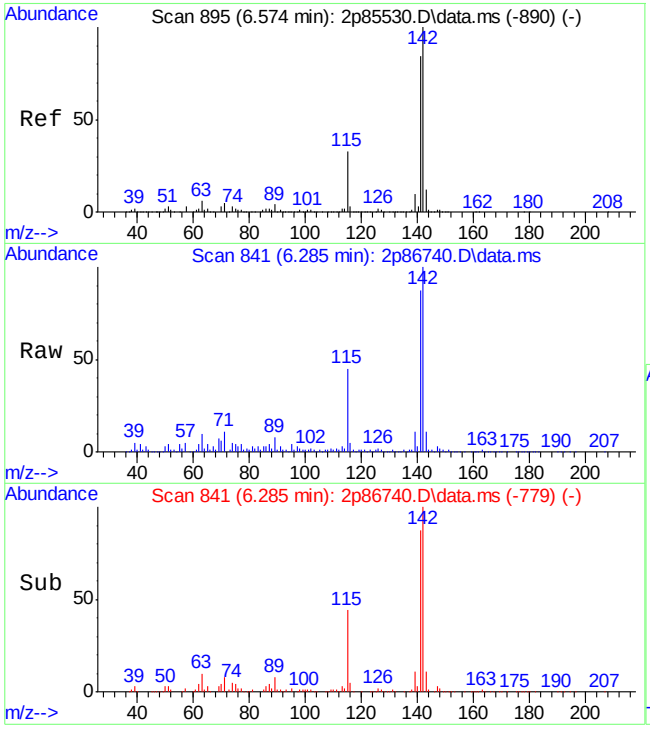


#38
Naphthalene
Concen: 11.44 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:128 Resp: 658578

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	41.2
127	13.5	0.0	43.7

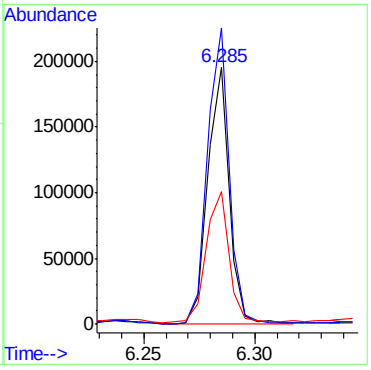


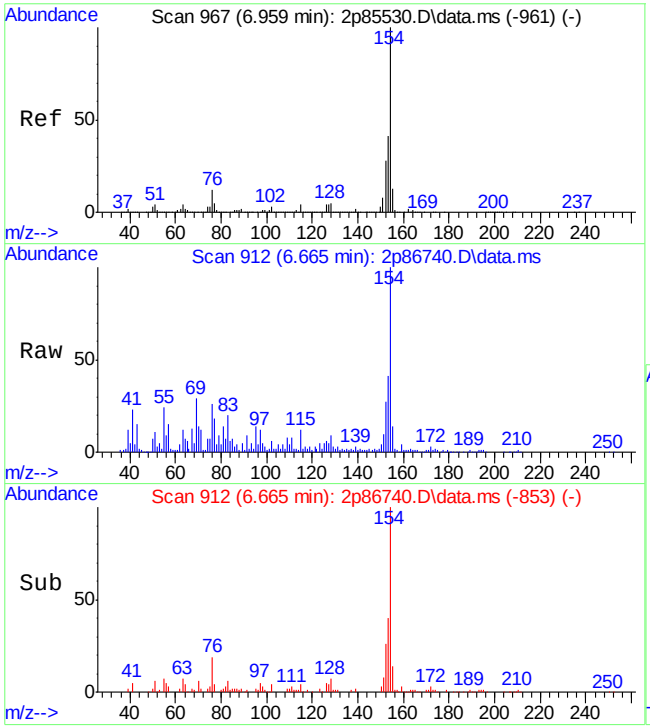


#44
2-Methylnaphthalene
Concen: 3.59 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:141 Resp: 131558

Ion	Ratio	Lower	Upper
141	100		
142	115.1	90.7	150.7
115	50.7	18.7	78.7

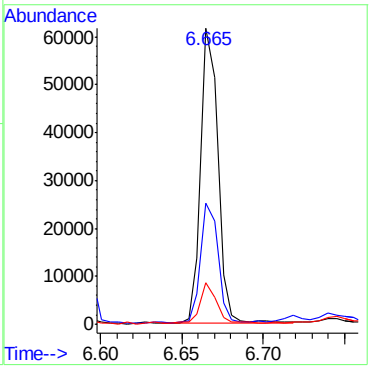


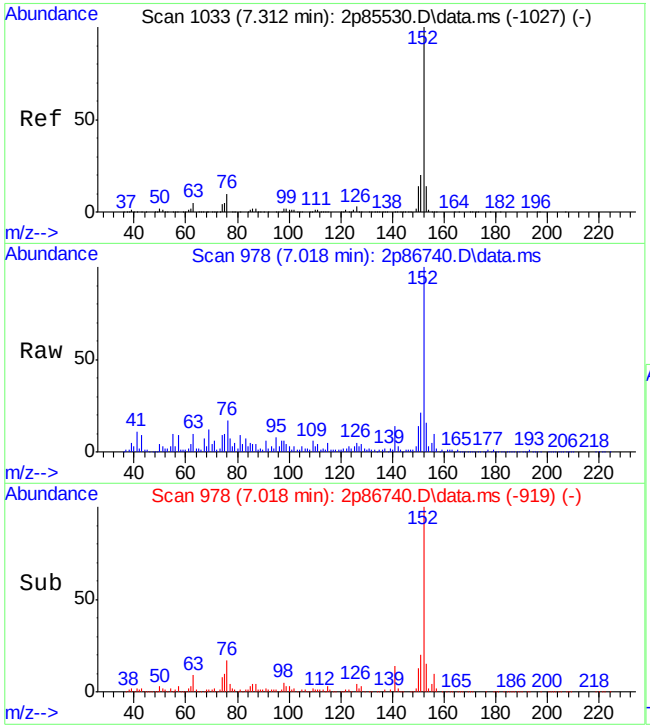


#53
Biphenyl
Concen: 1.08 ppm
RT: 6.665 min Scan# 912
Delta R.T. -0.182 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:154 Resp: 45767

Ion	Ratio	Lower	Upper
154	100		
153	39.3	11.1	71.1
155	13.5	0.0	43.4

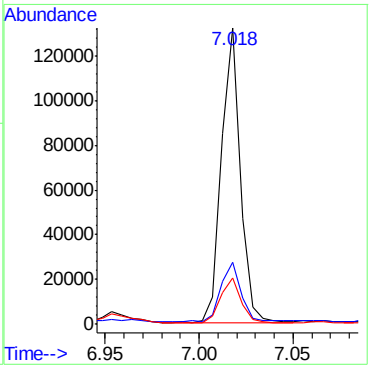


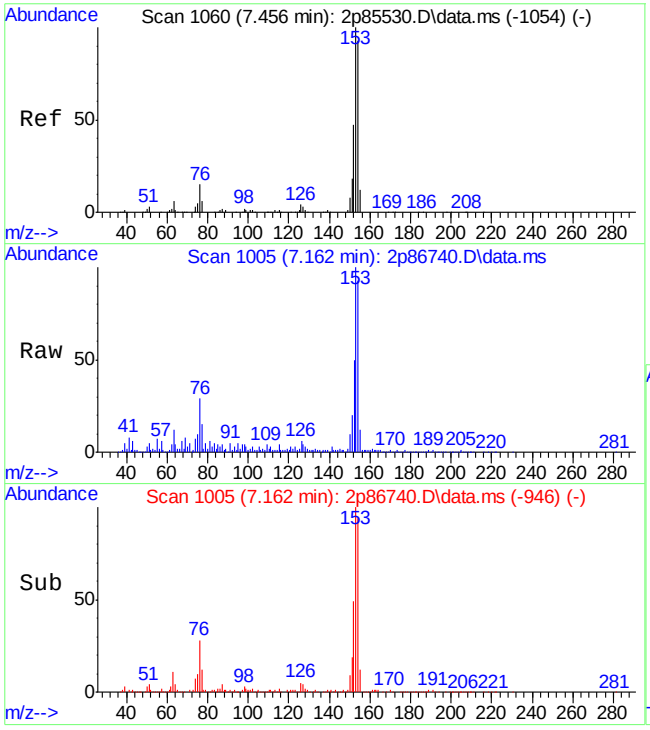


#56
Acenaphthylene
Concen: 1.79 ppm
RT: 7.018 min Scan# 978
Delta R.T. -0.182 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:152 Resp: 92429

Ion	Ratio	Lower	Upper
152	100		
151	20.2	0.0	50.3
153	15.3	0.0	43.6

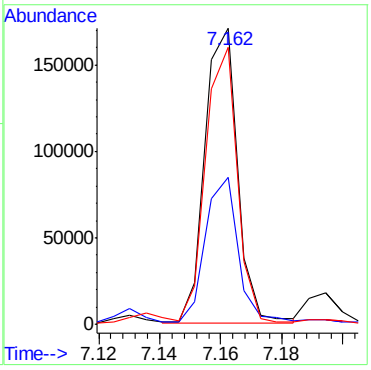


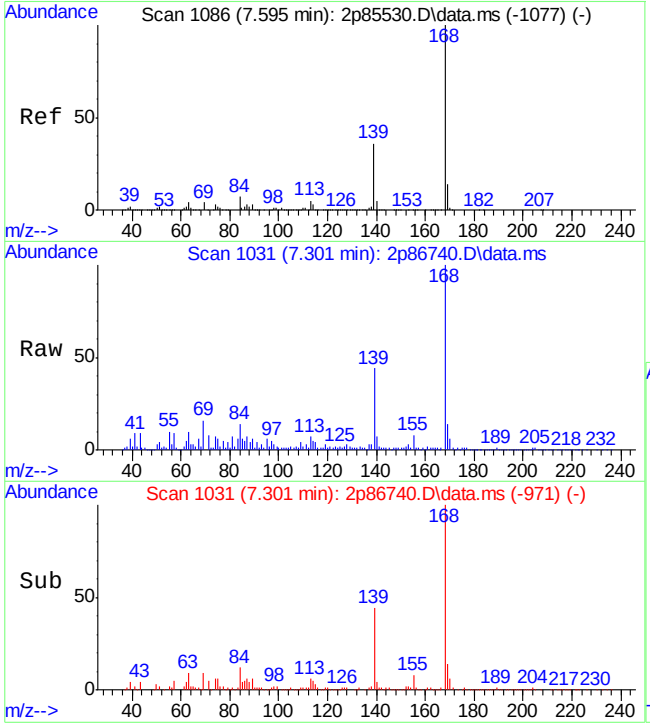


#59
Acenaphthene
Concen: 4.20 ppm
RT: 7.162 min Scan# 1005
Delta R.T. -0.182 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:153 Resp: 127057

Ion	Ratio	Lower	Upper
153	100		
152	49.3	17.8	77.8
154	93.1	59.8	119.8

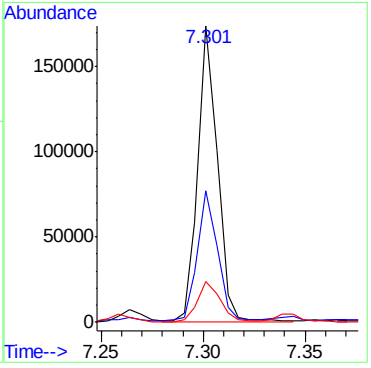


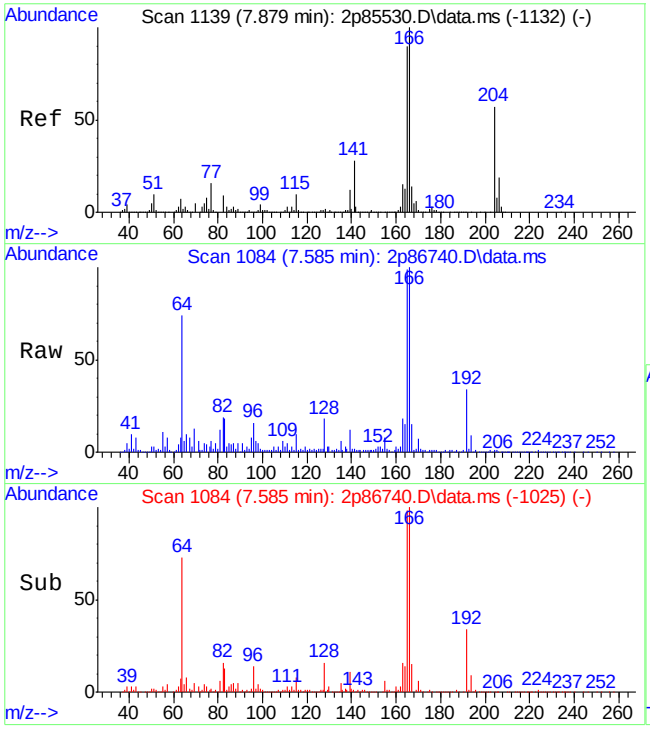


#62
Dibenzofuran
Concen: 2.77 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:168 Resp: 115572

Ion	Ratio	Lower	Upper
168	100		
139	43.3	9.2	69.2
169	12.2	0.0	44.1

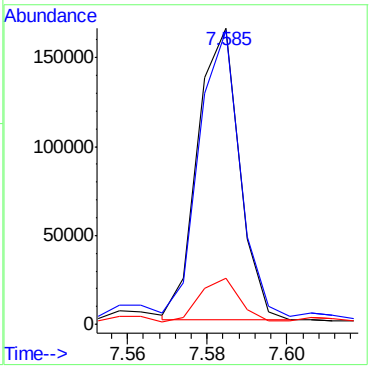


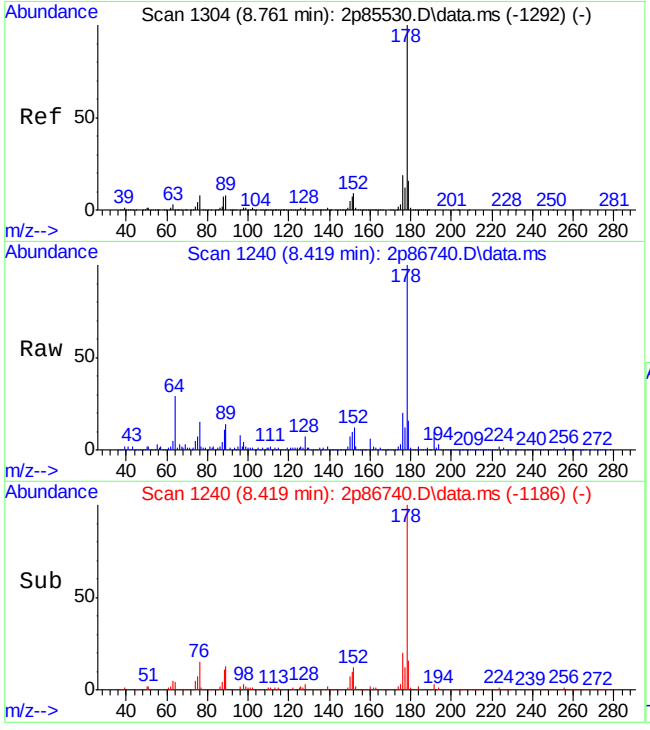


#66
Fluorene
Concen: 3.34 ppm m
RT: 7.585 min Scan# 1084
Delta R.T. -0.182 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:166 Resp: 119610

Ion	Ratio	Lower	Upper
166	100		
165	99.4	60.6	120.6
167	15.4	0.0	44.1

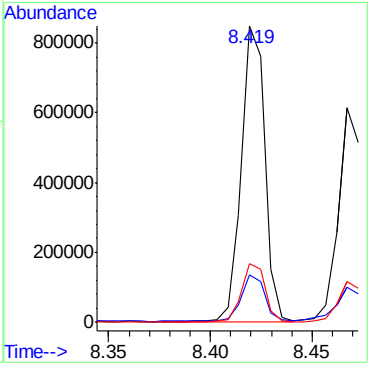


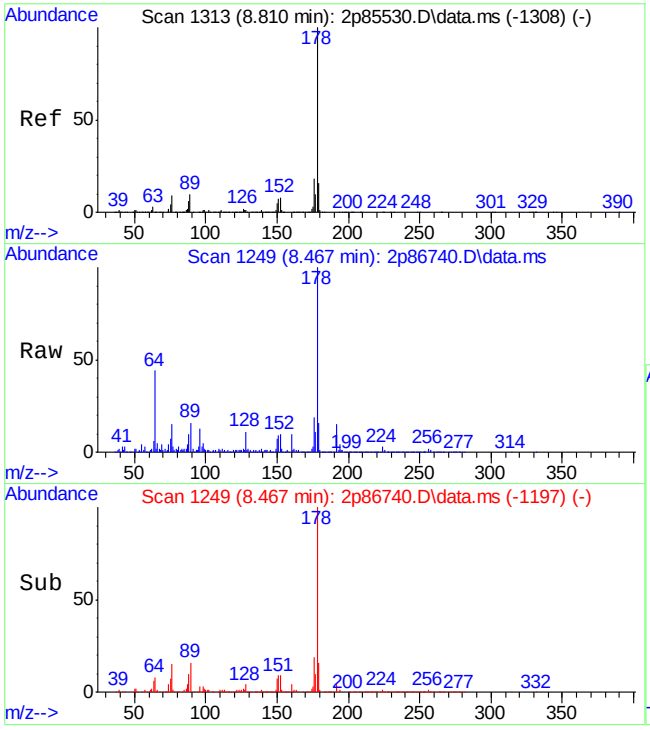


#77
Phenanthrene
Concen: 17.66 ppm
RT: 8.419 min Scan# 1240
Delta R.T. -0.214 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:178 Resp: 683829

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	46.0
176	19.6	0.0	49.2

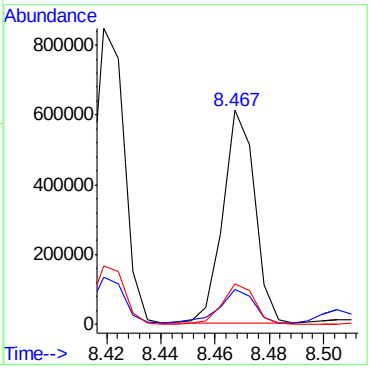


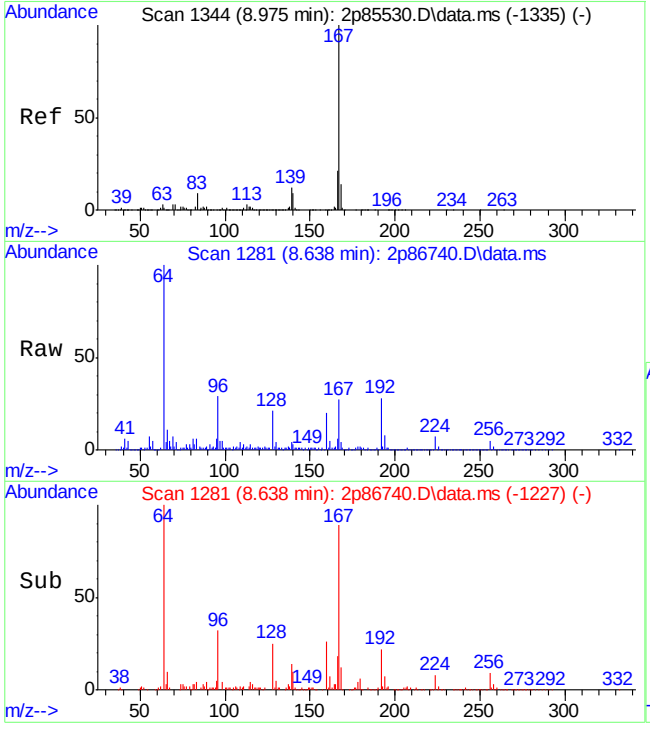


#78
Anthracene
Concen: 12.66 ppm
RT: 8.467 min Scan# 1249
Delta R.T. -0.220 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:178 Resp: 498376

Ion	Ratio	Lower	Upper
178	100		
179	16.0	0.0	45.7
176	19.0	0.0	48.6

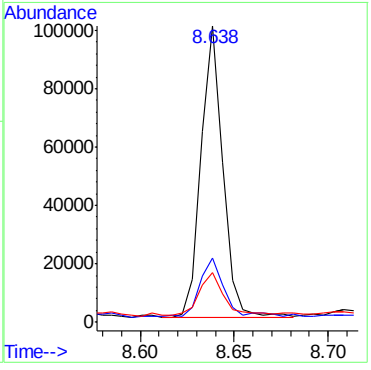


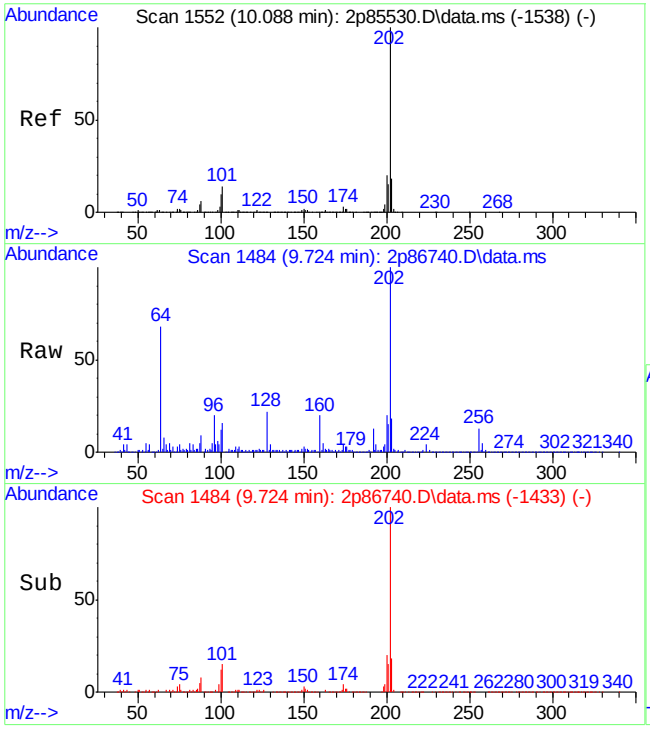


#79
Carbazole
Concen: 1.98 ppm
RT: 8.638 min Scan# 1281
Delta R.T. -0.214 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:167 Resp: 80501

Ion	Ratio	Lower	Upper
167	100		
166	19.7	0.0	50.8
139	14.3	0.0	44.2

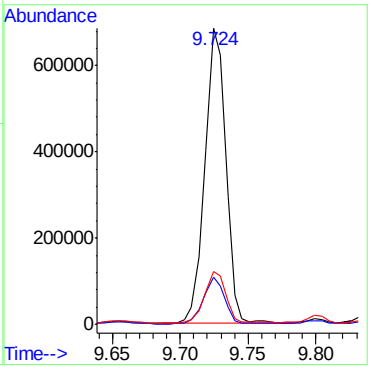


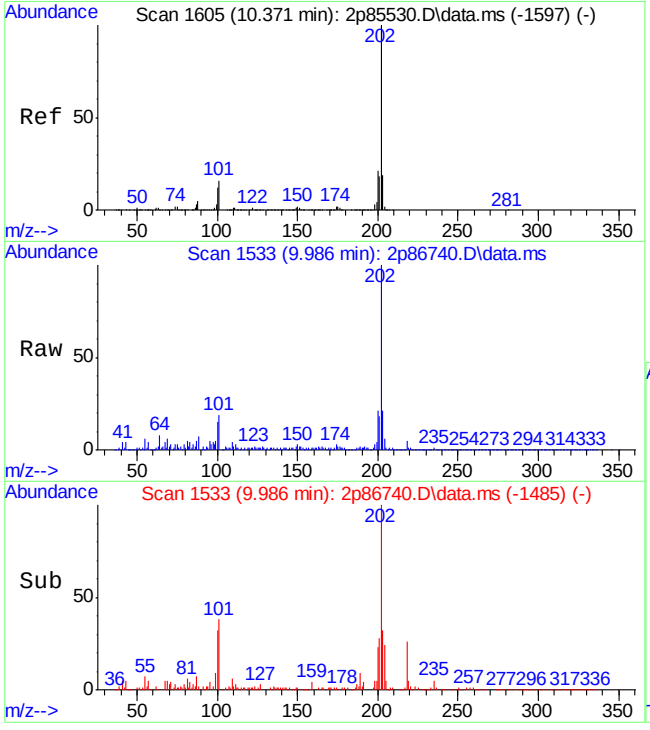


#81
Fluoranthene
Concen: 13.46 ppm
RT: 9.724 min Scan# 1484
Delta R.T. -0.225 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:202 Resp: 740656

Ion	Ratio	Lower	Upper
202	100		
101	15.7	0.0	43.7
203	17.4	0.0	48.6

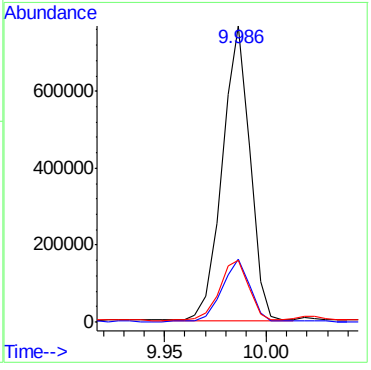


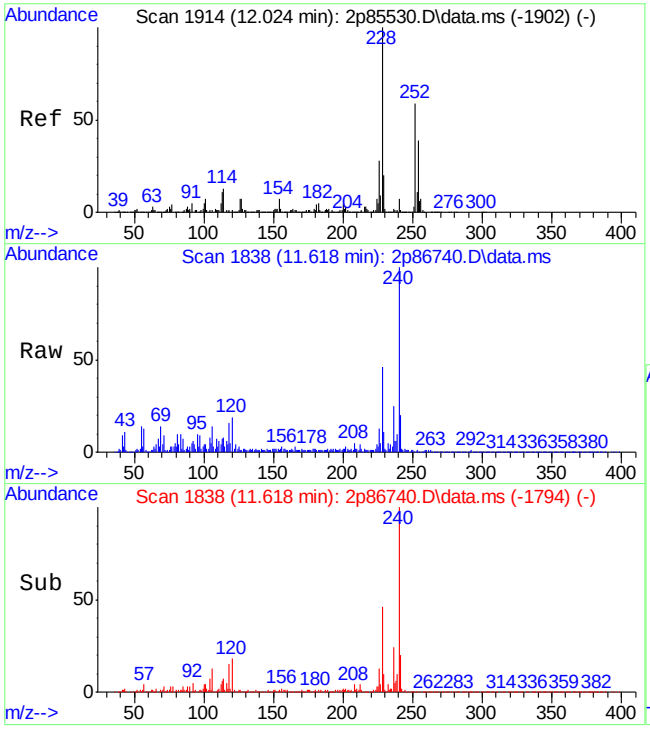


#84
Pyrene
Concen: 14.17 ppm
RT: 9.986 min Scan# 1533
Delta R.T. -0.246 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:202 Resp: 729540

Ion	Ratio	Lower	Upper
202	100		
200	21.1	0.0	50.1
203	20.0	0.0	47.4

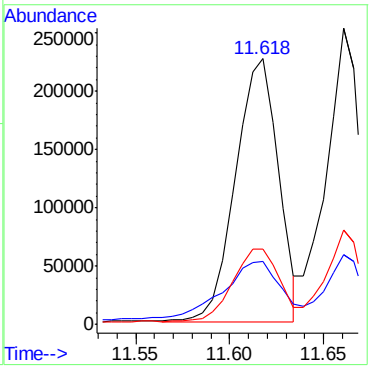


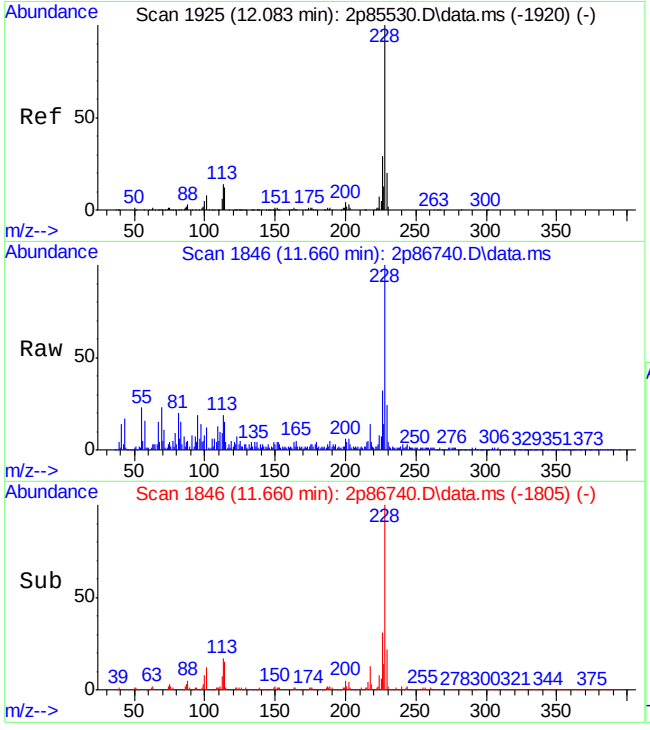


#87
Benzo[a]anthracene
Concen: 7.18 ppm
RT: 11.618 min Scan# 1838
Delta R.T. -0.262 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:228 Resp: 356858

Ion	Ratio	Lower	Upper
228	100		
229	20.9	0.0	50.3
226	27.2	0.0	57.9

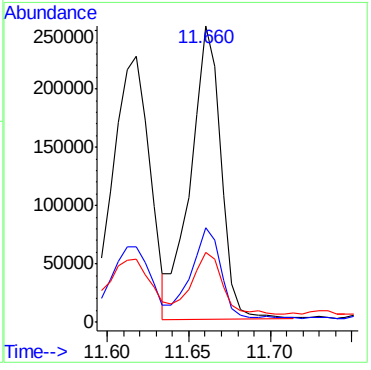


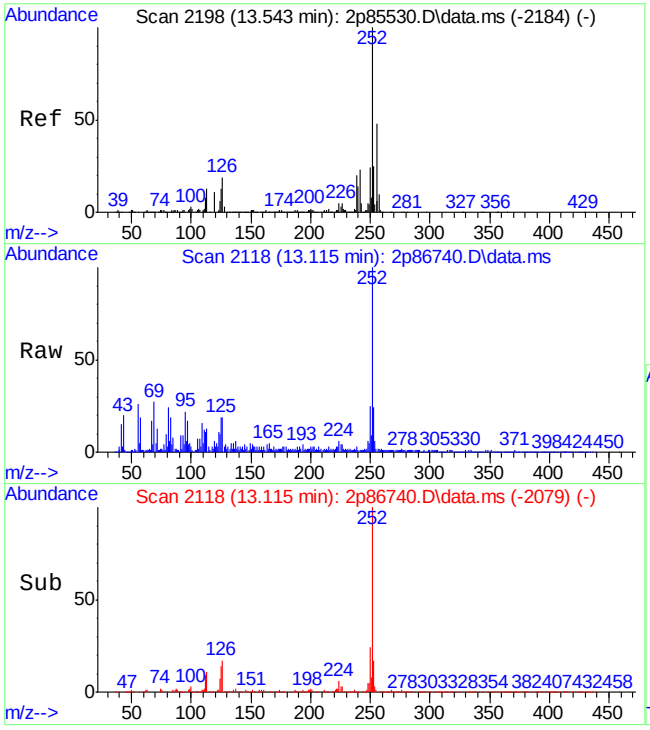


#89
Chrysene
Concen: 9.25 ppm
RT: 11.660 min Scan# 1846
Delta R.T. -0.279 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:228 Resp: 326271

Ion	Ratio	Lower	Upper
228	100		
226	30.9	0.0	59.2
229	20.5	0.0	50.2

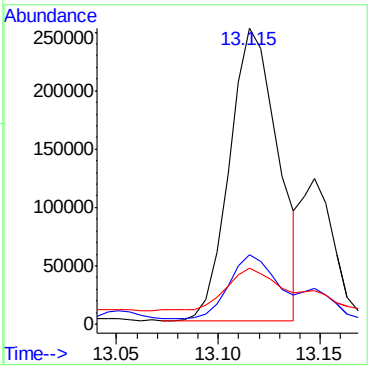


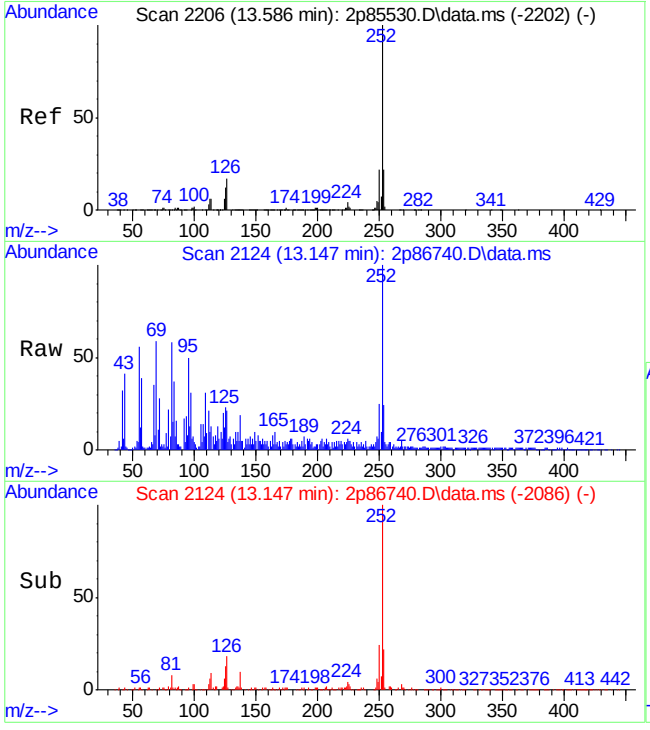


#93
Benzo[b]fluoranthene
Concen: 8.86 ppm
RT: 13.115 min Scan# 2118
Delta R.T. -0.289 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:252 Resp: 416407

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	54.9
125	13.7	0.0	42.5

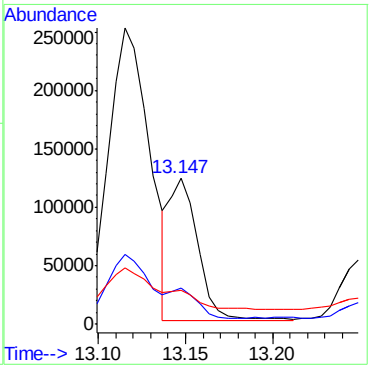


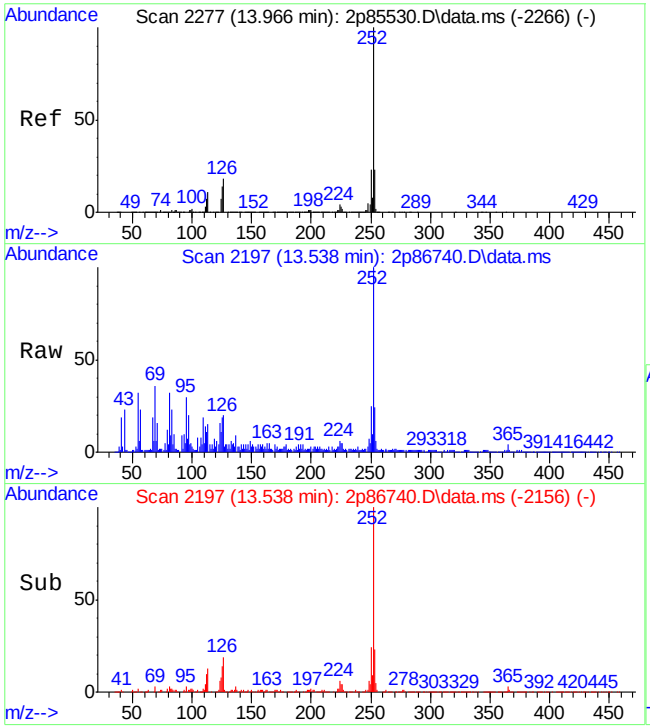


#94
Benzo[k]fluoranthene
Concen: 3.62 ppm
RT: 13.147 min Scan# 2124
Delta R.T. -0.295 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:252 Resp: 139108

Ion	Ratio	Lower	Upper
252	100		
253	20.1	0.0	52.4
125	12.0	0.0	40.8

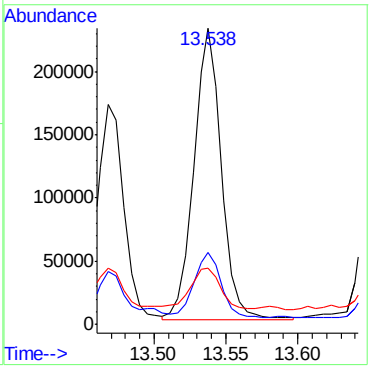


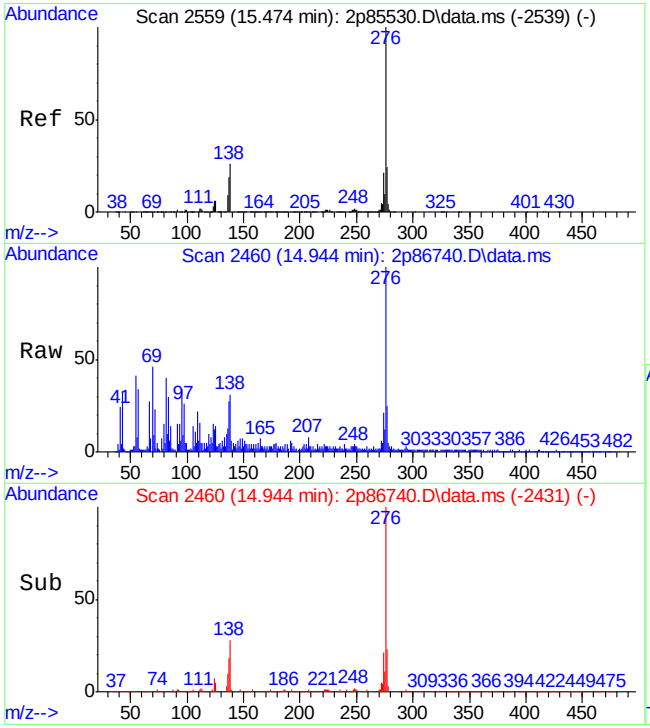


#95
Benzo[a]pyrene
Concen: 7.88 ppm
RT: 13.538 min Scan# 2197
Delta R.T. -0.283 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:252 Resp: 311309

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.1
125	13.8	0.0	42.5

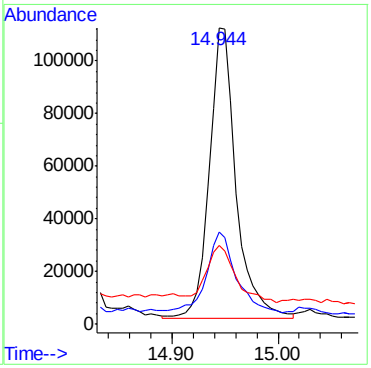


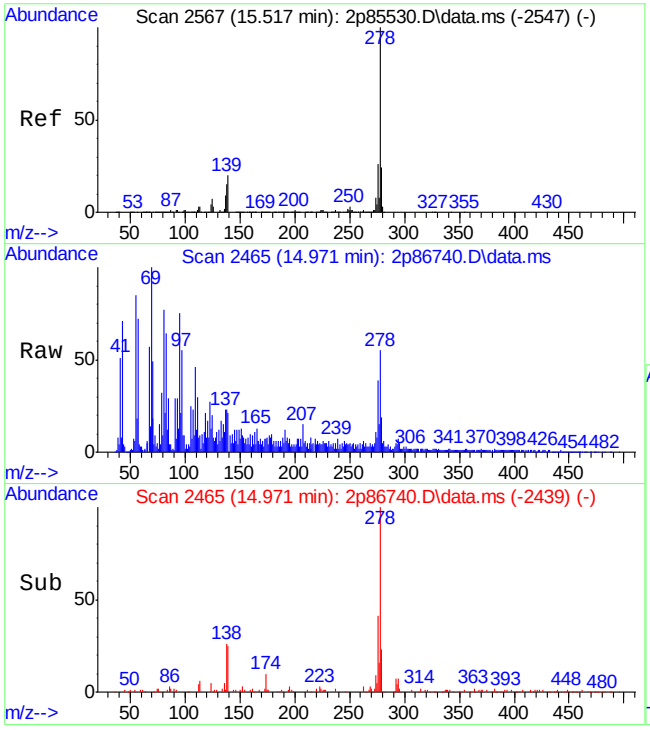


#96
Indeno[1,2,3-cd]pyrene
Concen: 4.33 ppm
RT: 14.944 min Scan# 2460
Delta R.T. -0.348 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:276 Resp: 194930

Ion	Ratio	Lower	Upper
276	100		
138	27.4	0.0	55.3
137	18.3	0.0	48.5

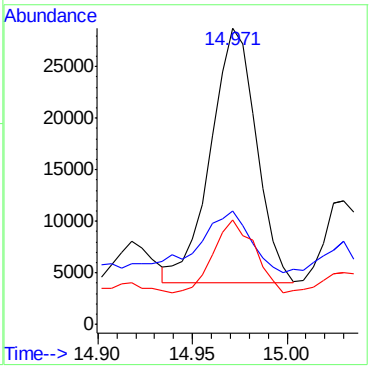


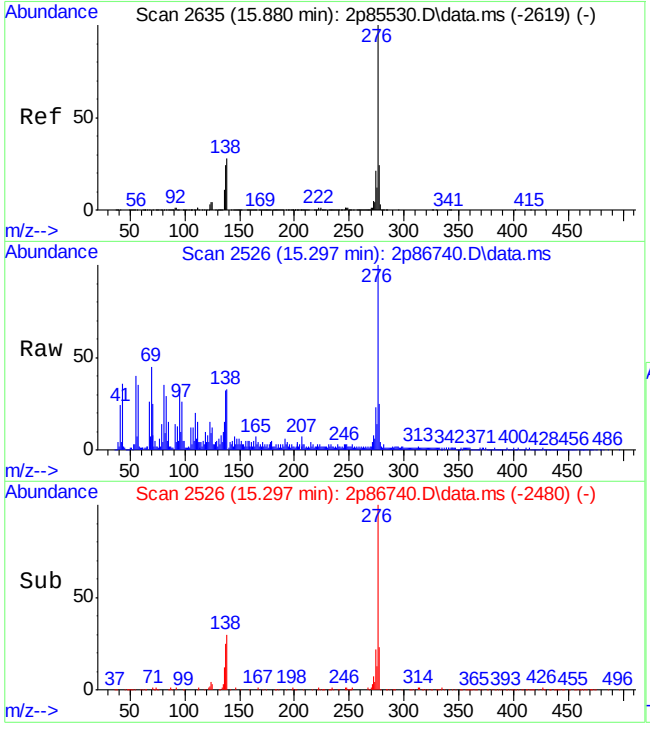


#98
Dibenz[a,h]anthracene
Concen: 1.19 ppm m
RT: 14.971 min Scan# 2465
Delta R.T. -0.359 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:278 Resp: 41674

Ion	Ratio	Lower	Upper
278	100		
139	38.4	0.0	50.3
279	35.2	0.0	54.3

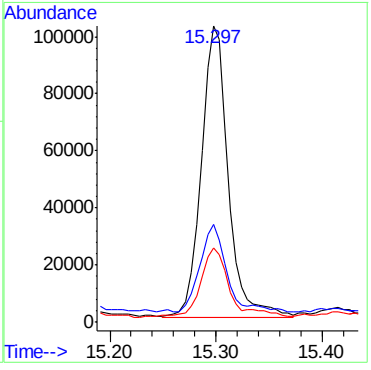


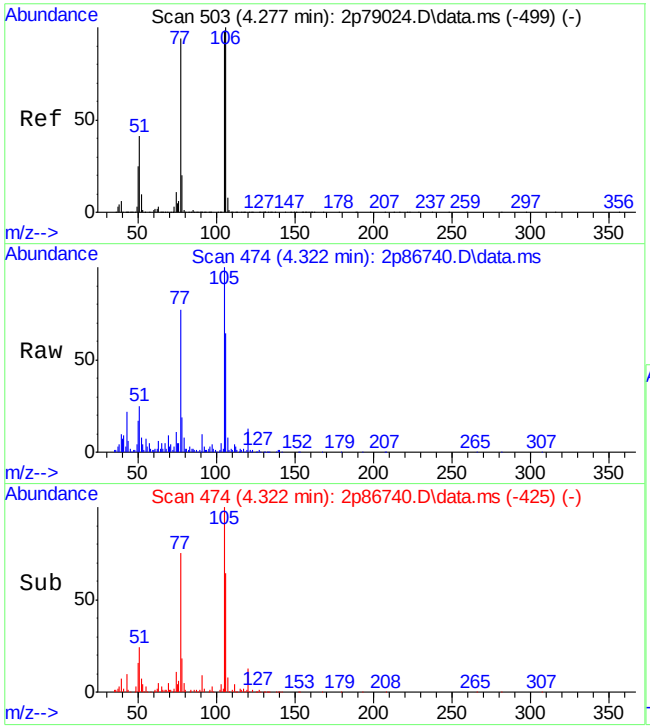


#100
Benzo[g,h,i]perylene
Concen: 5.08 ppm
RT: 15.297 min Scan# 2526
Delta R.T. -0.253 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:276 Resp: 180973

Ion	Ratio	Lower	Upper
276	100		
138	29.9	0.0	57.9
277	23.5	0.0	54.0

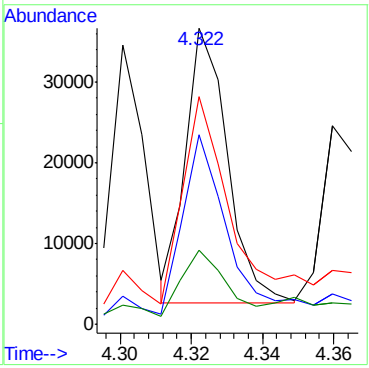




#102
Benzaldehyde
Concen: 0.98 ppm m
RT: 4.322 min Scan# 474
Delta R.T. -0.237 min
Lab File: 2p86740.D
Acq: 19 Apr 2019 3:00 am

Tgt Ion:105 Resp: 27822

Ion	Ratio	Lower	Upper
105	100		
106	64.0	70.0	130.0#
77	76.7	76.7	136.7
51	24.9	5.1	65.1



Manual Integration Approval Summary

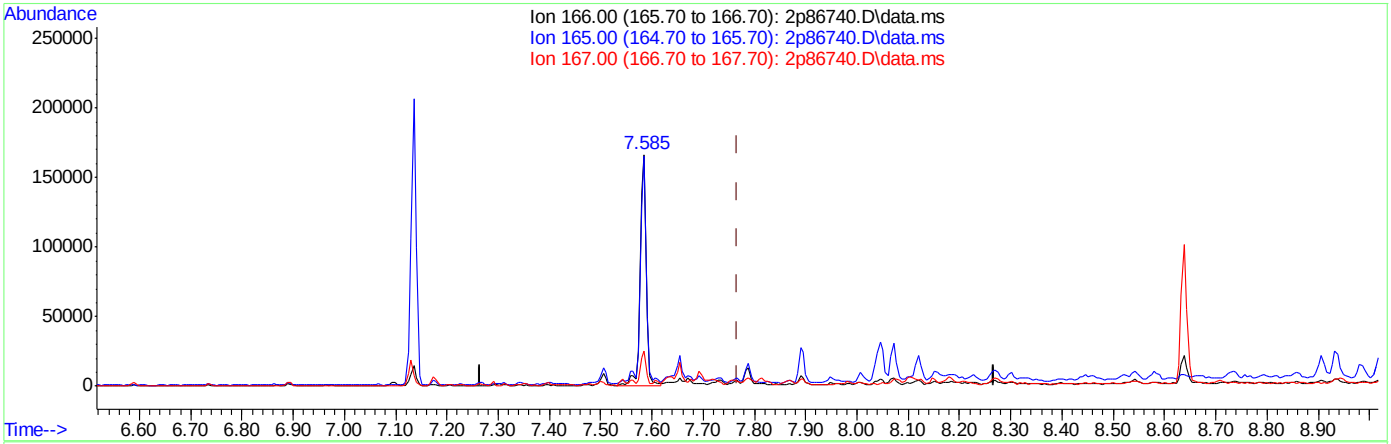
Sample Number: JC86406-7
Lab FileID: 2P86740.D
Injection Time: 04/19/19 03:00
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/19/19 14:21 Nancy Ma

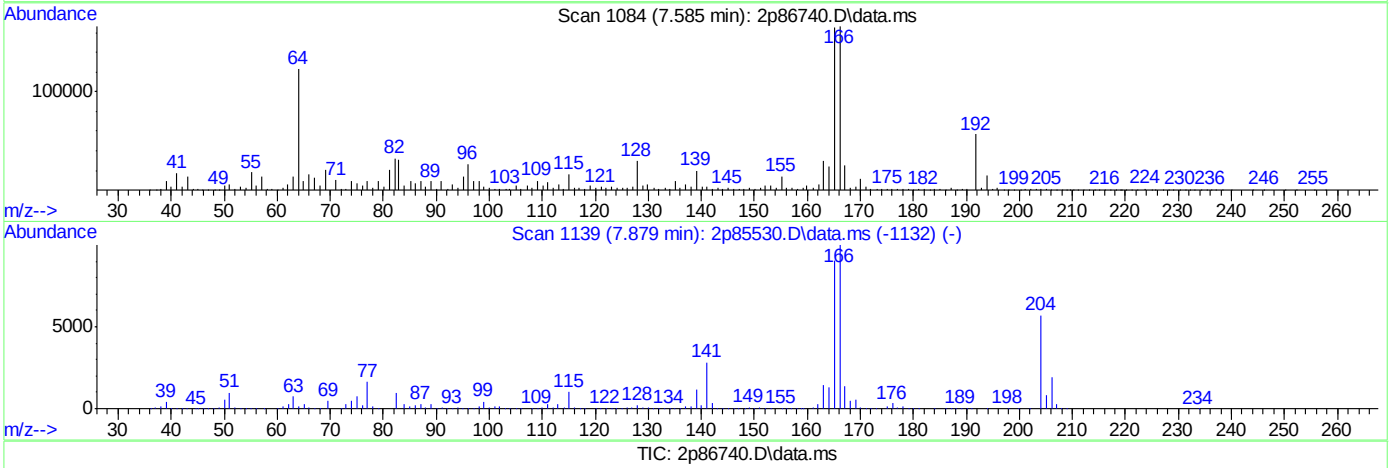
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzaldehyde	100-52-7		4.32	Poor instrument integration
Fluorene	86-73-7		7.58	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.97	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration





TIC: 2p86740.D\data.ms

(66) Fluorene (t)

7.585min (-0.182) 3.72ppm

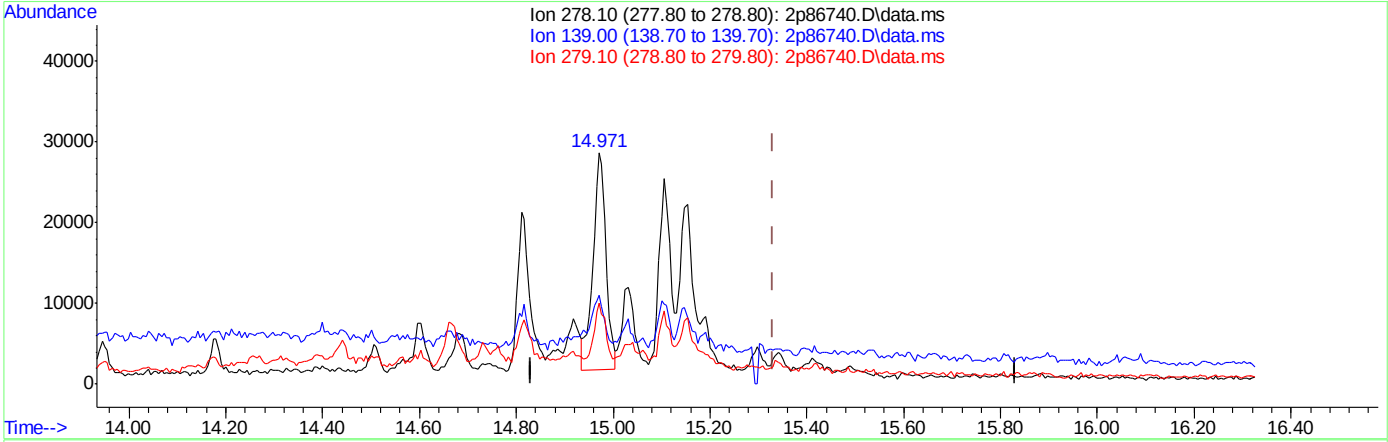
response 133439

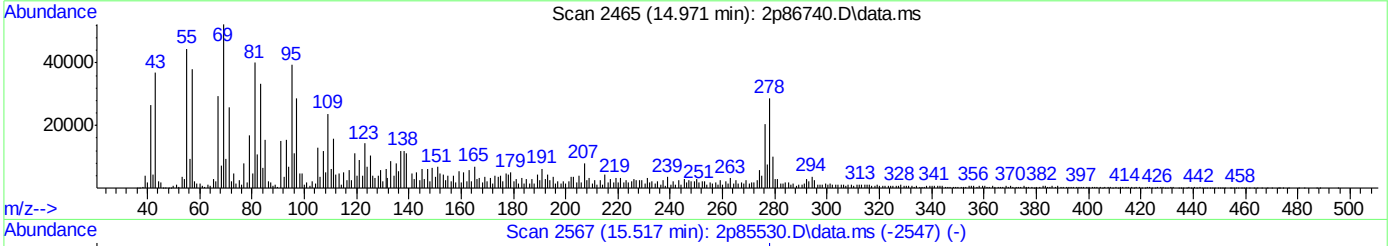
Ion	Exp%	Act%
166.00	100	100
165.00	90.60	98.70
167.00	14.10	14.62
0.00	0.00	0.00

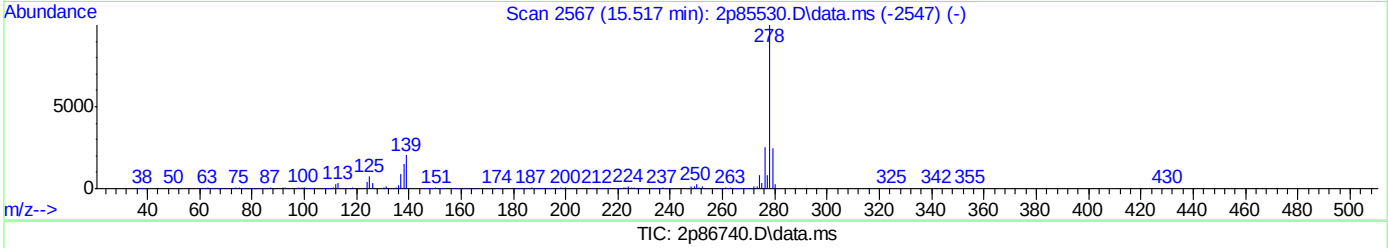
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86740.D\data.ms

(98) Dibenz[a,h]anthracene (t)

14.971min (-0.359) 1.45ppm

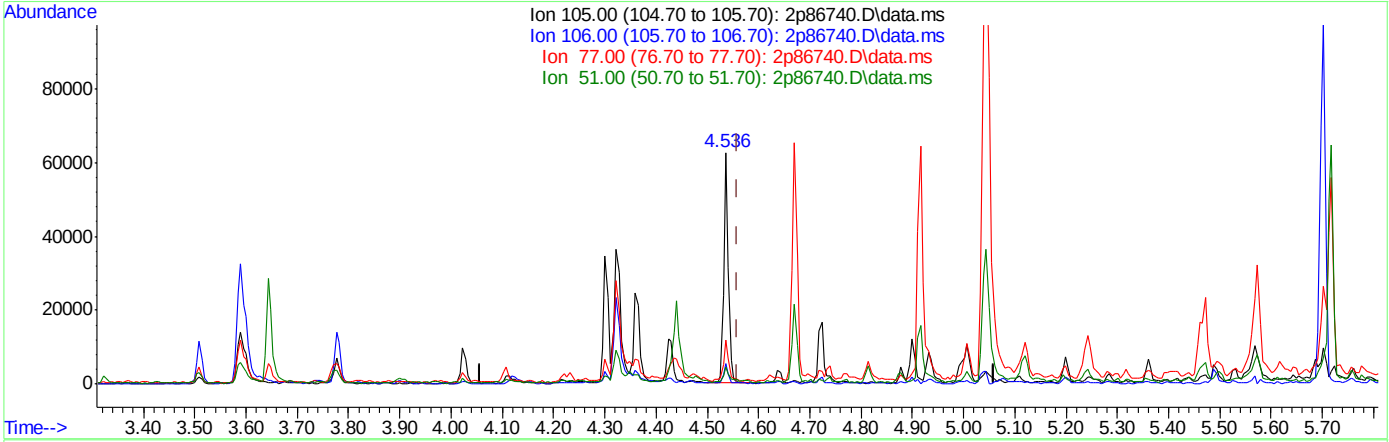
response 50871

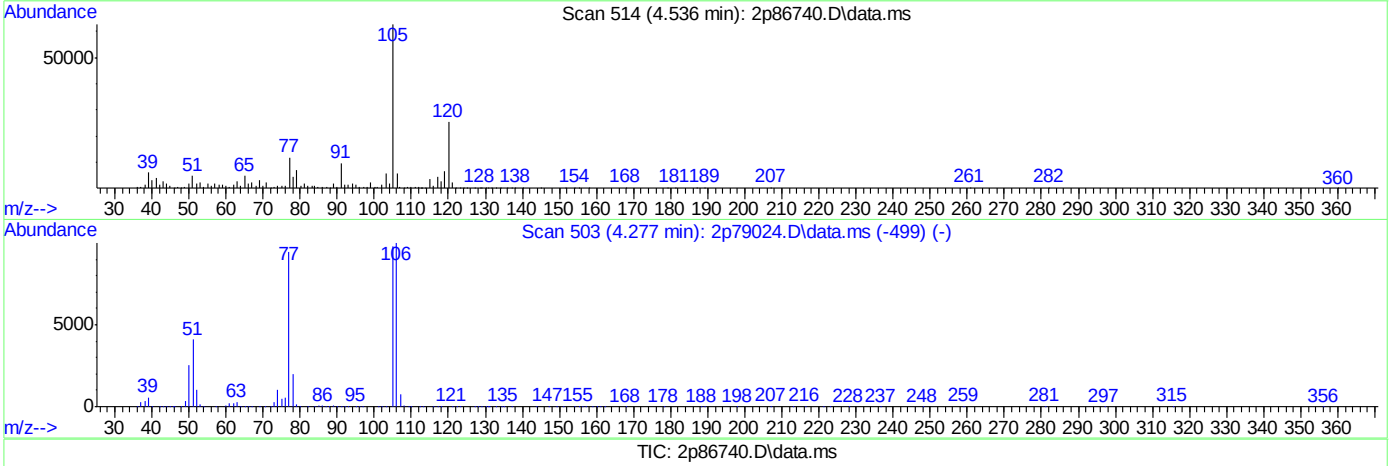
Ion	Exp%	Act%
278.10	100	100
139.00	20.30	22.05
279.10	24.30	28.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86740.D
Acq On : 19 Apr 2019 3:00 am
Operator : carolb
Sample : jc86406-7
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 19 10:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration





TIC: 2p86740.D\data.ms

(102) Benzaldehyde

4.536min (-0.023) 1.45ppm

response 41282

Ion	Exp%	Act%
105.00	100	100
106.00	100.00	8.72#
77.00	106.70	16.88#
51.00	35.10	5.85

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/19/19 14:21

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86741.D
Acq On : 19 Apr 2019 3:22 am
Operator : carolb
Sample : jc86406-8
Misc : op19810,e2p3831,31.8,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 19 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	673878	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	1843360	40.00	ppm	-0.17
47) Acenaphthene-d10	7.141	164	787209	40.00	ppm	-0.17
69) Phenanthrene-d10	8.409	188	1313195	40.00	ppm	-0.20
83) Chrysene-d12	11.644	240	1324816	40.00	ppm	-0.25
91) Perylene-d12	13.634	264	1517112	40.00	ppm	-0.26
101) 1,4-Dichlorobenzene-d4a	4.670	152	673878	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	1843360	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.141	164	787209	40.00	ppm	-0.17
108) Chrysene-d12a	11.644	240	1324816	40.00	ppm	0.03
110) Phenanthrene-d10a	8.409	188	1313195	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	947614	27.94	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 55.88%			
8) Phenol-d5	4.429	99	1194933	32.15	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 64.30%#			
25) Nitrobenzene-d5	5.124	82	983336	39.69	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 79.38%#			
51) 2-Fluorobiphenyl	6.590	172	1097665	40.28	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 80.56%#			
73) 2,4,6-Tribromophenol	7.793	330	155707	33.80	ppm	-0.18
Spiked Amount 50.000	Range 12 - 68		Recovery = 67.60%			
85) Terphenyl-d14	10.227	244	1191844	36.15	ppm	-0.23
Spiked Amount 50.000	Range 16 - 65		Recovery = 72.30%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
21) 3&4-Methylphenol	5.039	108	105957	5.28	ppm	97
38) Naphthalene	5.718	128	724026	16.42	ppm	100
44) 2-Methylnaphthalene	6.285	141	217122	7.74	ppm	94
53) Biphenyl	6.670	154	41436	1.31	ppm	98
56) Acenaphthylene	7.023	152	151186	3.93	ppm	89
59) Acenaphthene	7.168	153	658397	29.13	ppm	97
62) Dibenzofuran	7.307	168	101479	3.26	ppm	80
77) Phenanthrene	8.435	178	2291214	70.04	ppm	99
78) Anthracene	8.478	178	506367	15.22	ppm	98
79) Carbazole	8.644	167	23914	0.70	ppm	93
81) Fluoranthene	9.740	202	1688327	36.32	ppm	99
84) Pyrene	10.002	202	2044917m	39.67	ppm	
87) Benzo[a]anthracene	11.628	228	728760	14.65	ppm	98
89) Chrysene	11.677	228	732684	20.76	ppm	99
93) Benzo[b]fluoranthene	13.131	252	666529	13.41	ppm	96
94) Benzo[k]fluoranthene	13.163	252	174356	4.29	ppm	95
95) Benzo[a]pyrene	13.549	252	553158	13.24	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.955	276	212012	4.45	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86741.D
Acq On : 19 Apr 2019 3:22 am
Operator : carolb
Sample : jc86406-8
Misc : op19810,e2p3831,31.8,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 19 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

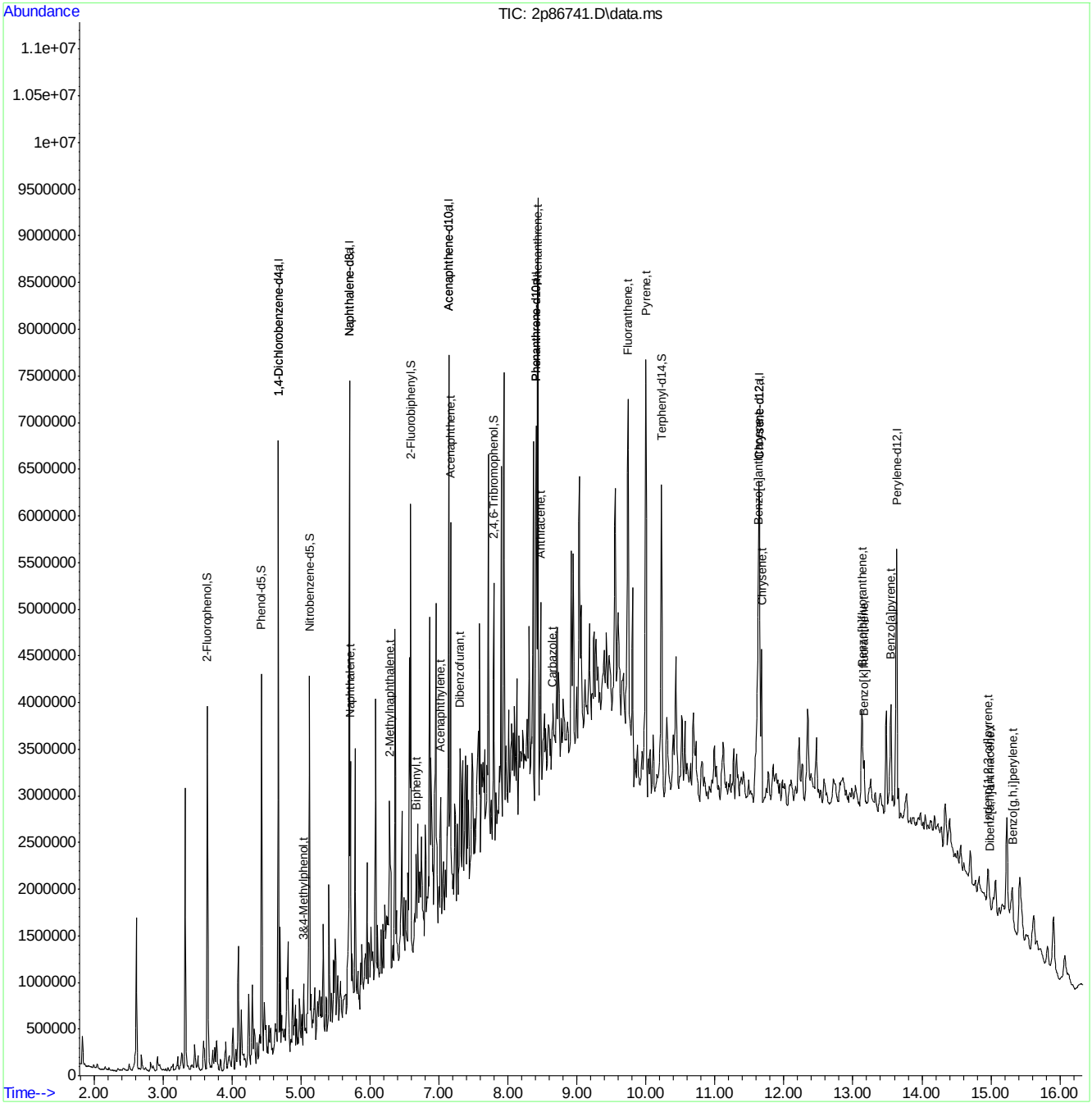
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.982	278	59978m	1.62	ppm	
100) Benzo[g,h,i]perylene	15.314	276	221159	5.87	ppm	98

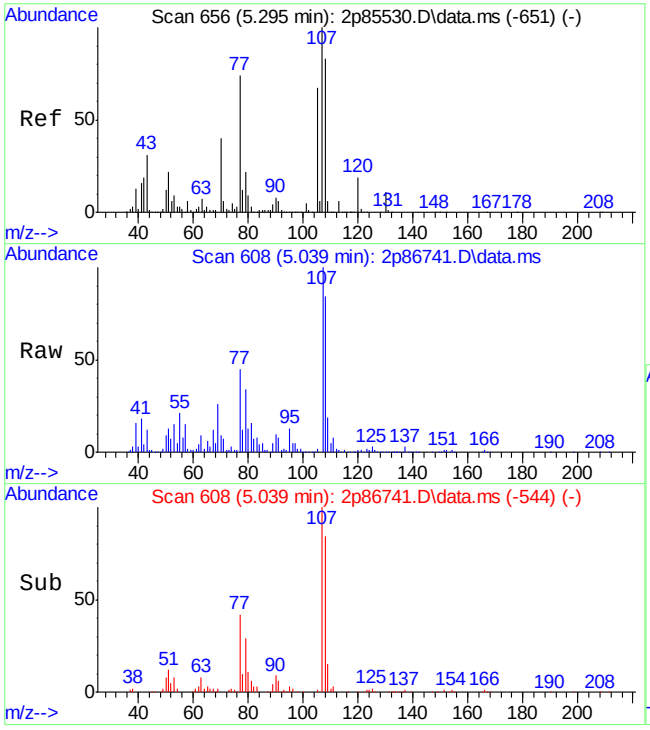
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86741.D
Acq On : 19 Apr 2019 3:22 am
Operator : carolb
Sample : jc86406-8
Misc : op19810,e2p3831,31.8,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 19 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

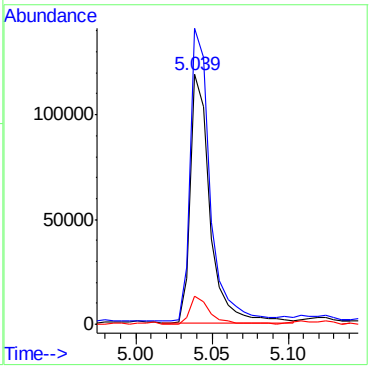


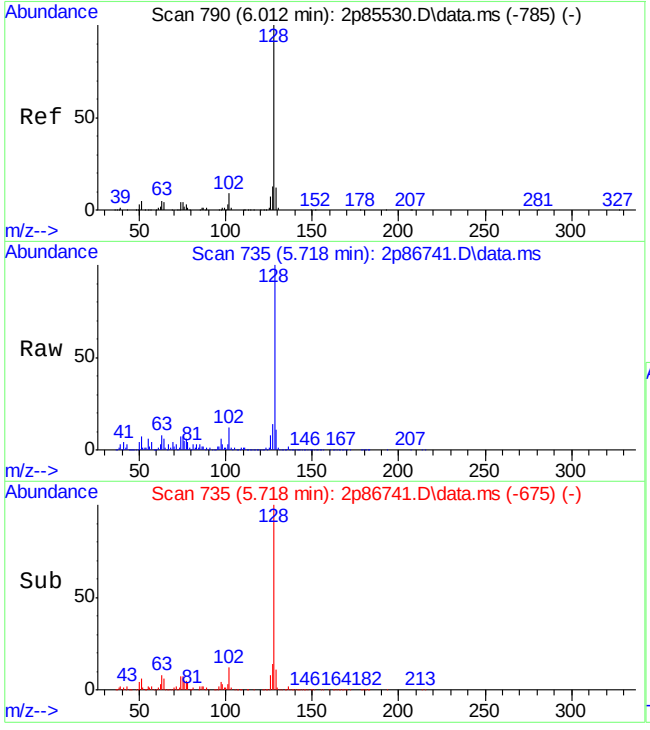


#21
3&4-Methylphenol
Concen: 5.28 ppm
RT: 5.039 min Scan# 608
Delta R.T. -0.160 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:108 Resp: 105957

Ion	Ratio	Lower	Upper
108	100		
107	117.8	90.6	150.6
90	10.9	0.0	39.9

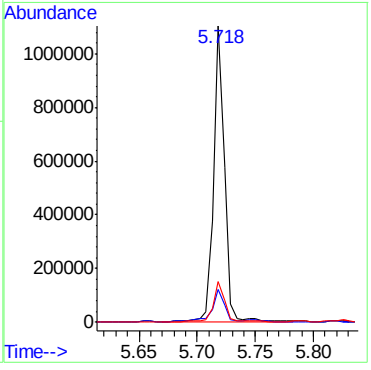


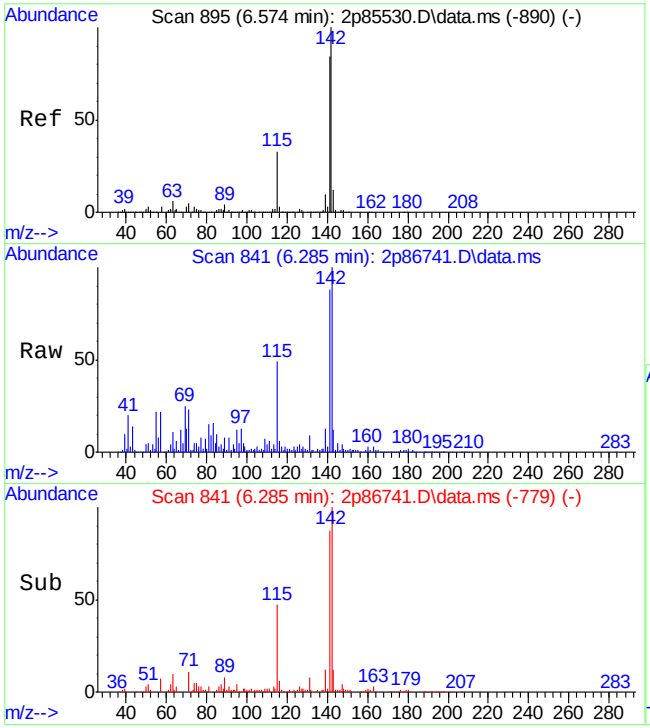


#38
Naphthalene
Concen: 16.42 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:128 Resp: 724026

Ion	Ratio	Lower	Upper
128	100		
129	11.1	0.0	41.2
127	13.6	0.0	43.7

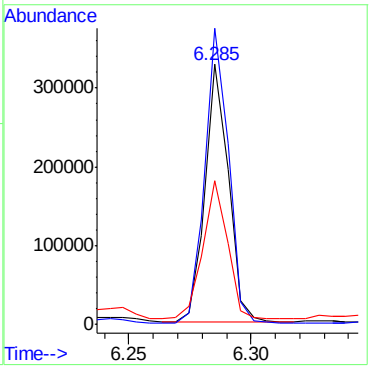


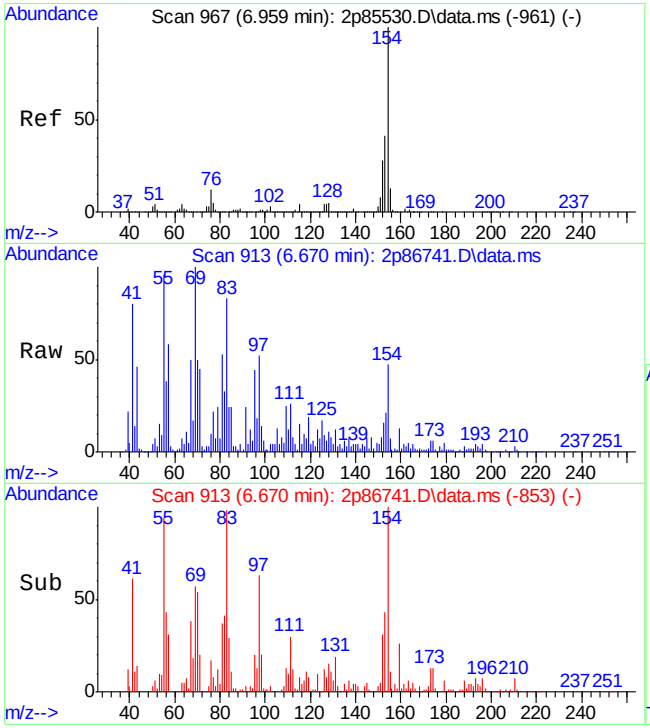


#44
2-Methylnaphthalene
Concen: 7.74 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:141 Resp: 217122

Ion	Ratio	Lower	Upper
141	100		
142	114.4	90.7	150.7
115	53.8	18.7	78.7

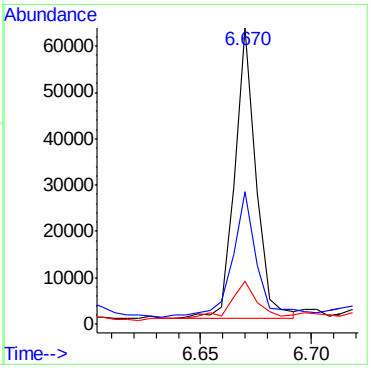


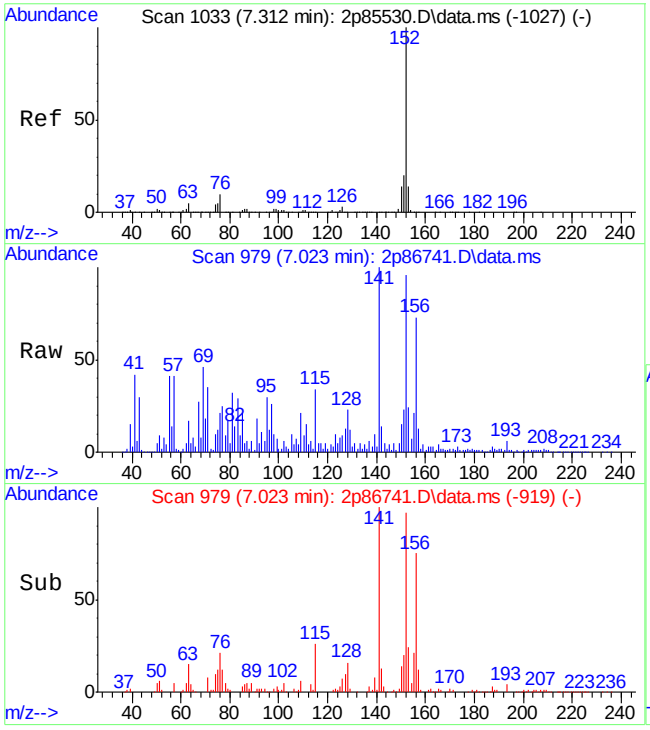


#53
Biphenyl
Concen: 1.31 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:154 Resp: 41436

Ion	Ratio	Lower	Upper
154	100		
153	42.2	11.1	71.1
155	12.3	0.0	43.4

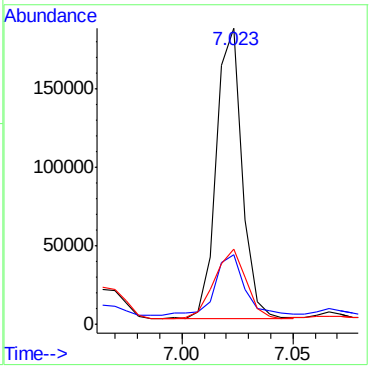


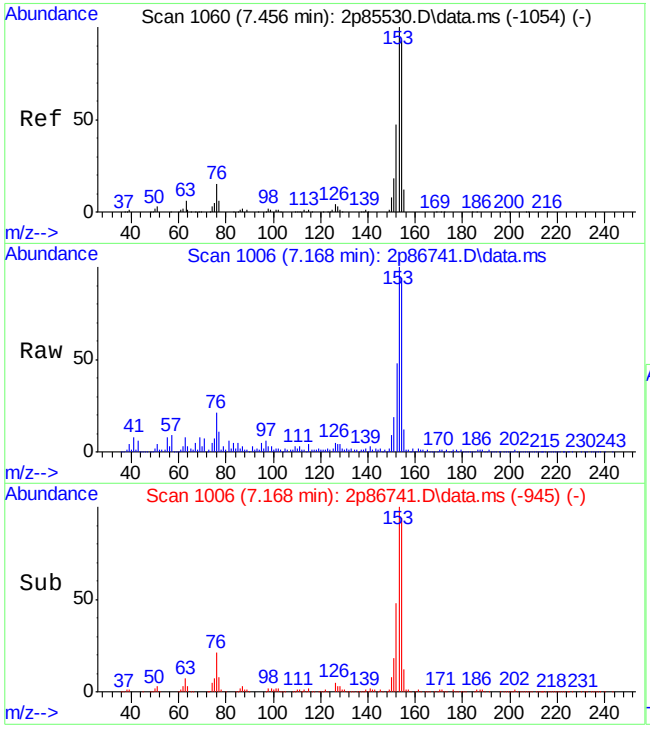


#56
Acenaphthylene
Concen: 3.93 ppm
RT: 7.023 min Scan# 979
Delta R.T. -0.177 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:152 Resp: 151186

Ion	Ratio	Lower	Upper
152	100		
151	20.8	0.0	50.3
153	23.6	0.0	43.6

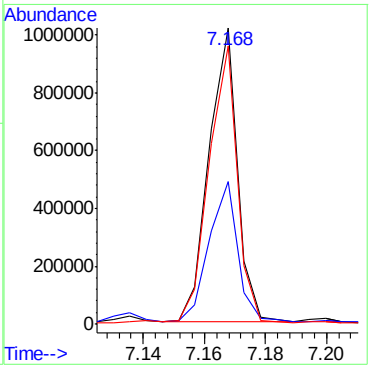


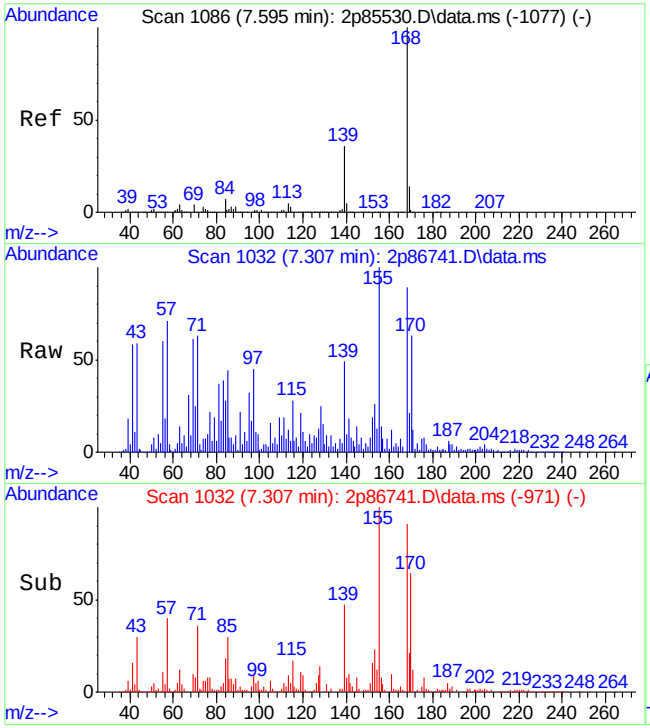


#59
Acenaphthene
Concen: 29.13 ppm
RT: 7.168 min Scan# 1006
Delta R.T. -0.176 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:153 Resp: 658397

Ion	Ratio	Lower	Upper
153	100		
152	47.7	17.8	77.8
154	94.3	59.8	119.8

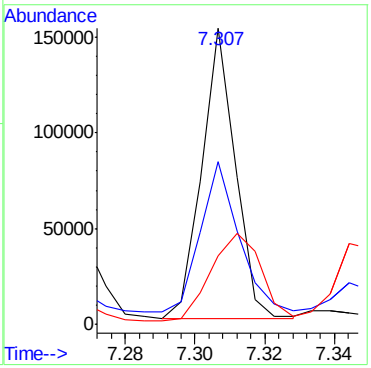


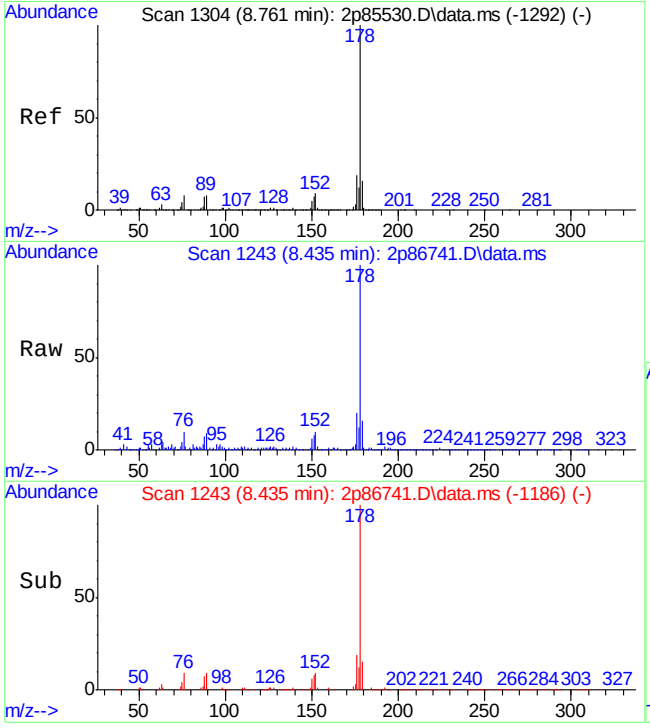


#62
Dibenzofuran
Concen: 3.26 ppm
RT: 7.307 min Scan# 1032
Delta R.T. -0.176 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:168 Resp: 101479

Ion	Ratio	Lower	Upper
168	100		
139	51.6	9.2	69.2
169	22.0	0.0	44.1

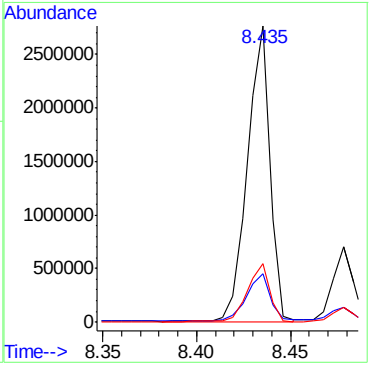


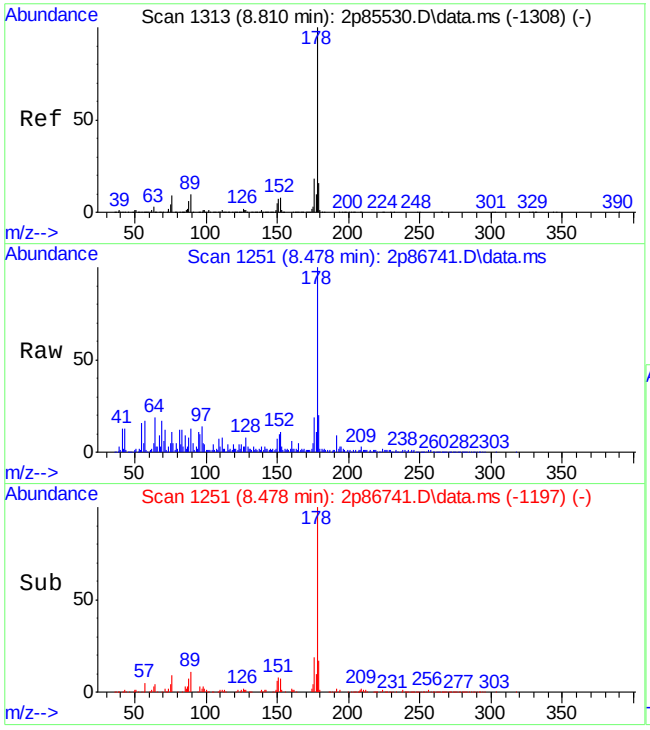


#77
Phenanthrene
Concen: 70.04 ppm
RT: 8.435 min Scan# 1243
Delta R.T. -0.198 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:178 Resp: 2291214

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	46.0
176	19.6	0.0	49.2

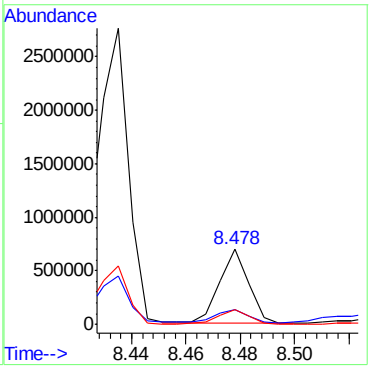


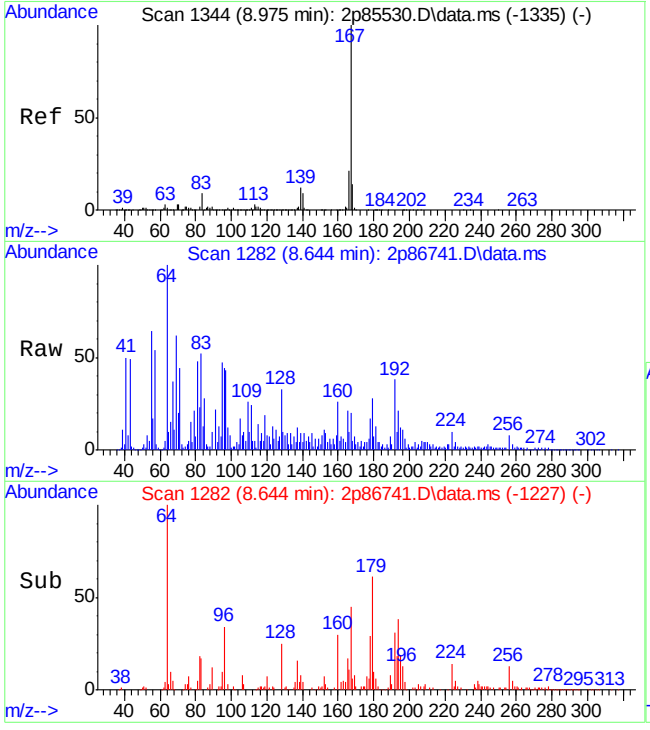


#78
Anthracene
Concen: 15.22 ppm
RT: 8.478 min Scan# 1251
Delta R.T. -0.209 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:178 Resp: 506367

Ion	Ratio	Lower	Upper
178	100		
179	17.3	0.0	45.7
176	19.0	0.0	48.6

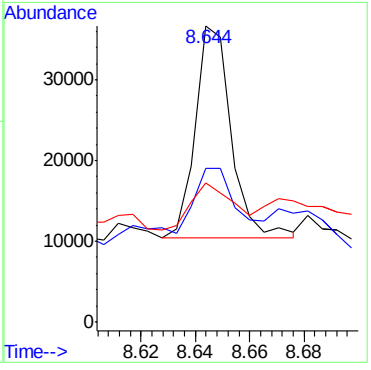


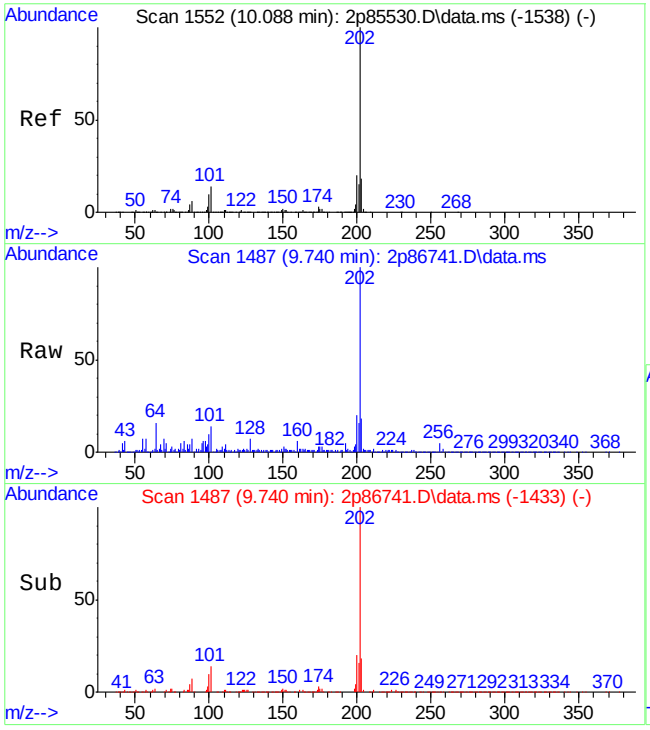


#79
Carbazole
Concen: 0.70 ppm
RT: 8.644 min Scan# 1282
Delta R.T. -0.208 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:167 Resp: 23914

Ion	Ratio	Lower	Upper
167	100		
166	24.9	0.0	50.8
139	15.7	0.0	44.2

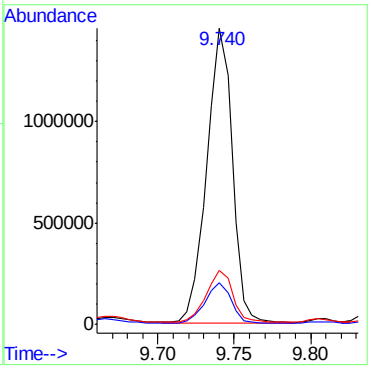


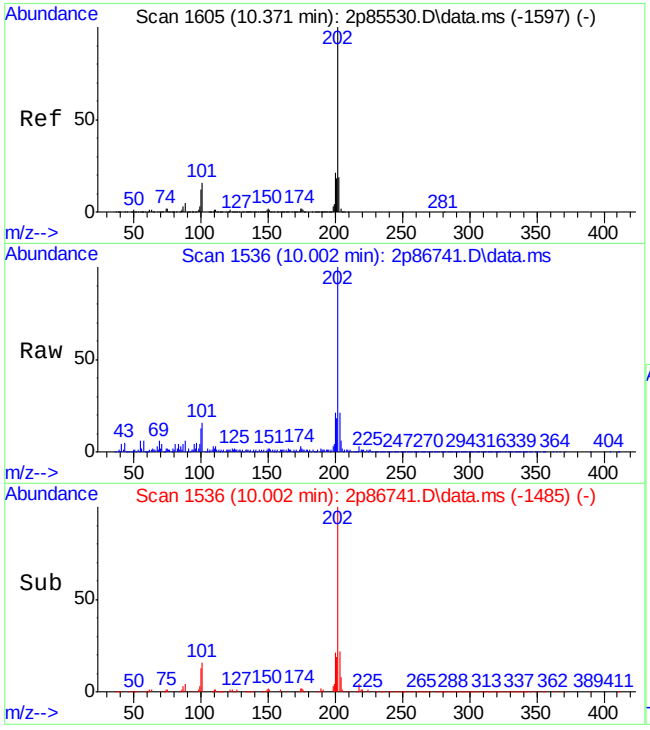


#81
Fluoranthene
Concen: 36.32 ppm
RT: 9.740 min Scan# 1487
Delta R.T. -0.209 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:202 Resp: 1688327

Ion	Ratio	Lower	Upper
202	100		
101	13.9	0.0	43.7
203	17.7	0.0	48.6

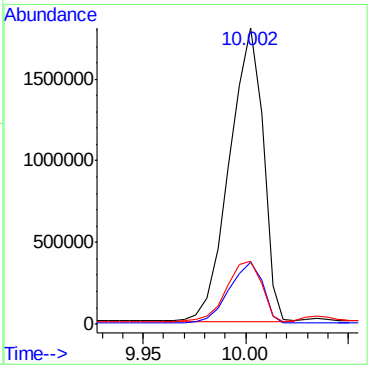


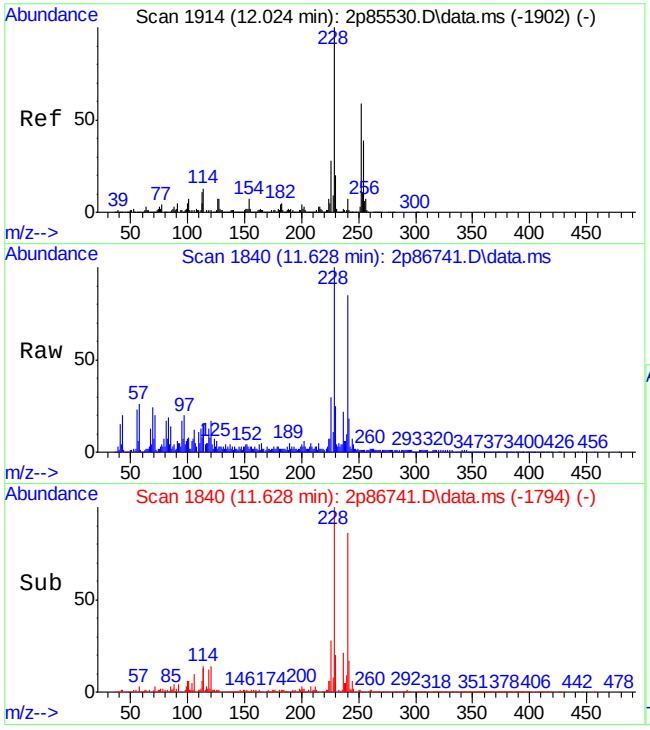


#84
Pyrene
Concen: 39.67 ppm m
RT: 10.002 min Scan# 1536
Delta R.T. -0.230 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:202 Resp: 2044917

Ion	Ratio	Lower	Upper
202	100		
200	20.9	0.0	50.1
203	21.4	0.0	47.4

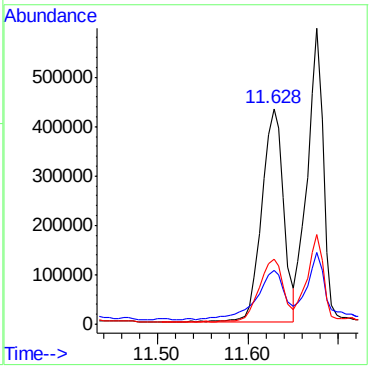


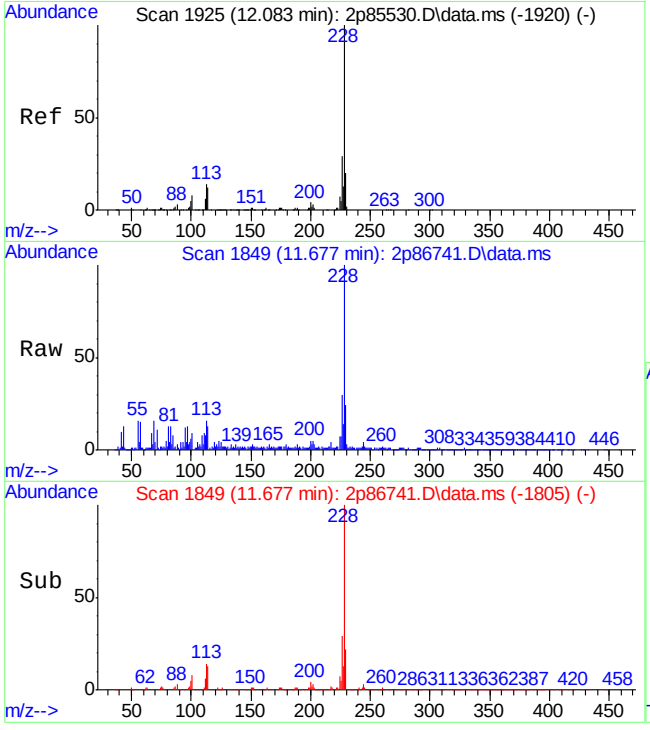


#87
Benzo[a]anthracene
Concen: 14.65 ppm
RT: 11.628 min Scan# 1840
Delta R.T. -0.252 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:228 Resp: 728760

Ion	Ratio	Lower	Upper
228	100		
229	21.4	0.0	50.3
226	28.5	0.0	57.9

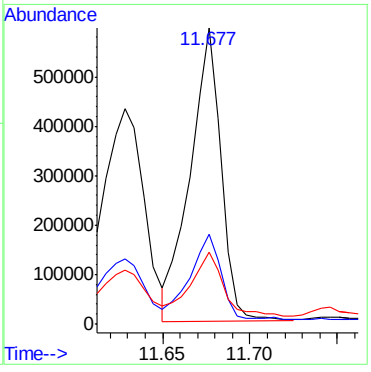


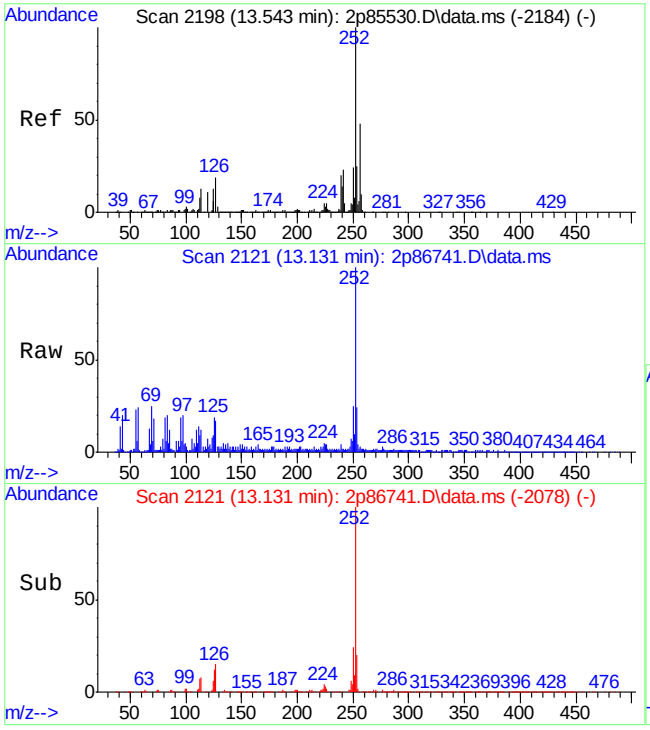


#89
Chrysene
Concen: 20.76 ppm
RT: 11.677 min Scan# 1849
Delta R.T. -0.262 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:228 Resp: 732684

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	59.2
229	21.1	0.0	50.2

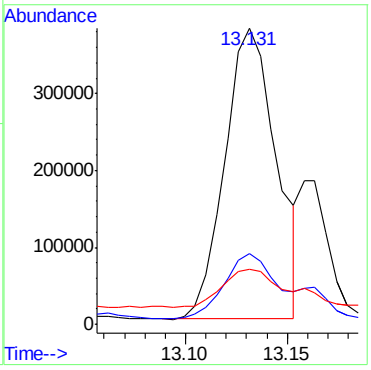


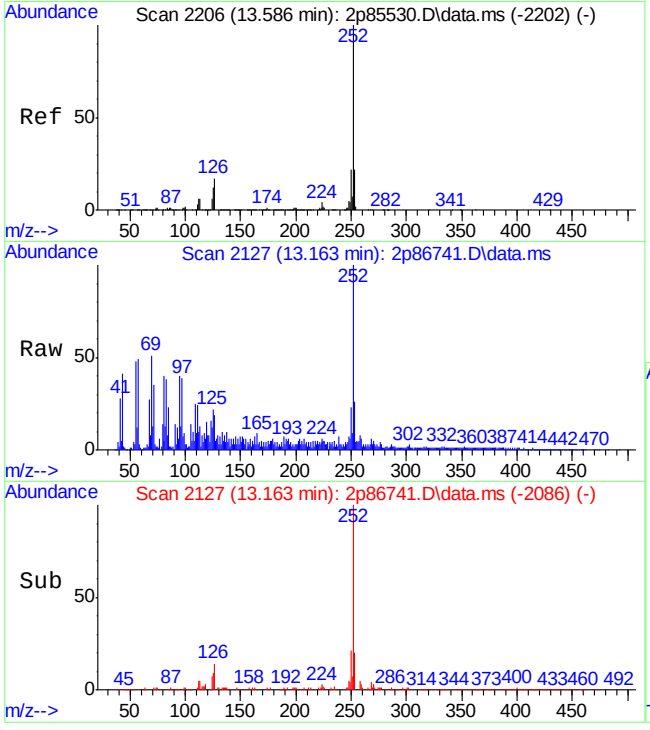


#93
Benzo[b]fluoranthene
Concen: 13.41 ppm
RT: 13.131 min Scan# 2121
Delta R.T. -0.273 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:252 Resp: 666529

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	54.9
125	12.6	0.0	42.5

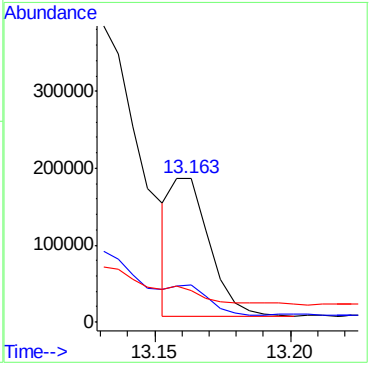


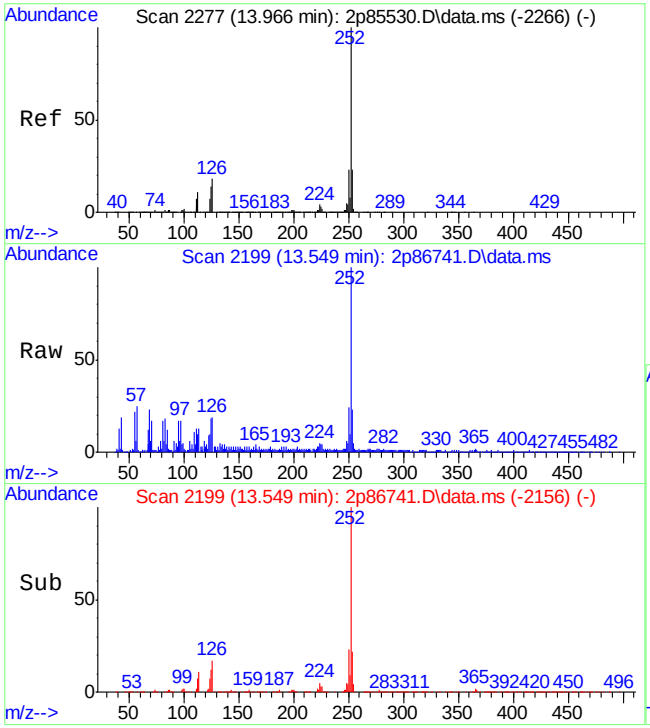


#94
Benzo[k]fluoranthene
Concen: 4.29 ppm
RT: 13.163 min Scan# 2127
Delta R.T. -0.279 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:252 Resp: 174356

Ion	Ratio	Lower	Upper
252	100		
253	20.5	0.0	52.4
125	7.7	0.0	40.8

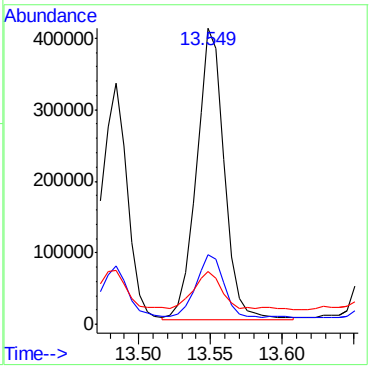


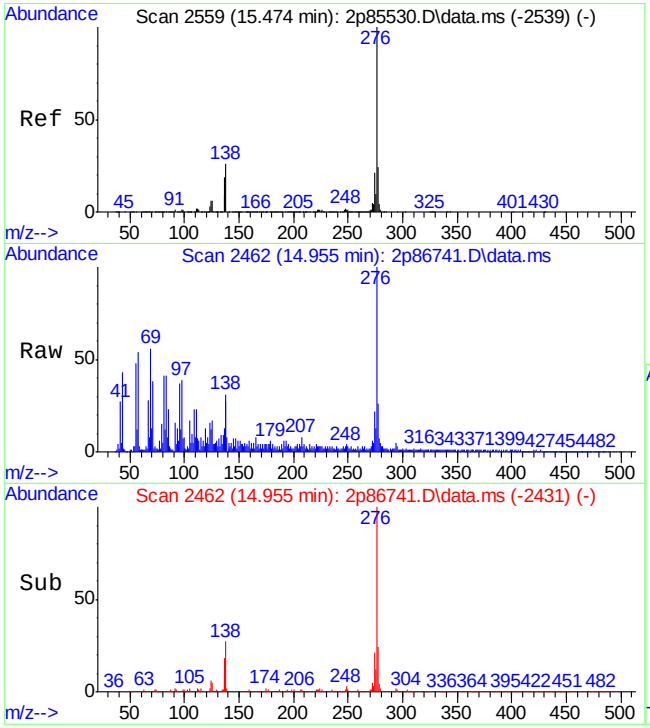


#95
Benzo[a]pyrene
Concen: 13.24 ppm
RT: 13.549 min Scan# 2199
Delta R.T. -0.272 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:252 Resp: 553158

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.1
125	12.8	0.0	42.5

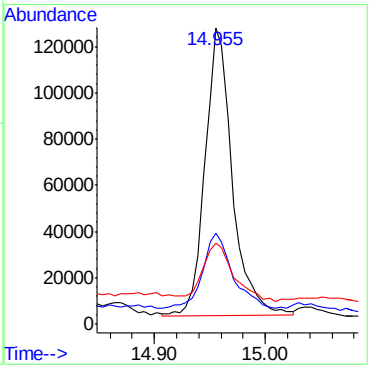


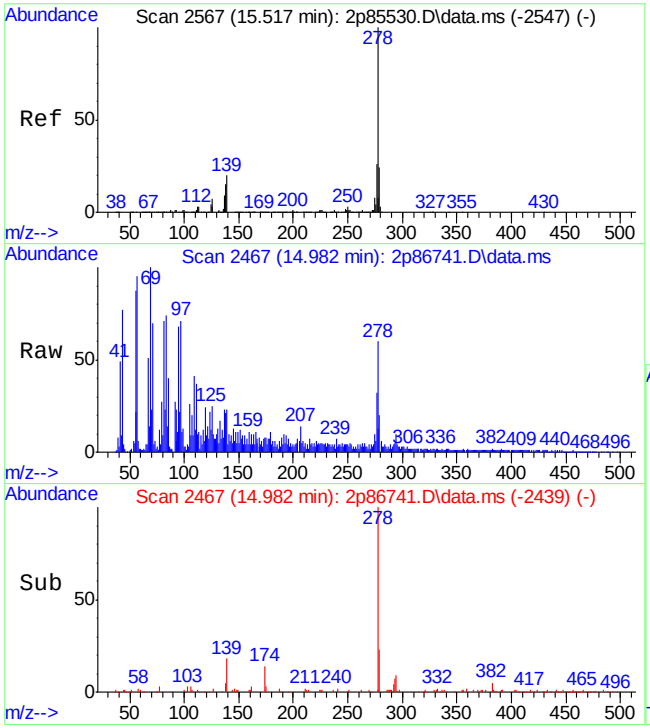


#96
Indeno[1,2,3-cd]pyrene
Concen: 4.45 ppm
RT: 14.955 min Scan# 2462
Delta R.T. -0.337 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:276 Resp: 212012

Ion	Ratio	Lower	Upper
276	100		
138	25.7	0.0	55.3
137	19.0	0.0	48.5

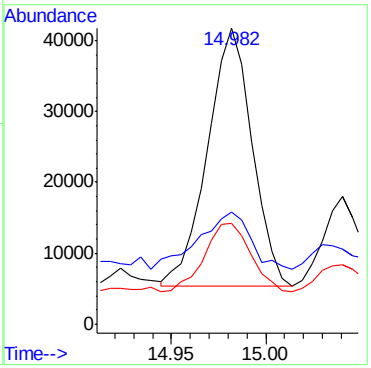


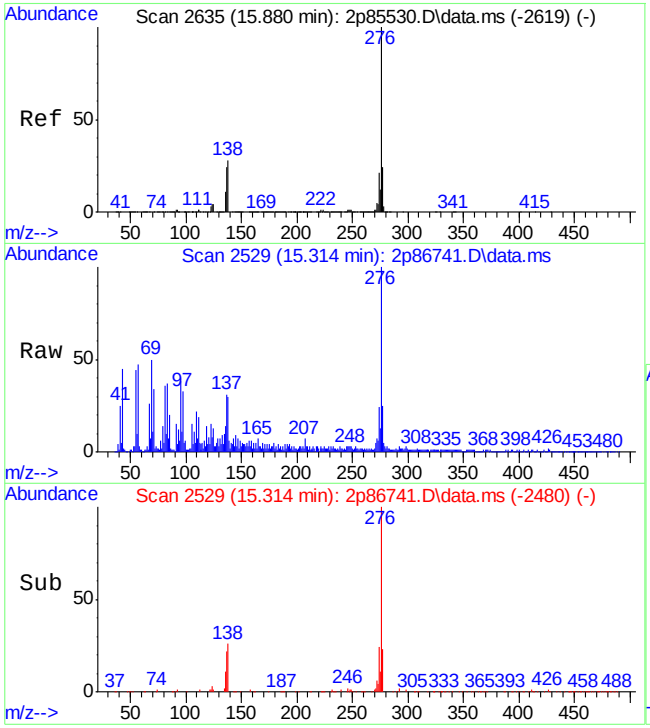


#98
Dibenz[a,h]anthracene
Concen: 1.62 ppm m
RT: 14.982 min Scan# 2467
Delta R.T. -0.348 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:278 Resp: 59978

Ion	Ratio	Lower	Upper
278	100		
139	37.9	0.0	50.3
279	34.2	0.0	54.3

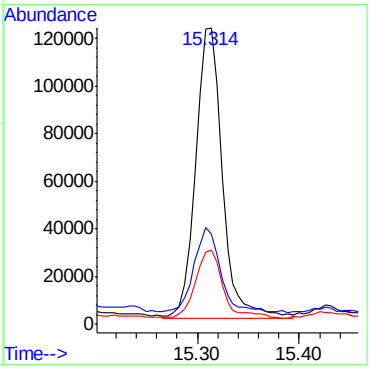




#100
Benzo[g,h,i]perylene
Concen: 5.87 ppm
RT: 15.314 min Scan# 2529
Delta R.T. -0.236 min
Lab File: 2p86741.D
Acq: 19 Apr 2019 3:22 am

Tgt Ion:276 Resp: 221159

Ion	Ratio	Lower	Upper
276	100		
138	27.1	0.0	57.9
277	23.2	0.0	54.0



Manual Integration Approval Summary

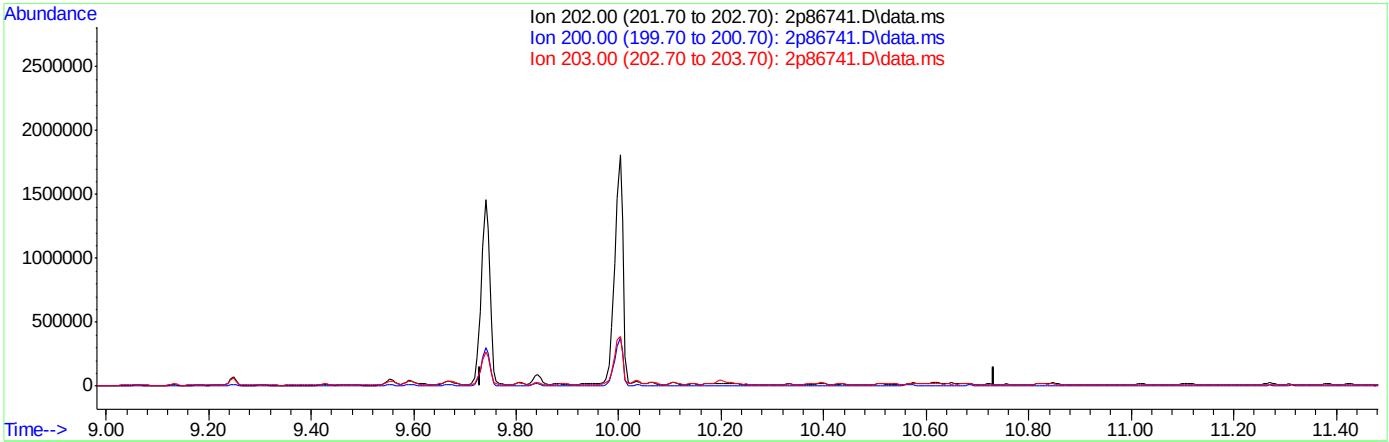
Sample Number:	JC86406-8	**Method:**	SW846 8270D
Lab FileID:	2P86741.D	**Analyst approved:**	04/19/19 12:30 Dipa Patel
Injection Time:	04/19/19 03:22	**Supervisor approved:**	04/19/19 14:21 Nancy Ma

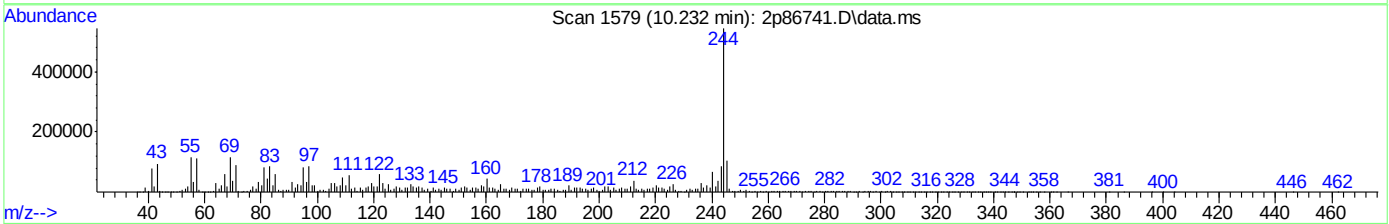
Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyrene	129-00-0		10.00	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.98	Poor instrument integration

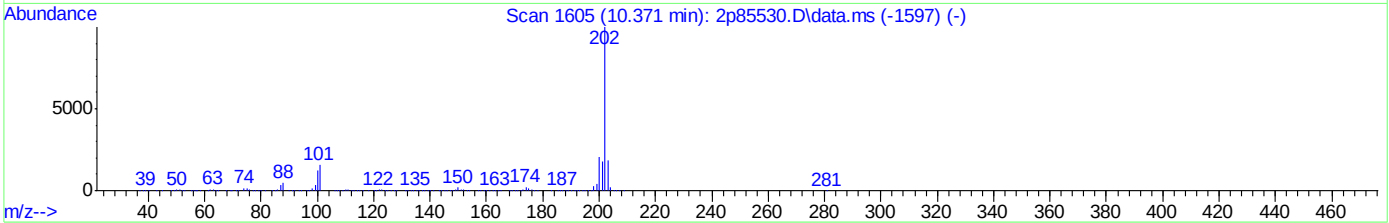
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86741.D
Acq On : 19 Apr 2019 3:22 am
Operator : carolb
Sample : jc86406-8
Misc : op19810,e2p3831,31.8,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 19 11:07:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86741.D\data.ms

(84) Pyrene (t)

10.232min 0.00ppm d

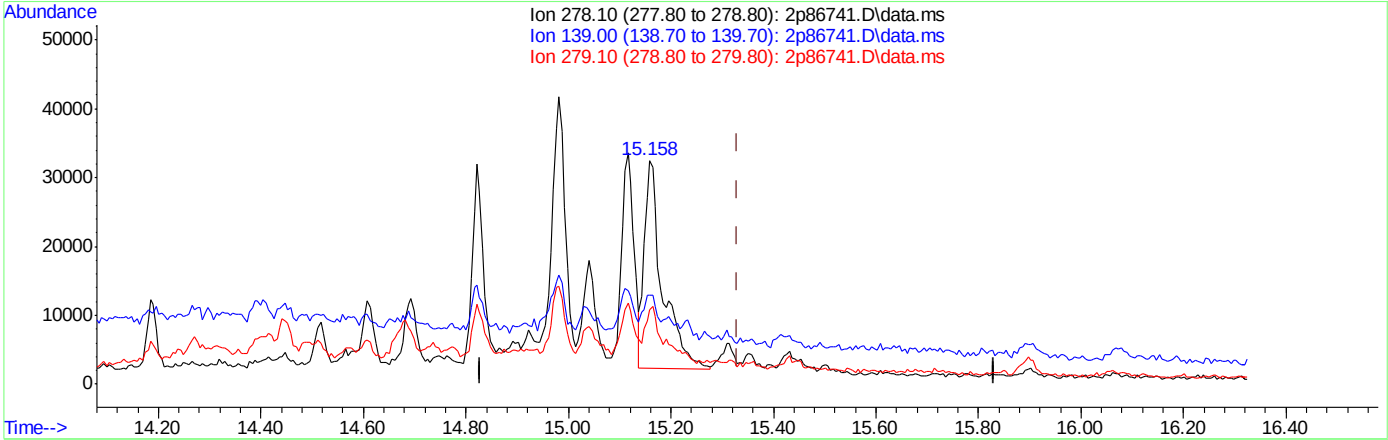
response 0

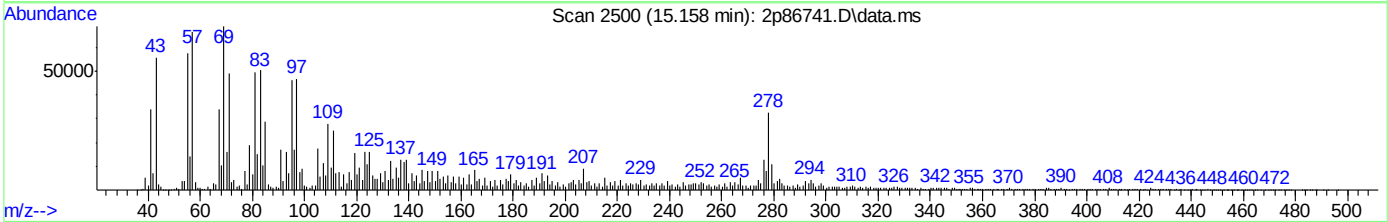
Ion	Exp%	Act%
202.00	100	0.00
200.00	20.10	0.00
203.00	17.40	0.00
0.00	0.00	0.00

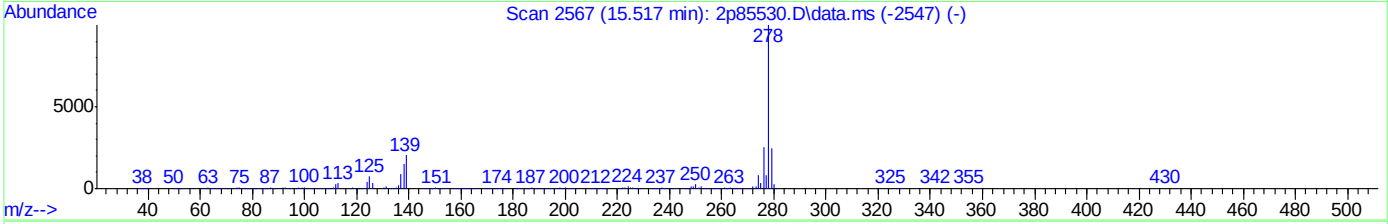
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86741.D
Acq On : 19 Apr 2019 3:22 am
Operator : carolb
Sample : jc86406-8
Misc : op19810,e2p3831,31.8,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 19 11:07:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86741.D\data.ms

(98) Dibenz[a,h]anthracene (t)

15.158min (-0.172) 2.03ppm

response 75251

Ion	Exp%	Act%
278.10	100	100
139.00	20.30	19.32
279.10	24.30	22.65
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86734.D
Acq On : 19 Apr 2019 12:48 am
Operator : carolb
Sample : jc86406-9
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 19 10:41:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	769847	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2553634	40.00	ppm	-0.17
47) Acenaphthene-d10	7.135	164	1223068	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	2056795	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	1897062	40.00	ppm	-0.28
91) Perylene-d12	13.597	264	1649710	40.00	ppm	-0.30
101) 1,4-Dichlorobenzene-d4a	4.670	152	769847	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2553634	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.135	164	1223068	40.00	ppm	-0.18
108) Chrysene-d12a	11.612	240	1897062	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	2056795	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1153630	29.78	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 59.56%#			
8) Phenol-d5	4.429	99	1463940	34.48	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 68.96%#			
25) Nitrobenzene-d5	5.124	82	1373689	40.02	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 80.04%#			
51) 2-Fluorobiphenyl	6.590	172	1697043	40.09	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 80.18%#			
73) 2,4,6-Tribromophenol	7.788	330	200115	27.74	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 55.48%			
85) Terphenyl-d14	10.200	244	1682198	35.63	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 71.26%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
38) Naphthalene	5.718	128	144288	2.36	ppm	98
44) 2-Methylnaphthalene	6.285	141	45575	1.17	ppm	96
53) Biphenyl	6.670	154	13168	0.27	ppm	98
59) Acenaphthene	7.157	153	58026	1.65	ppm	98
62) Dibenzofuran	7.301	168	31951	0.66	ppm	88
66) Fluorene	7.579	166	50036	1.20	ppm	94
77) Phenanthrene	8.414	178	187808	3.67	ppm	98
78) Anthracene	8.462	178	46062	0.88	ppm	97
79) Carbazole	8.633	167	18608	0.35	ppm	99
81) Fluoranthene	9.697	202	77213	1.06	ppm	91
84) Pyrene	9.965	202	79326	1.07	ppm	96
87) Benzo[a]anthracene	11.596	228	35354	0.50	ppm	94
89) Chrysene	11.639	228	25106	0.50	ppm	94
93) Benzo[b]fluoranthene	13.094	252	21638	0.40	ppm	85
94) Benzo[k]fluoranthene	13.126	252	8581	0.19	ppm	87
95) Benzo[a]pyrene	13.511	252	17064	0.38	ppm	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86734.D
Acq On : 19 Apr 2019 12:48 am
Operator : carolb
Sample : jc86406-9
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 19 10:41:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

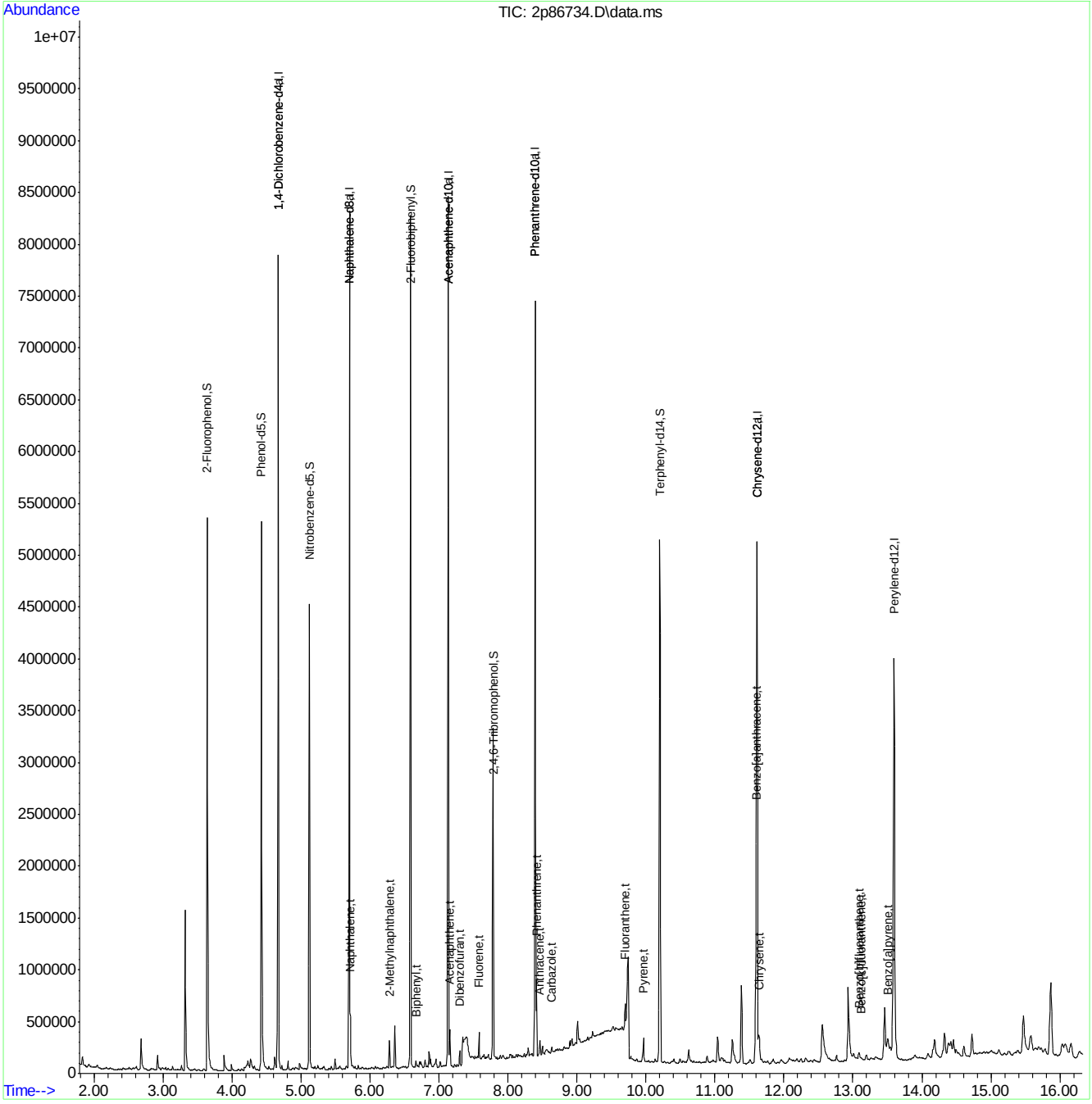
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

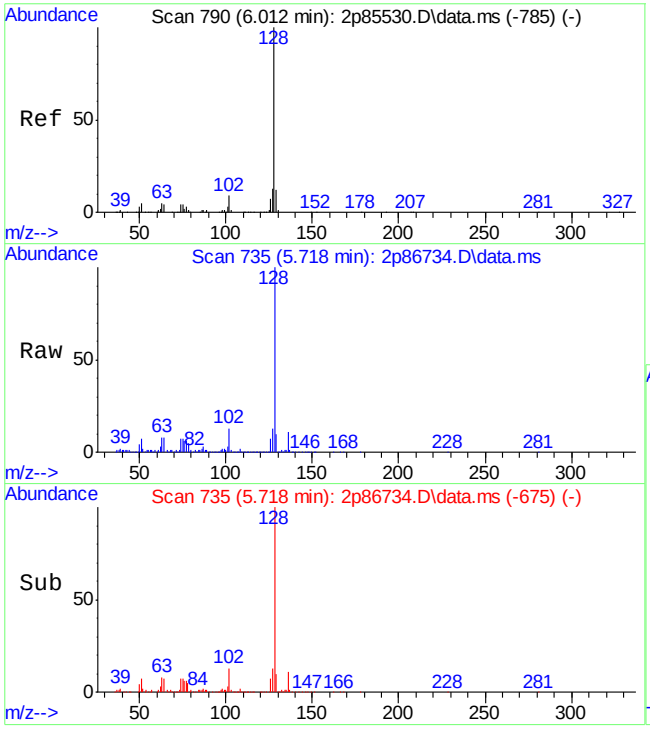
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86734.D
Acq On : 19 Apr 2019 12:48 am
Operator : carolb
Sample : jc86406-9
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 19 10:41:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

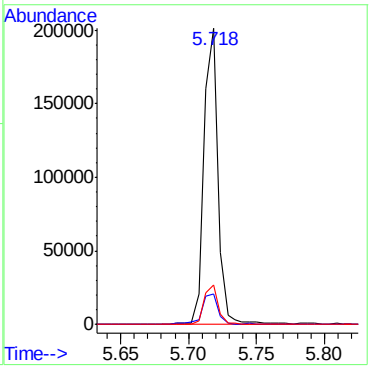


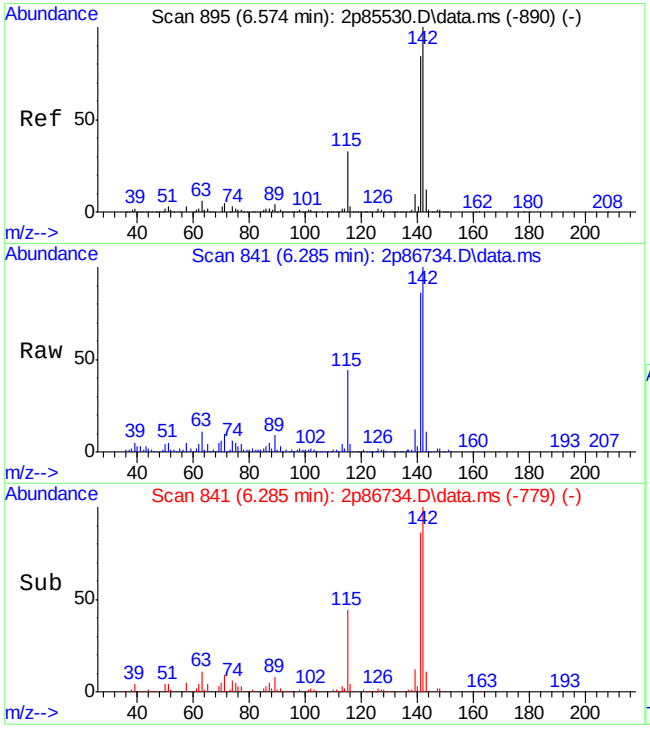


#38
Naphthalene
Concen: 2.36 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:128 Resp: 144288

Ion	Ratio	Lower	Upper
128	100		
129	10.2	0.0	41.2
127	13.2	0.0	43.7

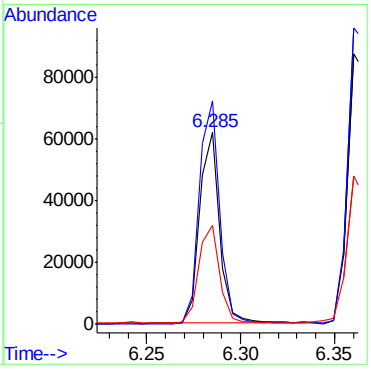


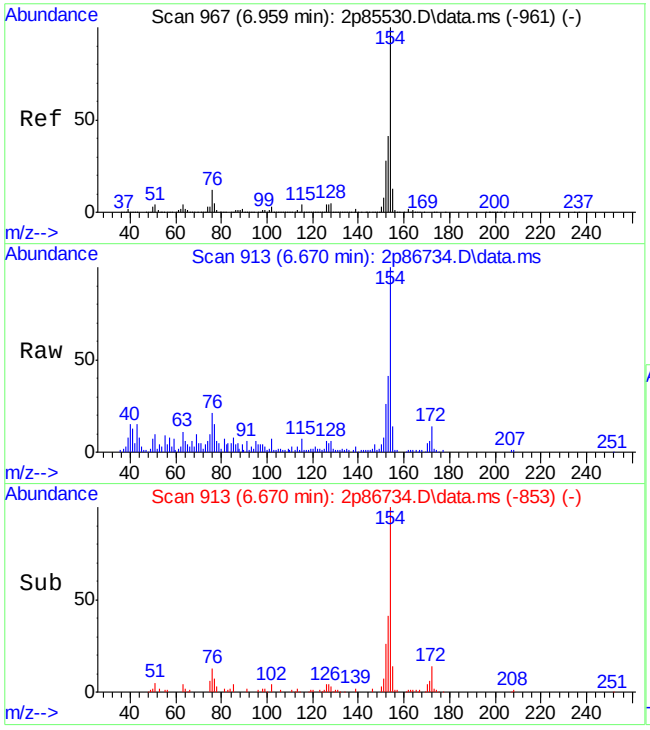


#44
2-Methylnaphthalene
Concen: 1.17 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:141 Resp: 45575

Ion	Ratio	Lower	Upper
141	100		
142	116.8	90.7	150.7
115	51.1	18.7	78.7

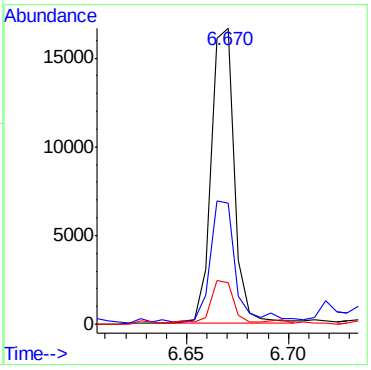


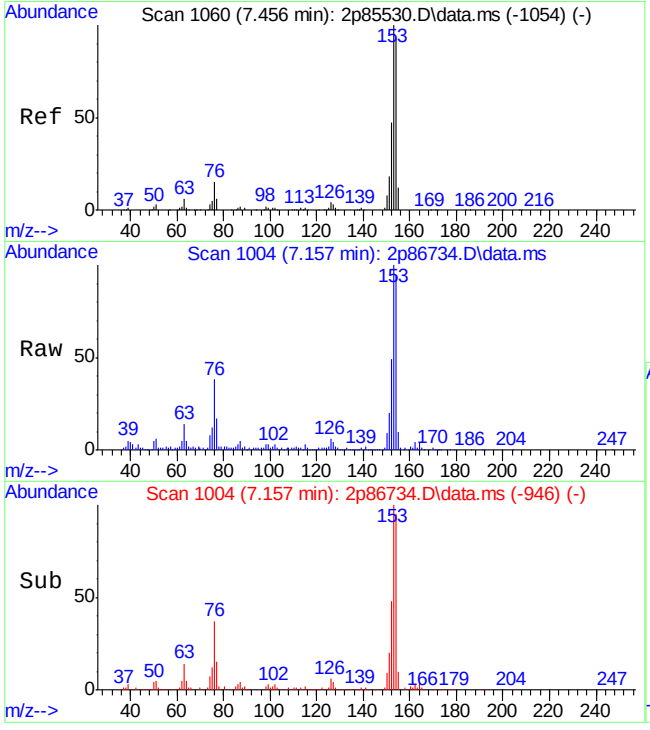


#53
Biphenyl
Concen: 0.27 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:154 Resp: 13168

Ion	Ratio	Lower	Upper
154	100		
153	39.7	11.1	71.1
155	13.6	0.0	43.4

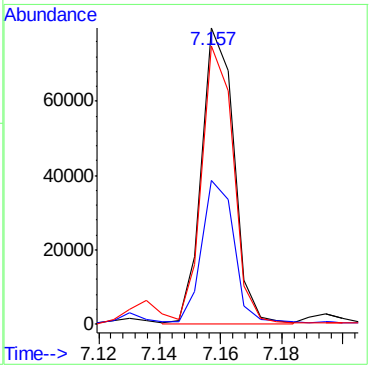


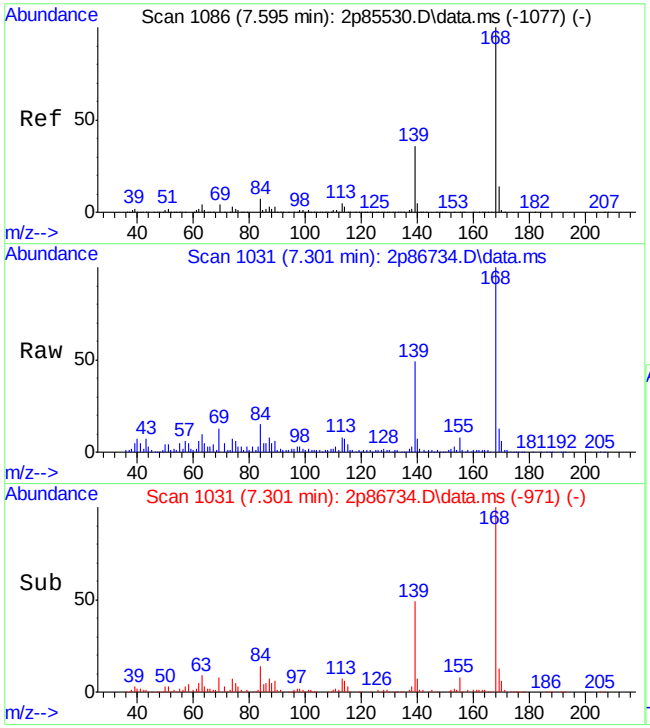


#59
Acenaphthene
Concen: 1.65 ppm
RT: 7.157 min Scan# 1004
Delta R.T. -0.187 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:153 Resp: 58026

Ion	Ratio	Lower	Upper
153	100		
152	48.1	17.8	77.8
154	92.7	59.8	119.8

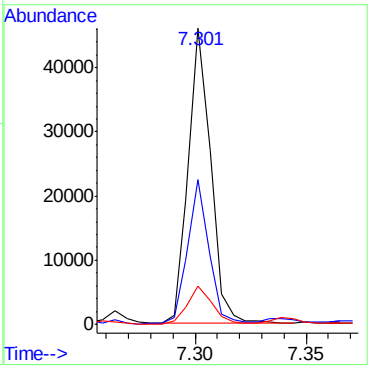


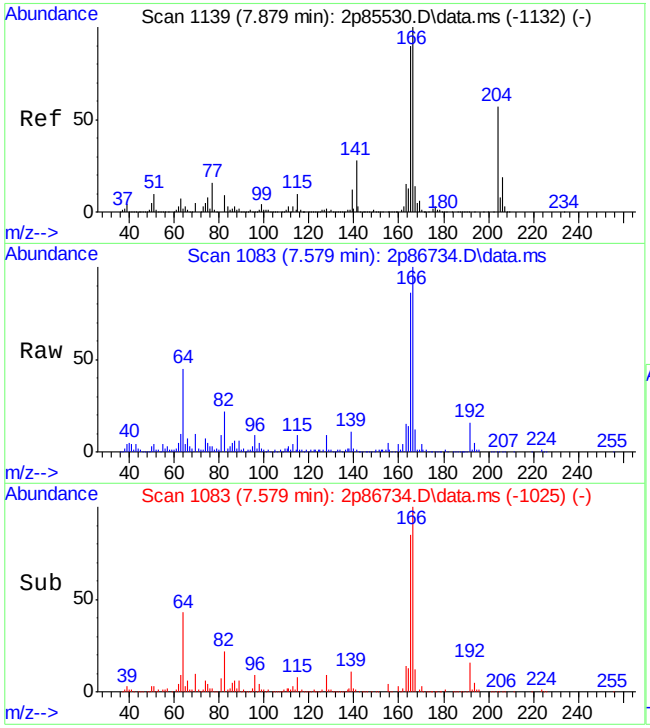


#62
Dibenzofuran
Concen: 0.66 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:168 Resp: 31951

Ion	Ratio	Lower	Upper
168	100		
139	48.1	9.2	69.2
169	12.0	0.0	44.1

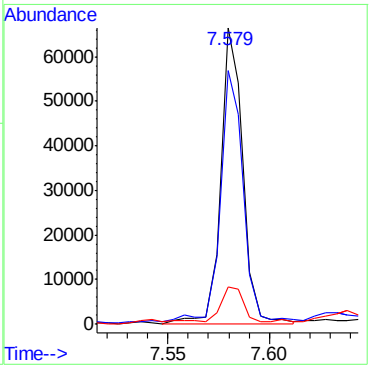


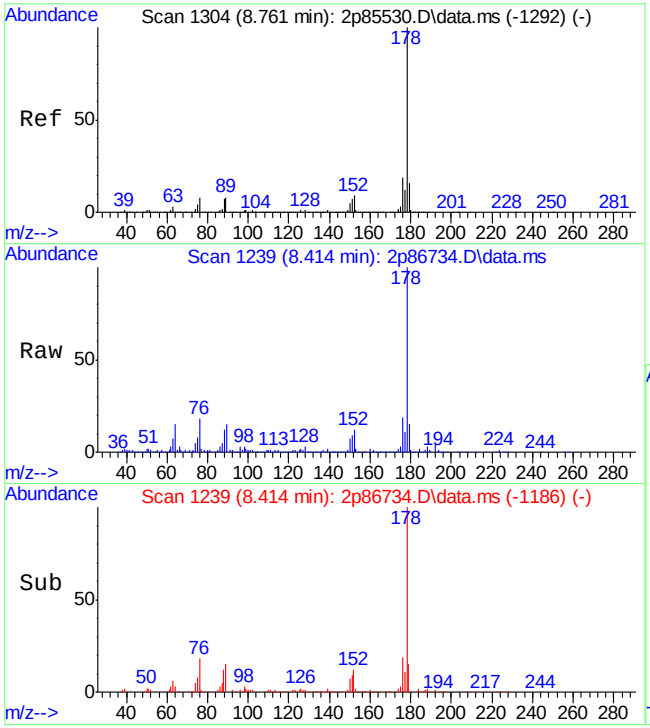


#66
Fluorene
Concen: 1.20 ppm
RT: 7.579 min Scan# 1083
Delta R.T. -0.188 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:166 Resp: 50036

Ion	Ratio	Lower	Upper
166	100		
165	84.9	60.6	120.6
167	11.8	0.0	44.1

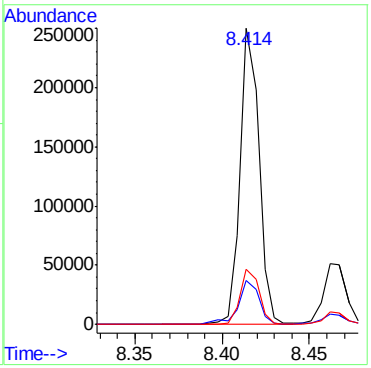


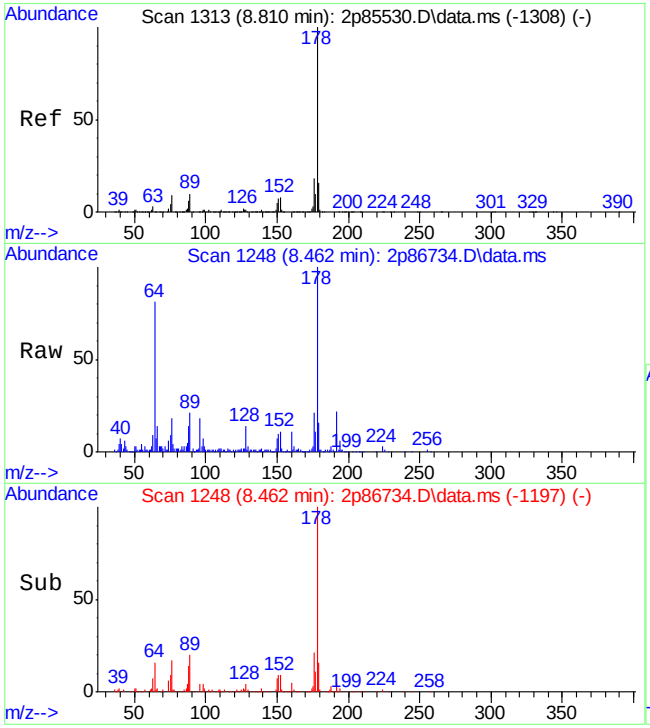


#77
Phenanthrene
Concen: 3.67 ppm
RT: 8.414 min Scan# 1239
Delta R.T. -0.219 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:178 Resp: 187808

Ion	Ratio	Lower	Upper
178	100		
179	14.8	0.0	46.0
176	18.7	0.0	49.2

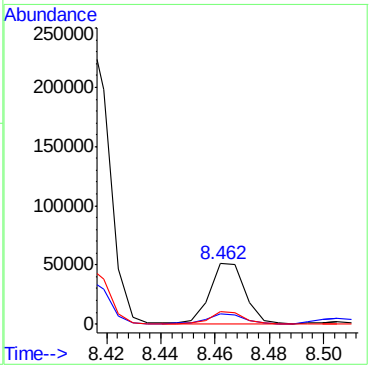


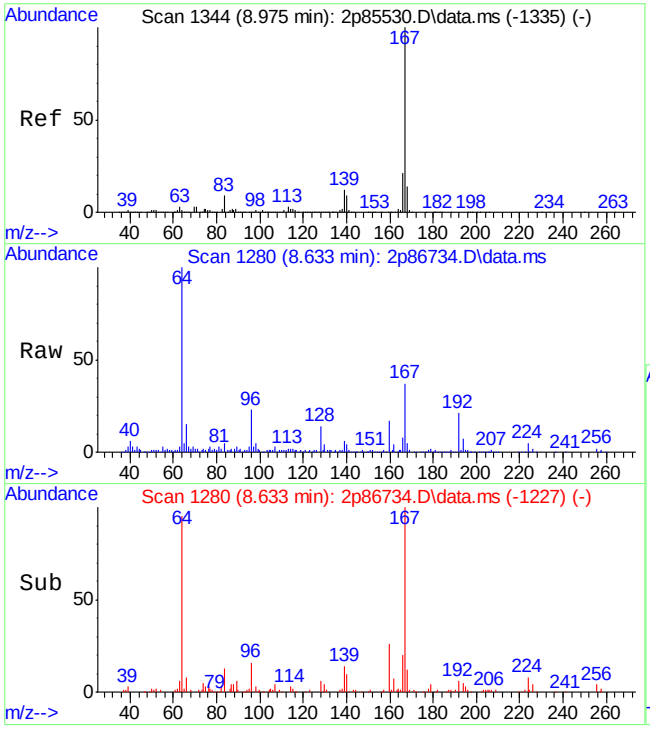


#78
Anthracene
Concen: 0.88 ppm
RT: 8.462 min Scan# 1248
Delta R.T. -0.225 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:178 Resp: 46062

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	45.7
176	20.7	0.0	48.6

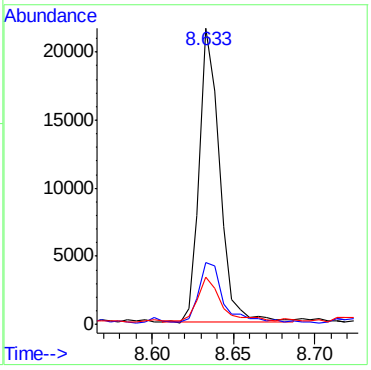


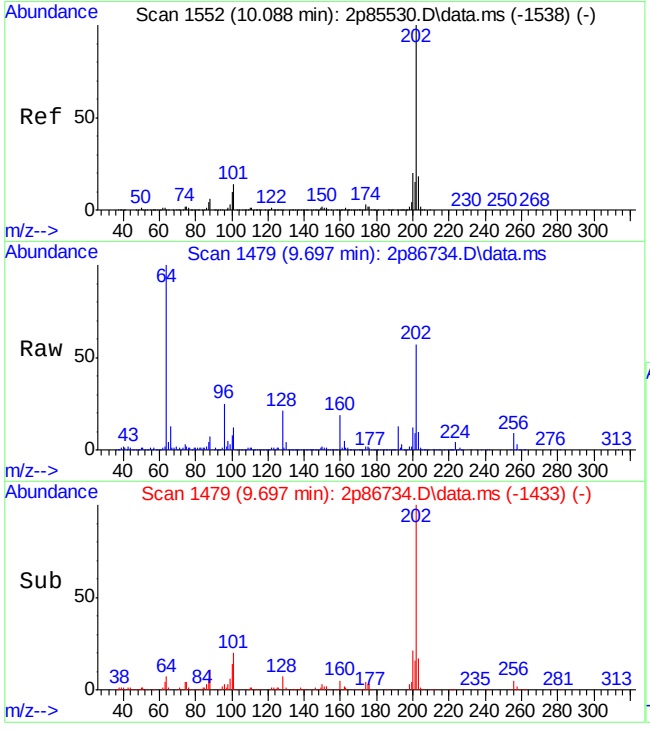


#79
Carbazole
Concen: 0.35 ppm
RT: 8.633 min Scan# 1280
Delta R.T. -0.219 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:167 Resp: 18608

Ion	Ratio	Lower	Upper
167	100		
166	20.2	0.0	50.8
139	14.8	0.0	44.2

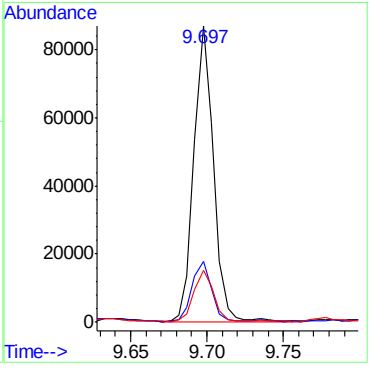


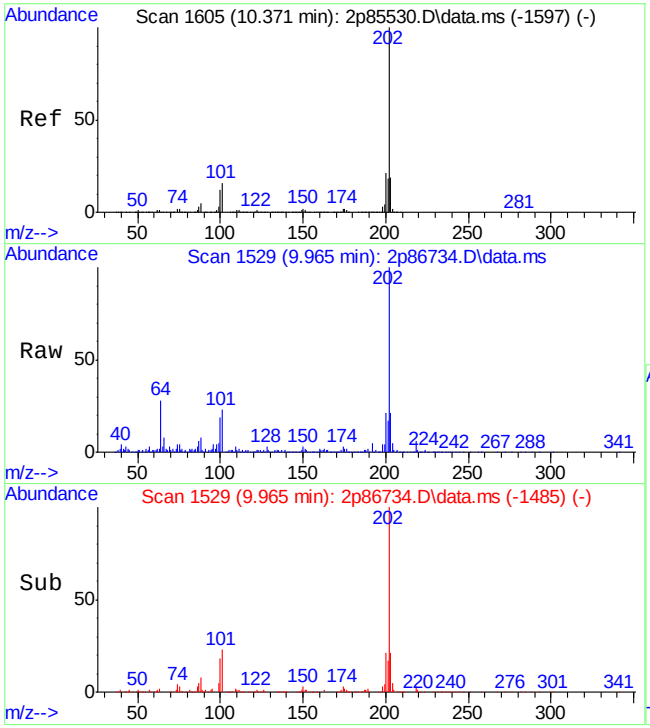


#81
Fluoranthene
Concen: 1.06 ppm
RT: 9.697 min Scan# 1479
Delta R.T. -0.252 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:202 Resp: 77213

Ion	Ratio	Lower	Upper
202	100		
101	20.2	0.0	43.7
203	17.2	0.0	48.6

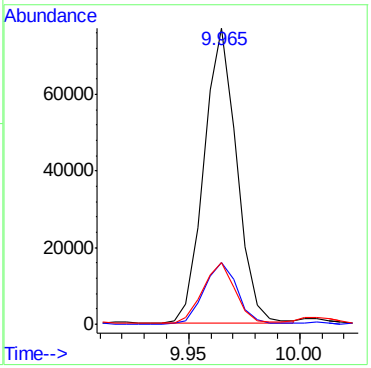


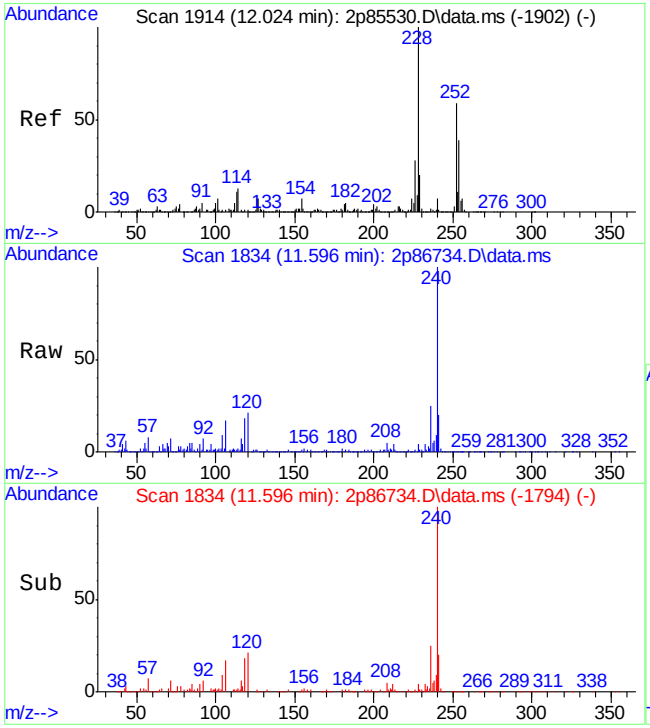


#84
Pyrene
Concen: 1.07 ppm
RT: 9.965 min Scan# 1529
Delta R.T. -0.267 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:202 Resp: 79326

Ion	Ratio	Lower	Upper
202	100		
200	20.7	0.0	50.1
203	20.3	0.0	47.4

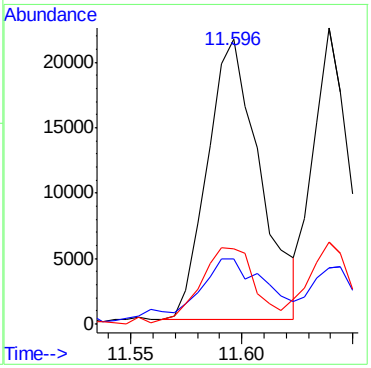


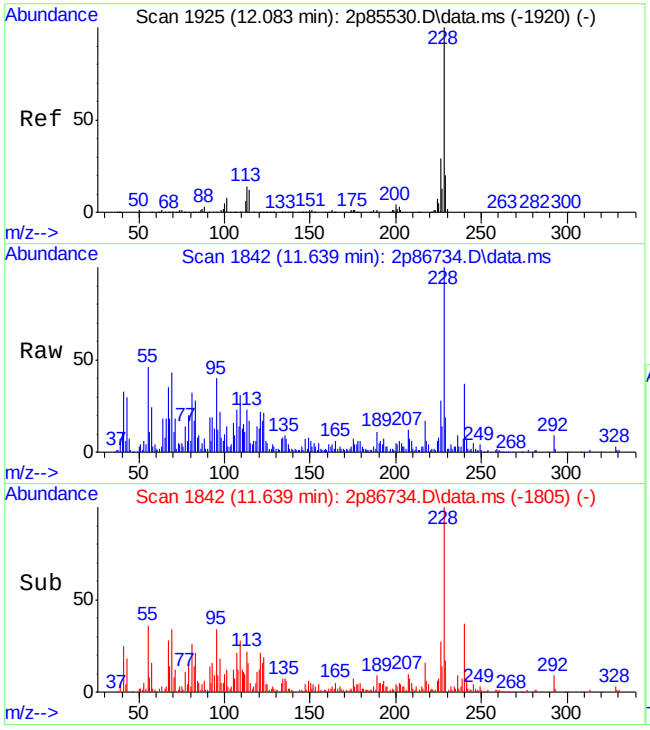


#87
Benzo[a]anthracene
Concen: 0.50 ppm
RT: 11.596 min Scan# 1834
Delta R.T. -0.284 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:228 Resp: 35354

Ion	Ratio	Lower	Upper
228	100		
229	18.0	0.0	50.3
226	24.1	0.0	57.9

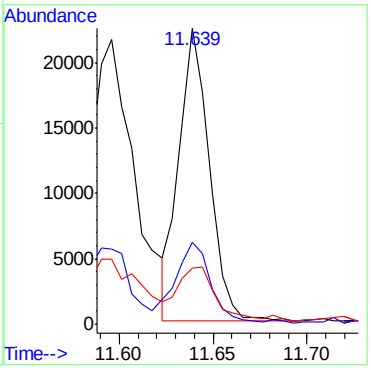


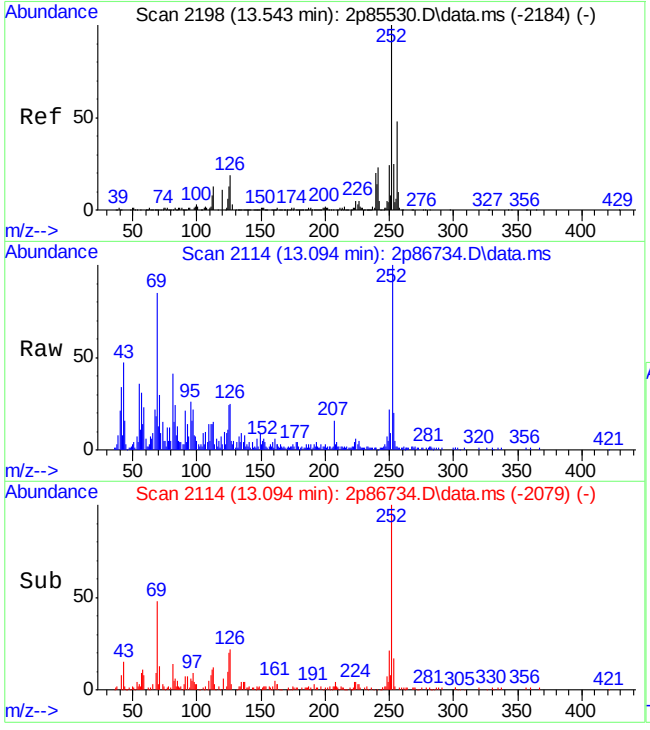


#89
Chrysene
Concen: 0.50 ppm
RT: 11.639 min Scan# 1842
Delta R.T. -0.300 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:228 Resp: 25106

Ion	Ratio	Lower	Upper
228	100		
226	26.6	0.0	59.2
229	16.7	0.0	50.2

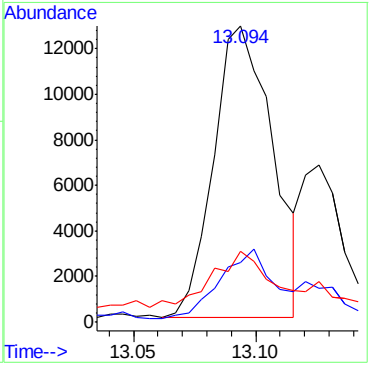


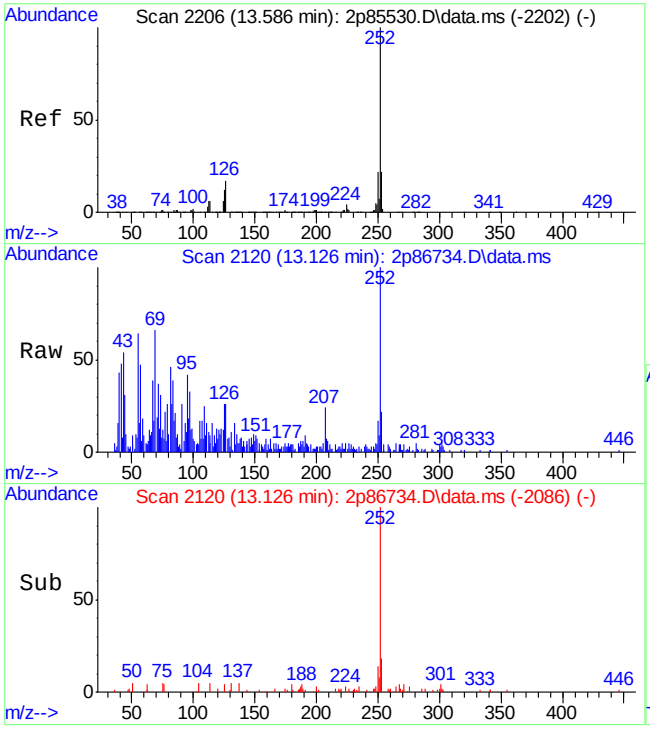


#93
Benzo[b]fluoranthene
Concen: 0.40 ppm
RT: 13.094 min Scan# 2114
Delta R.T. -0.310 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:252 Resp: 21638

Ion	Ratio	Lower	Upper
252	100		
253	17.9	0.0	54.9
125	18.7	0.0	42.5

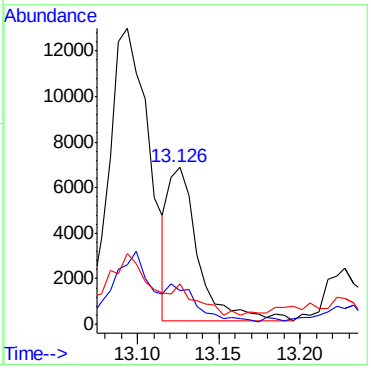


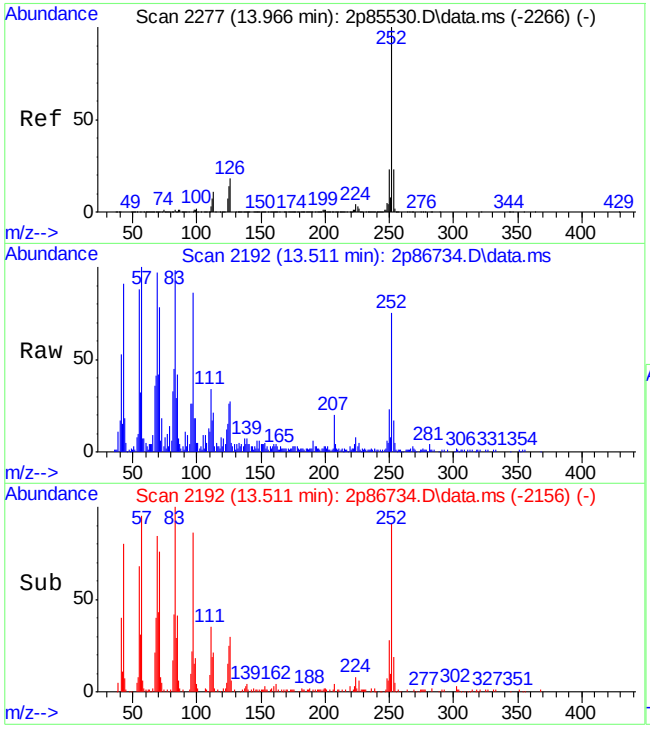


#94
Benzo[k]fluoranthene
Concen: 0.19 ppm
RT: 13.126 min Scan# 2120
Delta R.T. -0.316 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:252 Resp: 8581

Ion	Ratio	Lower	Upper
252	100		
253	16.3	0.0	52.4
125	15.6	0.0	40.8

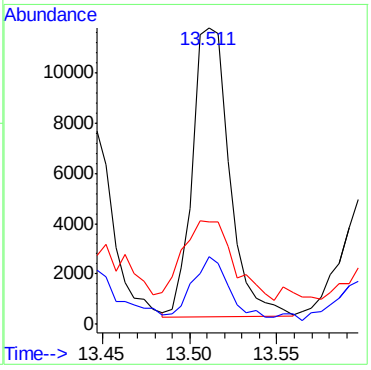




#95
Benzo[a]pyrene
Concen: 0.38 ppm
RT: 13.511 min Scan# 2192
Delta R.T. -0.310 min
Lab File: 2p86734.D
Acq: 19 Apr 2019 12:48 am

Tgt Ion:252 Resp: 17064

Ion	Ratio	Lower	Upper
252	100		
253	20.3	0.0	52.1
125	24.7	0.0	42.5



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 14:30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153649.d
Acq On : 21 Apr 2019 8:16 am
Operator : carolb
Sample : jc86406-10 Inst : MSM
Misc : op19854,em6566,31.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:53:33 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

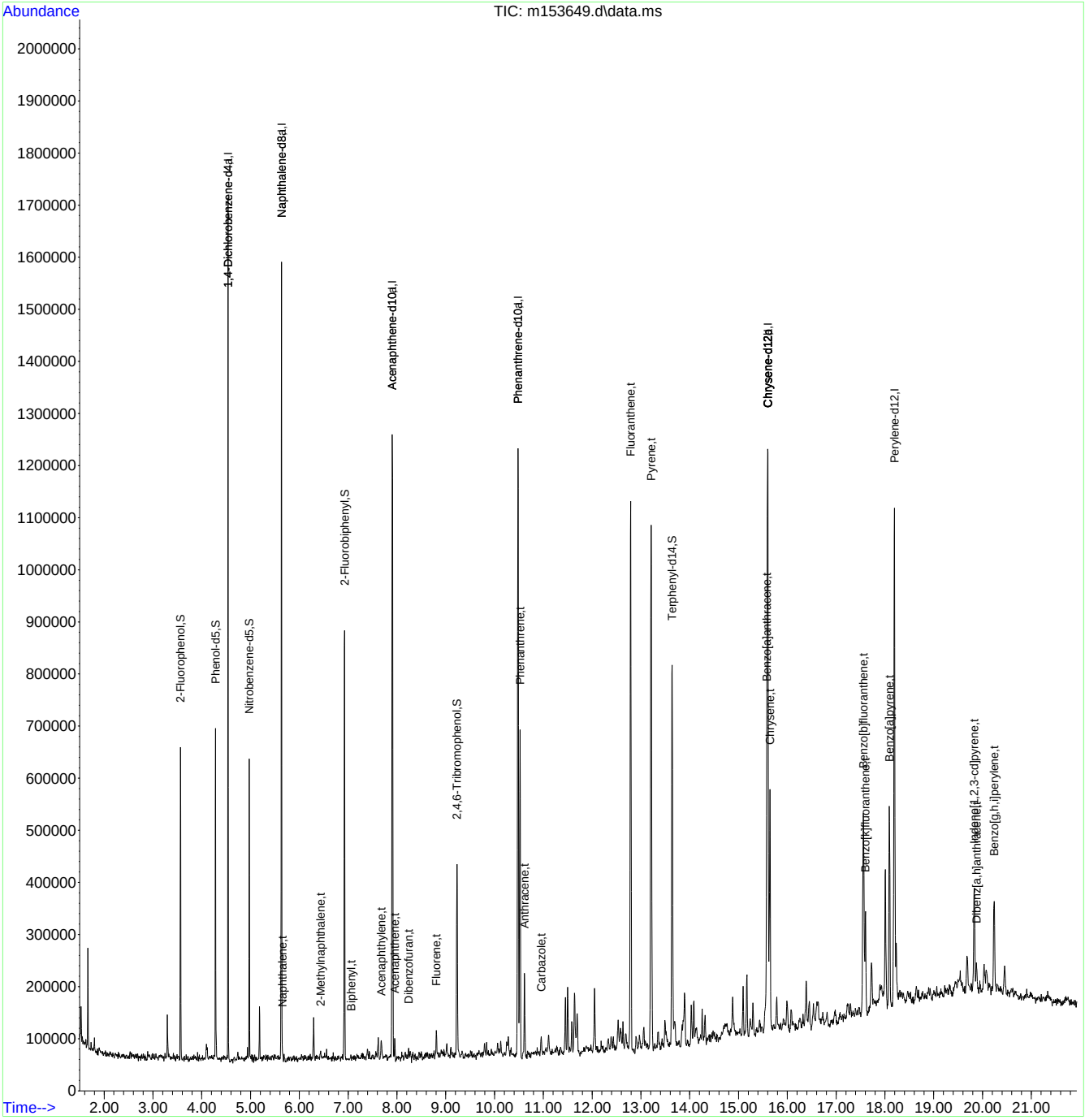
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.540	152	187016	40.00	ppm	0.00
24) Naphthalene-d8	5.635	136	592472	40.00	ppm	0.00
47) Acenaphthene-d10	7.905	164	316212	40.00	ppm	0.00
69) Phenanthrene-d10	10.479	188	619802	40.00	ppm	0.00
83) Chrysene-d12	15.601	240	574223	40.00	ppm	0.00
91) Perylene-d12	18.197	264	565439	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.540	152	187016	40.00	ppm	0.00
103) Acenaphthene-d10a	7.905	164	316212	40.00	ppm	0.00
106) Chrysene-d12a	15.601	240	574223	40.00	ppm	0.00
108) Chrysene-d12b	15.601	240	572772	40.00	ppm	0.00
110) Phenanthrene-d10a	10.479	188	619802	40.00	ppm	0.00
113) Naphthalene-d8a	5.635	136	592472	40.00	ppm	0.00
115) Chrysene-d12c	15.601	240	574223	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.562	112	137832	18.85	ppm	0.00
Spiked Amount 50.000			Recovery =	37.70%		
8) Phenol-d5	4.283	99	166014	18.39	ppm	0.00
Spiked Amount 50.000			Recovery =	36.78%		
25) Nitrobenzene-d5	4.972	82	142946	22.62	ppm	0.00
Spiked Amount 50.000			Recovery =	45.24%		
51) 2-Fluorobiphenyl	6.927	172	300373	25.55	ppm	0.00
Spiked Amount 50.000			Recovery =	51.10%		
73) 2,4,6-Tribromophenol	9.229	330	67248	32.25	ppm	0.00
Spiked Amount 50.000			Recovery =	64.50%		
85) Terphenyl-d14	13.641	244	387435	25.02	ppm	0.00
Spiked Amount 50.000			Recovery =	50.04%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.656	128	7529	0.52	ppm	94
44) 2-Methylnaphthalene	6.436	141	2639	0.29	ppm	81
53) Biphenyl	7.061	154	2000	0.16	ppm	82
56) Acenaphthylene	7.680	152	18767	1.23	ppm	91
59) Acenaphthene	7.953	153	12866	1.39	ppm	88
62) Dibenzofuran	8.236	168	9407	0.68	ppm	86
66) Fluorene	8.807	166	17578	1.53	ppm	98
77) Phenanthrene	10.522	178	335250	21.82	ppm	98
78) Anthracene	10.612	178	87523	5.41	ppm	99
79) Carbazole	10.960	167	18644	1.20	ppm	94
81) Fluoranthene	12.792	202	638984	31.46	ppm	100
84) Pyrene	13.208	202	599706	28.52	ppm	98
87) Benzo[a]anthracene	15.580	228	285047	14.50	ppm	99
89) Chrysene	15.644	228	250749	14.35	ppm	98
93) Benzo[b]fluoranthene	17.556	252	312171	17.52	ppm	96
94) Benzo[k]fluoranthene	17.599	252	102041	6.02	ppm	98
95) Benzo[a]pyrene	18.090	252	233286	14.92	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.831	276	135798m	9.01	ppm	
98) Dibenz[a,h]anthracene	19.879	278	29900m	2.07	ppm	
100) Benzo[g,h,i]perylene	20.237	276	137209	9.25	ppm	97

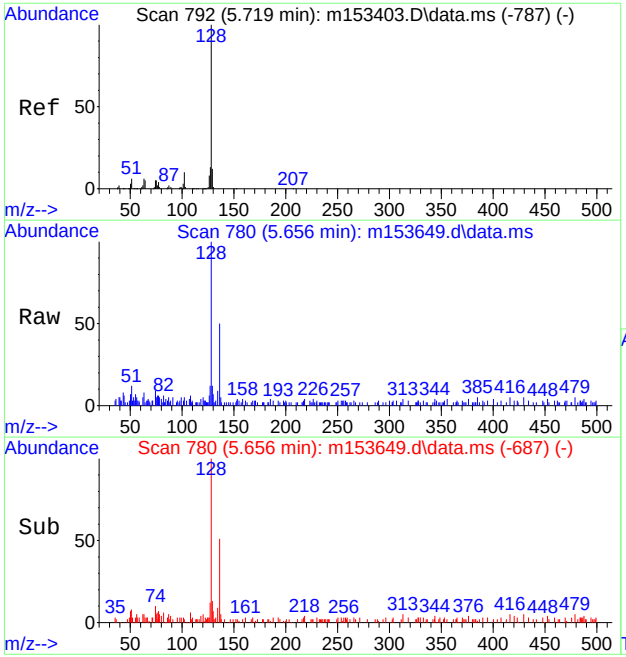
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153649.d
Acq On : 21 Apr 2019 8:16 am
Operator : carolb
Sample : jc86406-10 Inst : MSM
Misc : op19854,em6566,31.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:53:33 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

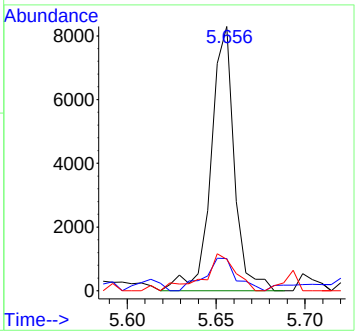


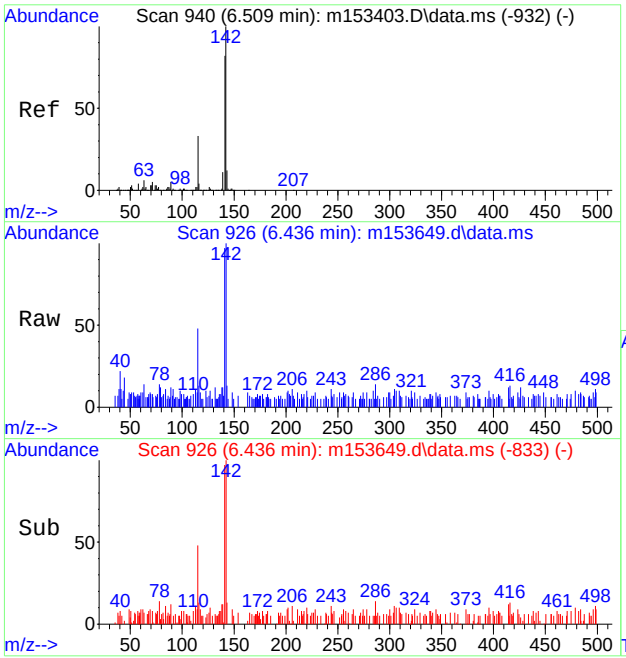


#38
Naphthalene
Concen: 0.52 ppm
RT: 5.656 min Scan# 780
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:128 Resp: 7529

Ion	Ratio	Lower	Upper
128	100		
129	9.7	0.0	41.4
127	10.4	0.0	43.6

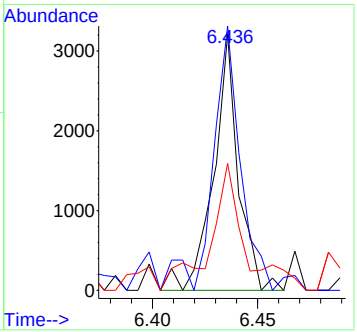


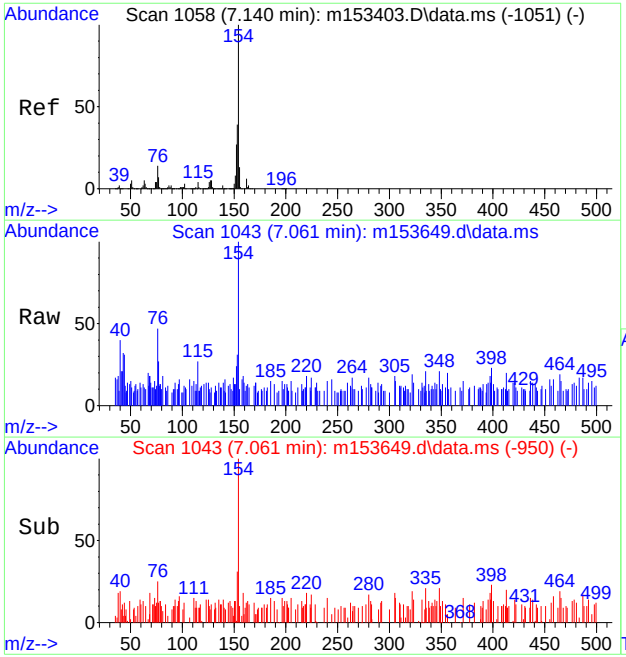


#44
2-Methylnaphthalene
Concen: 0.29 ppm
RT: 6.436 min Scan# 926
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:141 Resp: 2639

Ion	Ratio	Lower	Upper
141	100		
142	100.7	92.0	152.0
115	45.6	4.4	64.4

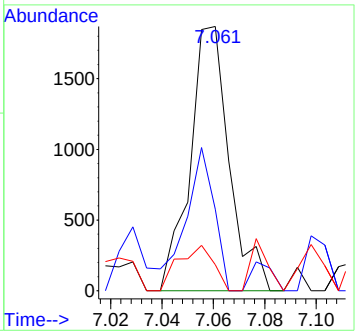


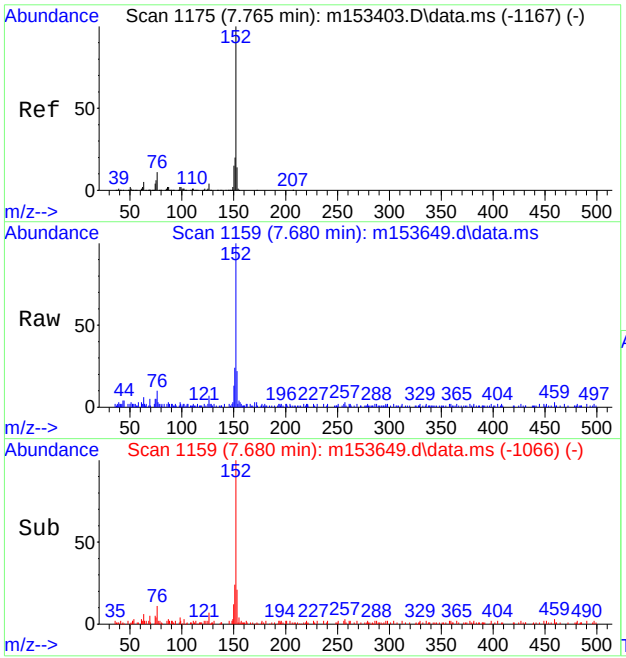


#53
Biphenyl
Concen: 0.16 ppm
RT: 7.061 min Scan# 1043
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:154 Resp: 2000

Ion	Ratio	Lower	Upper
154	100		
153	26.7	9.9	69.9
155	9.9	0.0	43.6

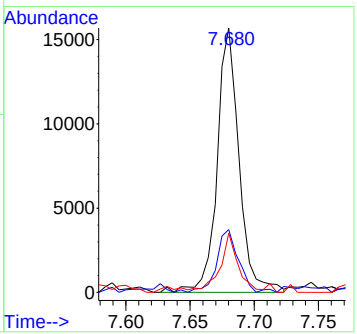


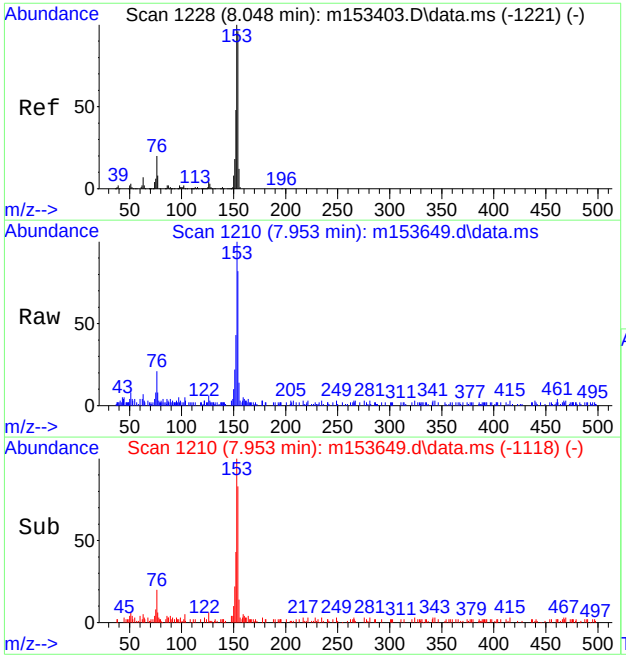


#56
Acenaphthylene
Concen: 1.23 ppm
RT: 7.680 min Scan# 1159
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:152 Resp: 18767

Ion	Ratio	Lower	Upper
152	100		
151	21.1	0.0	50.8
153	21.9	0.0	43.3

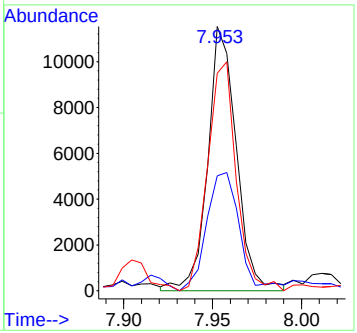


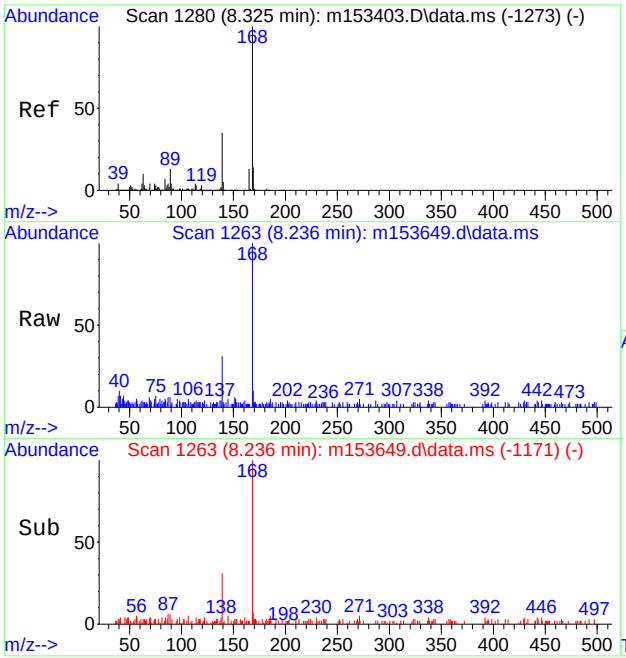


#59
Acenaphthene
Concen: 1.39 ppm
RT: 7.953 min Scan# 1210
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:153 Resp: 12866

Ion	Ratio	Lower	Upper
153	100		
152	40.8	17.5	77.5
154	82.6	65.7	125.7

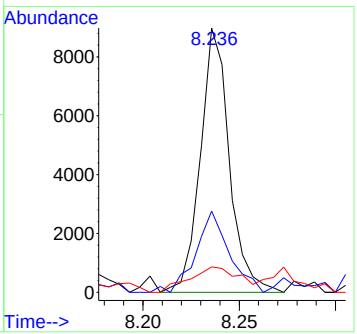


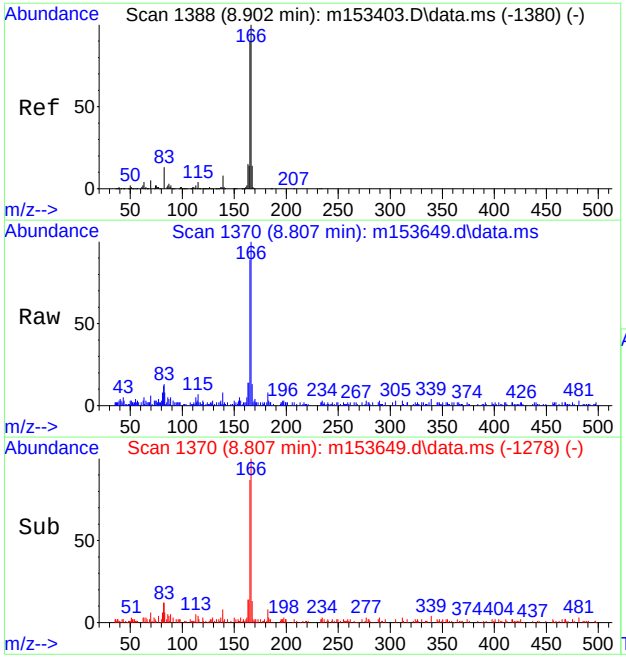


#62
Dibenzofuran
Concen: 0.68 ppm
RT: 8.236 min Scan# 1263
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:168 Resp: 9407

Ion	Ratio	Lower	Upper
168	100		
139	26.8	0.0	51.9
169	4.9	0.0	43.3

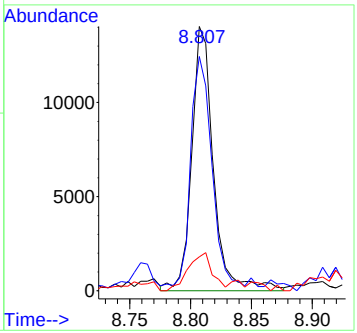


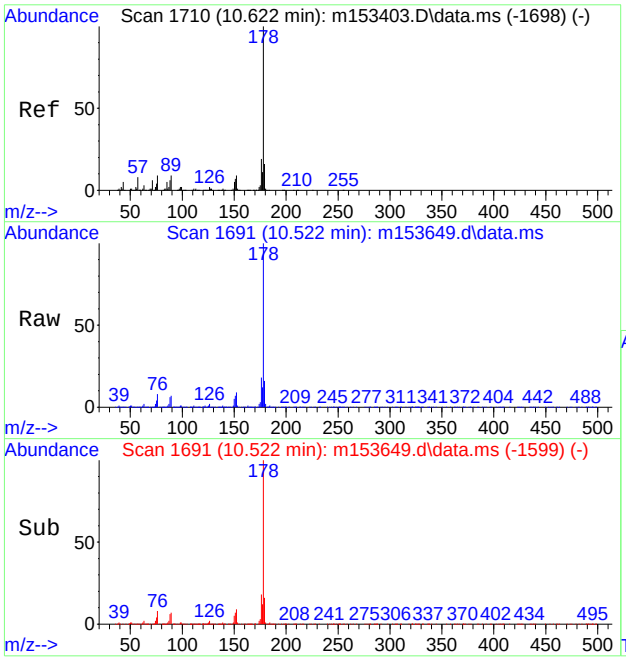


#66
Fluorene
Concen: 1.53 ppm
RT: 8.807 min Scan# 1370
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:166 Resp: 17578

Ion	Ratio	Lower	Upper
166	100		
165	87.5	59.4	119.4
167	13.1	0.0	43.4

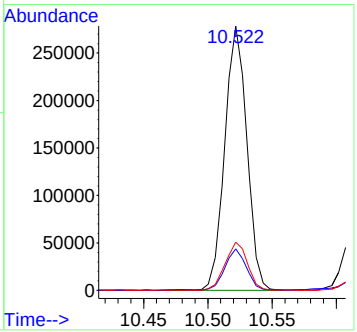


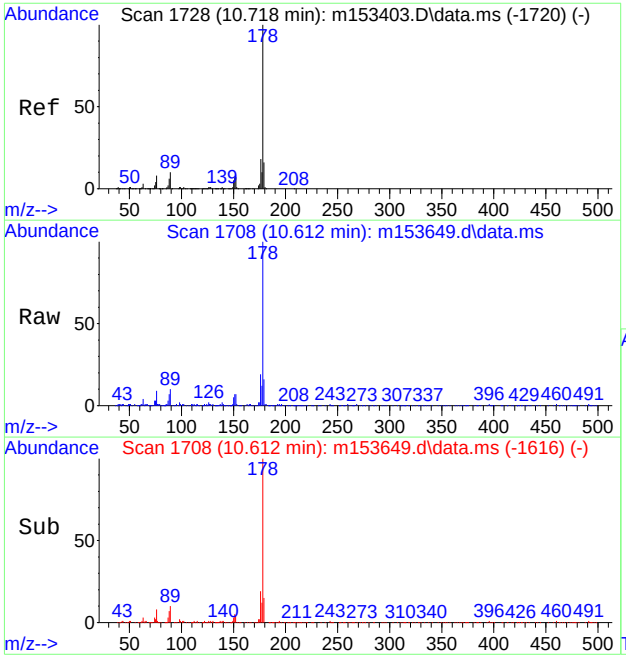


#77
Phenanthrene
Concen: 21.82 ppm
RT: 10.522 min Scan# 1691
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:178 Resp: 335250

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	44.8
176	18.1	0.0	48.6

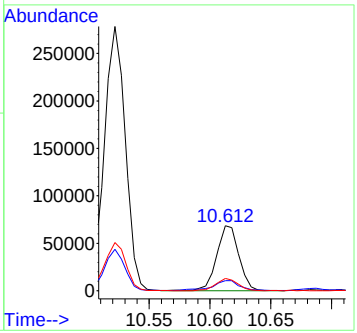


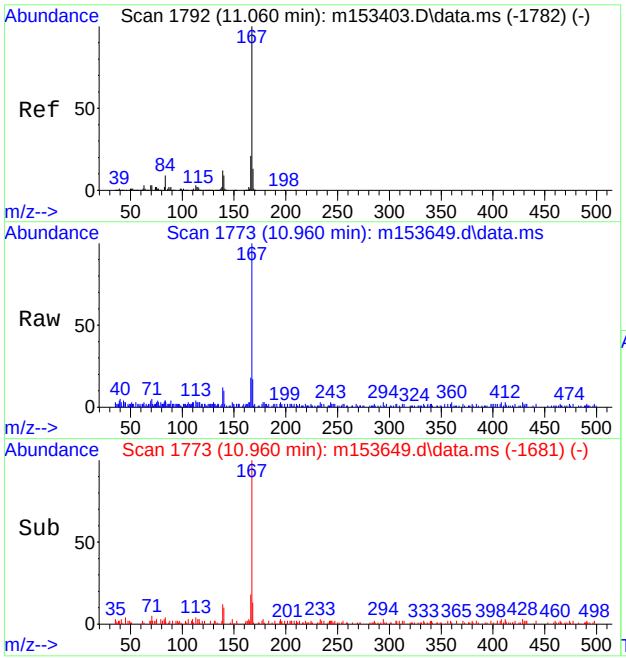


#78
Anthracene
Concen: 5.41 ppm
RT: 10.612 min Scan# 1708
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:178 Resp: 87523

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.6
176	19.0	0.0	48.2

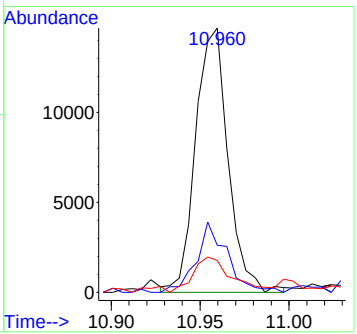


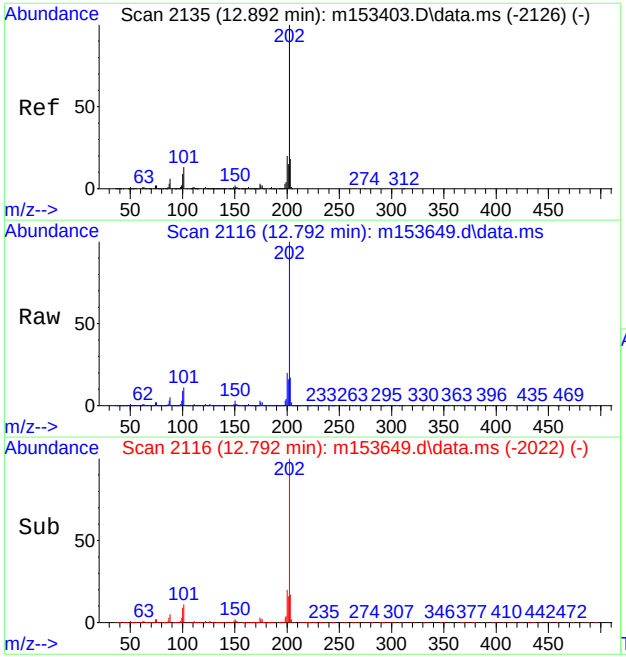


#79
Carbazole
Concen: 1.20 ppm
RT: 10.960 min Scan# 1773
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:167 Resp: 18644

Ion	Ratio	Lower	Upper
167	100		
166	18.2	0.0	50.9
139	8.6	0.0	41.0

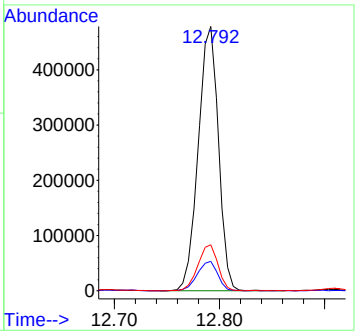


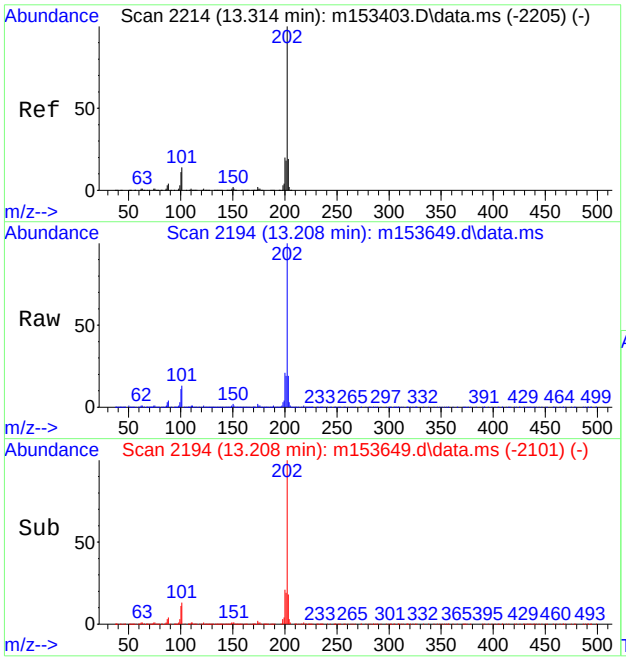


#81
Fluoranthene
Concen: 31.46 ppm
RT: 12.792 min Scan# 2116
Delta R.T. 0.002 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:202 Resp: 638984

Ion	Ratio	Lower	Upper
202	100		
101	11.0	0.0	41.1
203	17.4	0.0	47.4

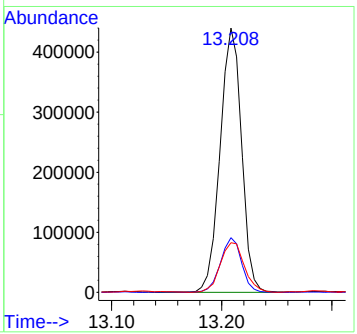


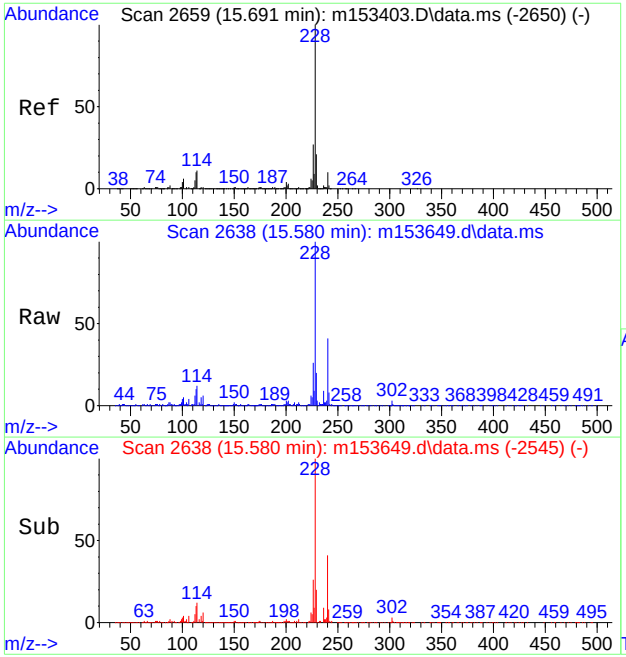


#84
Pyrene
Concen: 28.52 ppm
RT: 13.208 min Scan# 2194
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:202 Resp: 599706

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	49.9
203	18.5	0.0	47.9

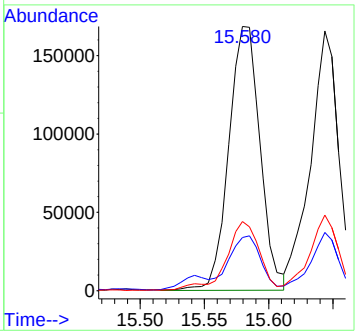


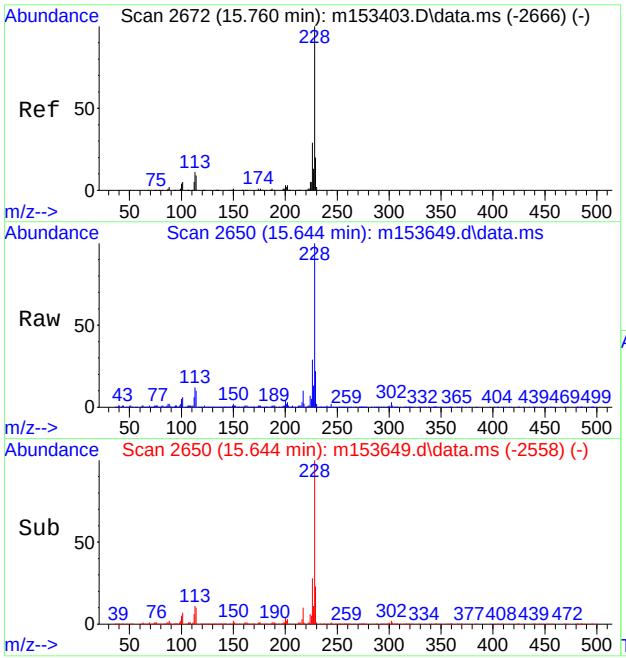


#87
Benzo[a]anthracene
Concen: 14.50 ppm
RT: 15.580 min Scan# 2638
Delta R.T. -0.003 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:228 Resp: 285047

Ion	Ratio	Lower	Upper
228	100		
229	19.7	0.0	50.1
226	26.0	0.0	55.1

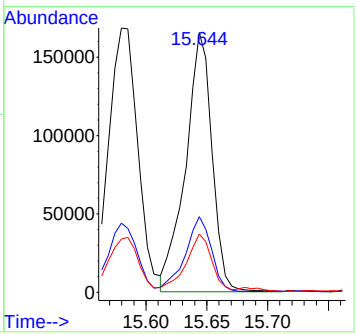


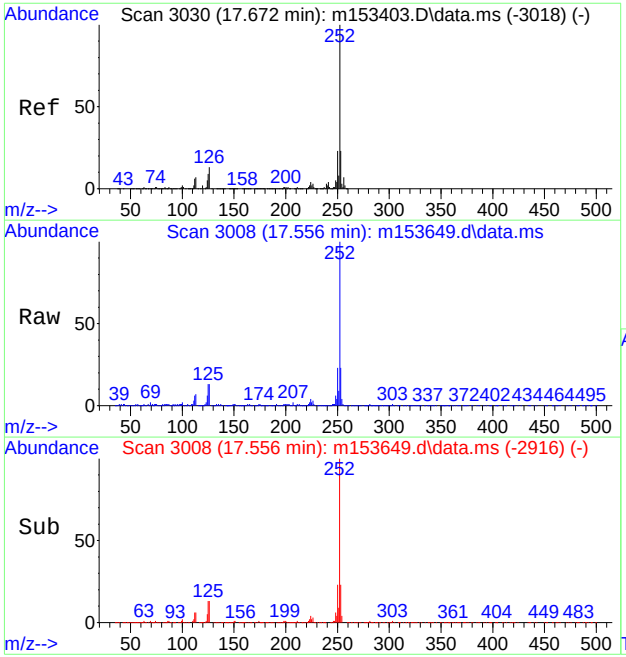


#89
Chrysene
Concen: 14.35 ppm
RT: 15.644 min Scan# 2650
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:228 Resp: 250749

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.5
229	22.1	0.0	50.0

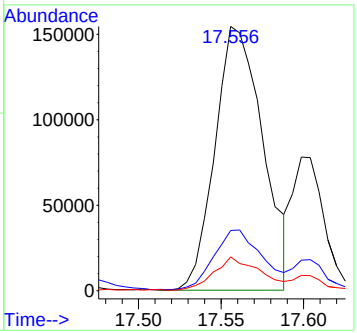


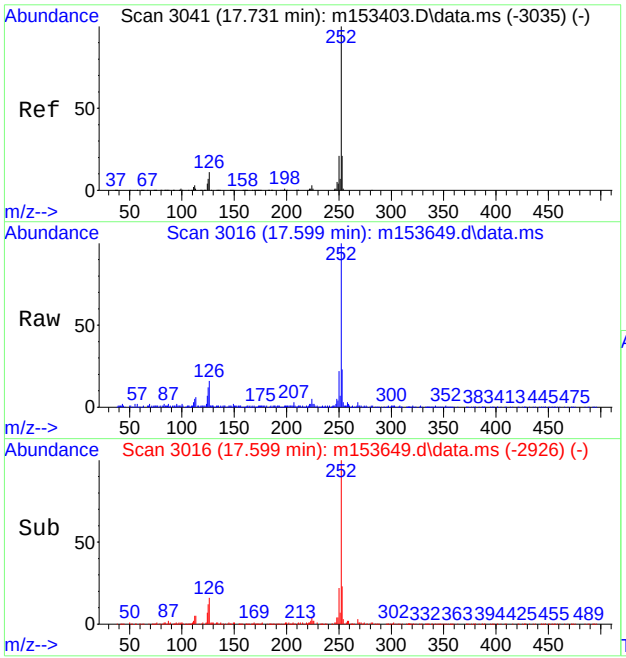


#93
Benzo[b]fluoranthene
Concen: 17.52 ppm
RT: 17.556 min Scan# 3008
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:252 Resp: 312171

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.3
125	12.6	0.0	40.0

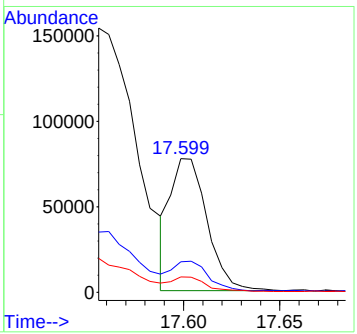


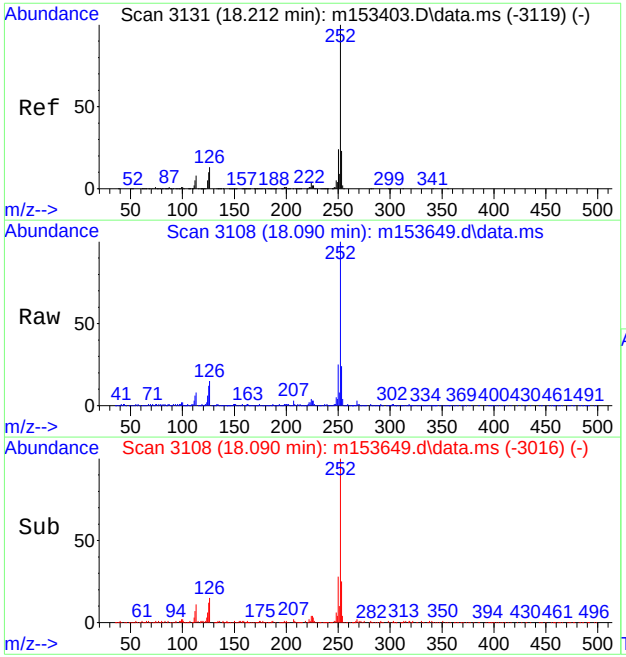


#94
Benzo[k]fluoranthene
Concen: 6.02 ppm
RT: 17.599 min Scan# 3016
Delta R.T. -0.019 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:252 Resp: 102041

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.6
125	10.8	0.0	38.4

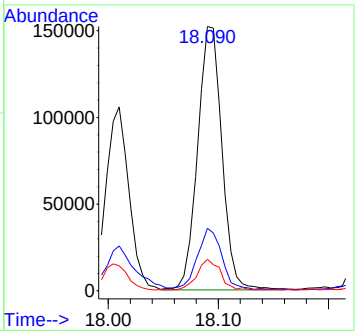


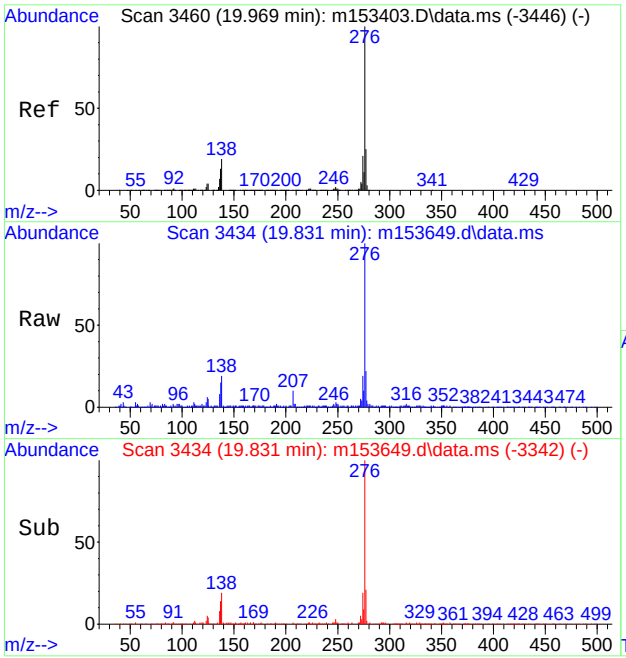


#95
Benzo[a]pyrene
Concen: 14.92 ppm
RT: 18.090 min Scan# 3108
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:252 Resp: 233286

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	53.2
125	11.6	0.0	40.5

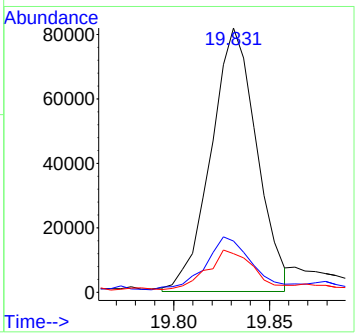


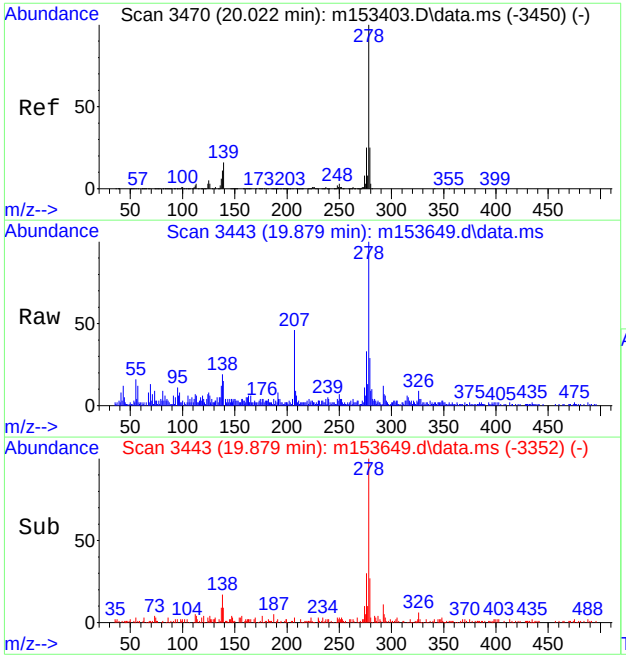


#96
Indeno[1,2,3-cd]pyrene
Concen: 9.01 ppm m
RT: 19.831 min Scan# 3434
Delta R.T. -0.008 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:276 Resp: 135798

Ion	Ratio	Lower	Upper
276	100		
138	19.4	0.0	48.9
137	14.7	0.0	44.5

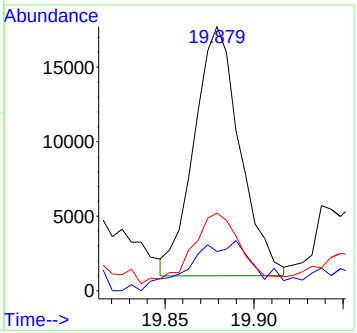


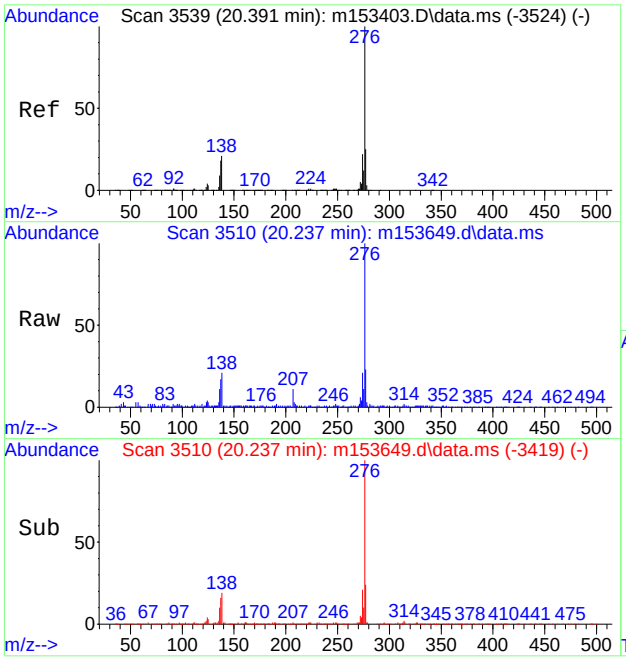


#98
Dibenz[a,h]anthracene
Concen: 2.07 ppm m
RT: 19.879 min Scan# 3443
Delta R.T. -0.014 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:278 Resp: 29900

Ion	Ratio	Lower	Upper
278	100		
139	14.9	0.0	45.1
279	29.4	0.0	54.2

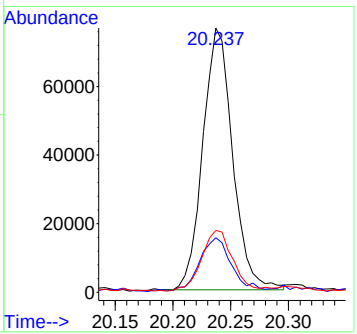




#100
Benzo[g,h,i]perylene
Concen: 9.25 ppm
RT: 20.237 min Scan# 3510
Delta R.T. -0.014 min
Lab File: m153649.d
Acq: 21 Apr 2019 8:16 am

Tgt Ion:276 Resp: 137209

Ion	Ratio	Lower	Upper
276	100		
138	19.2	0.0	50.9
277	22.3	0.0	53.8



Manual Integration Approval Summary

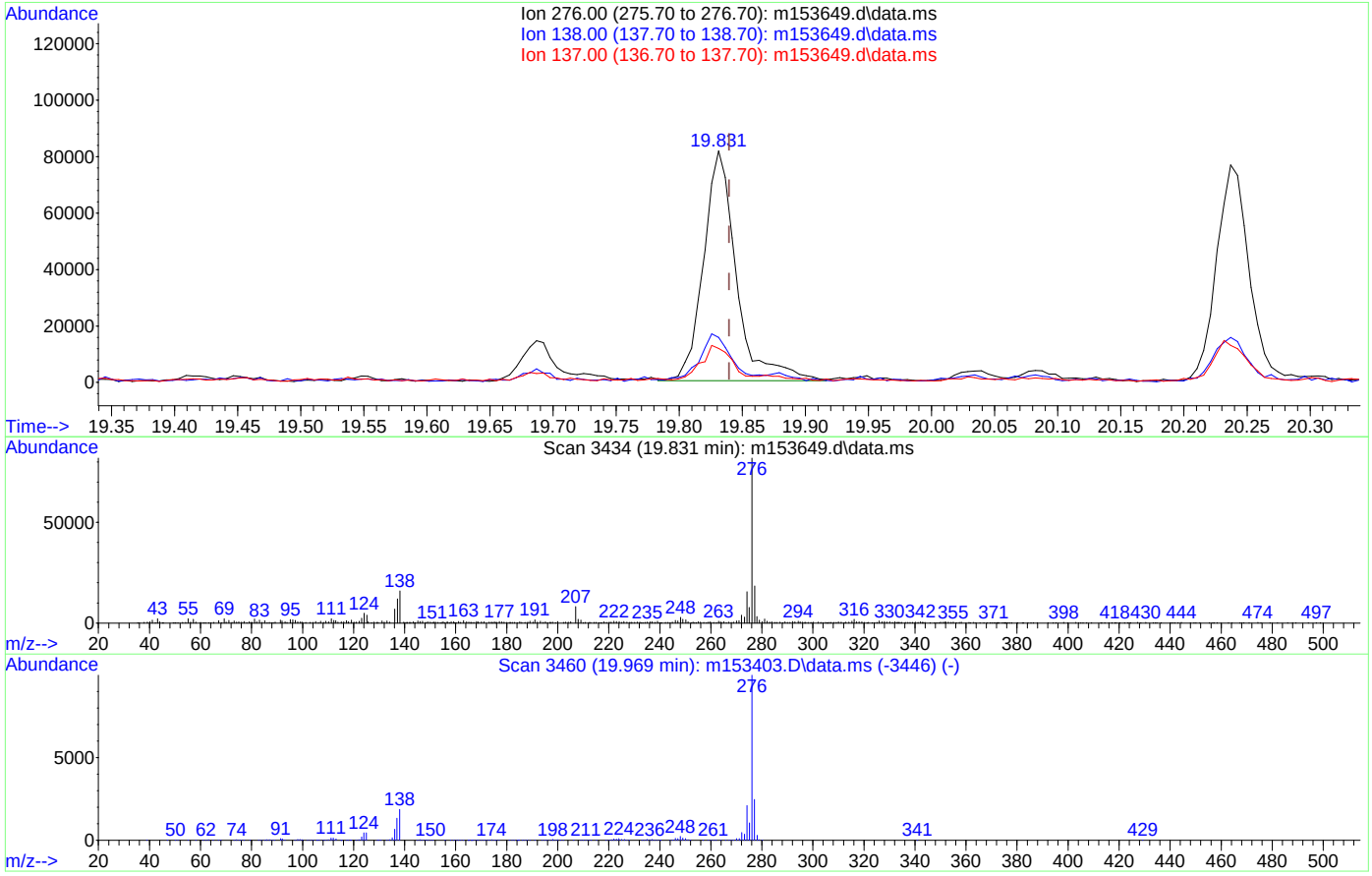
Sample Number:	JC86406-10	**Method:**	SW846 8270D
Lab FileID:	M153649.D	**Analyst approved:**	04/22/19 04:28 Michelle Co
Injection Time:	04/21/19 08:16	**Supervisor approved:**	04/26/19 14:30 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		19.83	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		19.88	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153649.d
Acq On : 21 Apr 2019 8:16 am
Operator : carolb
Sample : jc86406-10 Inst : MSM
Misc : op19854,em6566,31.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:47:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



TIC: m153649.d\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

19.831min (-0.008) 9.73ppm

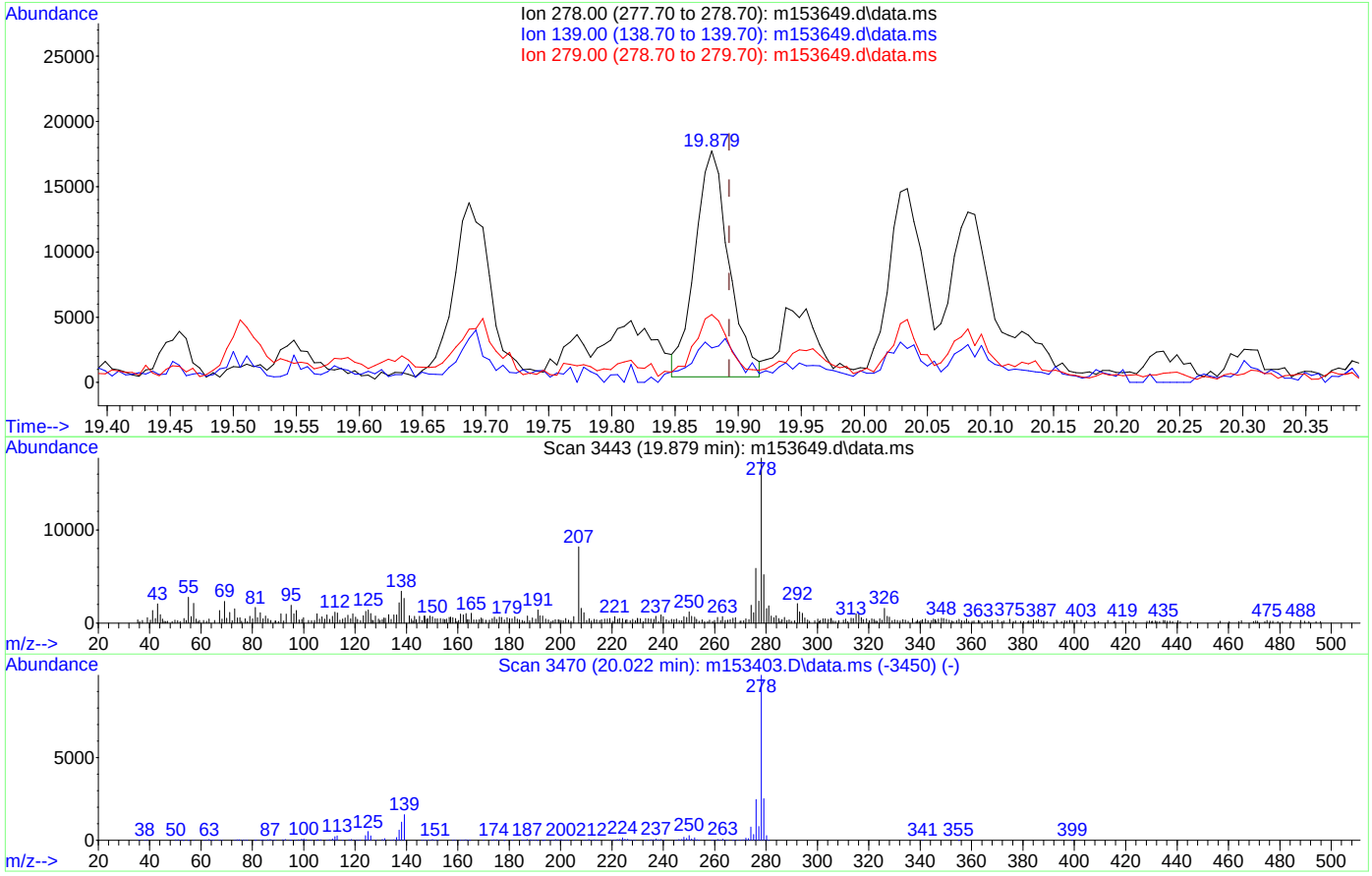
response 147336

Ion	Exp%	Act%
276.00	100	100
138.00	18.90	18.61
137.00	14.50	13.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153649.d
Acq On : 21 Apr 2019 8:16 am
Operator : carolb
Sample : jc86406-10 Inst : MSM
Misc : op19854,em6566,31.8,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:47:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



TIC: m153649.d\data.ms

(98) Dibenz[a,h]anthracene (t)

19.879min (-0.014) 2.24ppm

response 32310

Ion	Exp%	Act%
278.00	100	100
139.00	15.10	11.93
279.00	24.20	27.40
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 11:27

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:57:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	788904	40.00	ppm	-0.16
24) Naphthalene-d8	5.707	136	2122680	40.00	ppm	-0.17
47) Acenaphthene-d10	7.151	164	843852	40.00	ppm	-0.16
69) Phenanthrene-d10	8.435	188	1409553	40.00	ppm	-0.17
83) Chrysene-d12	11.746	240	1455027	40.00	ppm	-0.15
91) Perylene-d12	13.730	264	1293569	40.00	ppm	-0.17
101) 1,4-Dichlorobenzene-d4a	4.675	152	788904	40.00	ppm	-0.16
103) Naphthalene-d8a	5.707	136	2122680	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.151	164	843852	40.00	ppm	-0.16
108) Chrysene-d12a	11.746	240	1455027	40.00	ppm	0.13
110) Phenanthrene-d10a	8.435	188	1409553	40.00	ppm	-0.17
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	967672	24.38	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 48.76%			
8) Phenol-d5	4.434	99	1118352	25.70	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 51.40%			
25) Nitrobenzene-d5	5.130	82	891101	31.23	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 62.46%#			
51) 2-Fluorobiphenyl	6.595	172	1039518	35.59	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 71.18%#			
73) 2,4,6-Tribromophenol	7.809	330	177396	35.88	ppm	-0.17
Spiked Amount 50.000	Range 12 - 68		Recovery = 71.76%#			
85) Terphenyl-d14	10.254	244	1020906	28.19	ppm	-0.20
Spiked Amount 50.000	Range 16 - 65		Recovery = 56.38%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
21) 3&4-Methylphenol	5.044	108	73769	3.14	ppm	99
38) Naphthalene	5.723	128	1233530	24.29	ppm	100
44) 2-Methylnaphthalene	6.290	141	218238	6.76	ppm	95
53) Biphenyl	6.675	154	366797	10.85	ppm	99
56) Acenaphthylene	7.039	152	5969905	144.63	ppm	97
59) Acenaphthene	7.189	153	6064392	250.32	ppm	95
62) Dibenzofuran	7.328	168	7258778	217.26	ppm	95
66) Fluorene	7.622	166	8563225	298.84	ppm	99
77) Phenanthrene	8.483	178	16501027	469.94	ppm	97
78) Anthracene	8.531	178	11743567	328.91	ppm	97
79) Carbazole	8.681	167	4706241	127.48	ppm	97
81) Fluoranthene	9.820	202	32978441	660.86	ppm	99
84) Pyrene	10.109	202	26171725m	462.27	ppm	
87) Benzo[a]anthracene	11.735	228	21462856	392.72	ppm	96
89) Chrysene	11.794	228	10984112m	283.31	ppm	
93) Benzo[b]fluoranthene	13.265	252	22019951m	519.50	ppm	
94) Benzo[k]fluoranthene	13.292	252	2318505m	66.89	ppm	
95) Benzo[a]pyrene	13.688	252	12616394	354.18	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:57:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

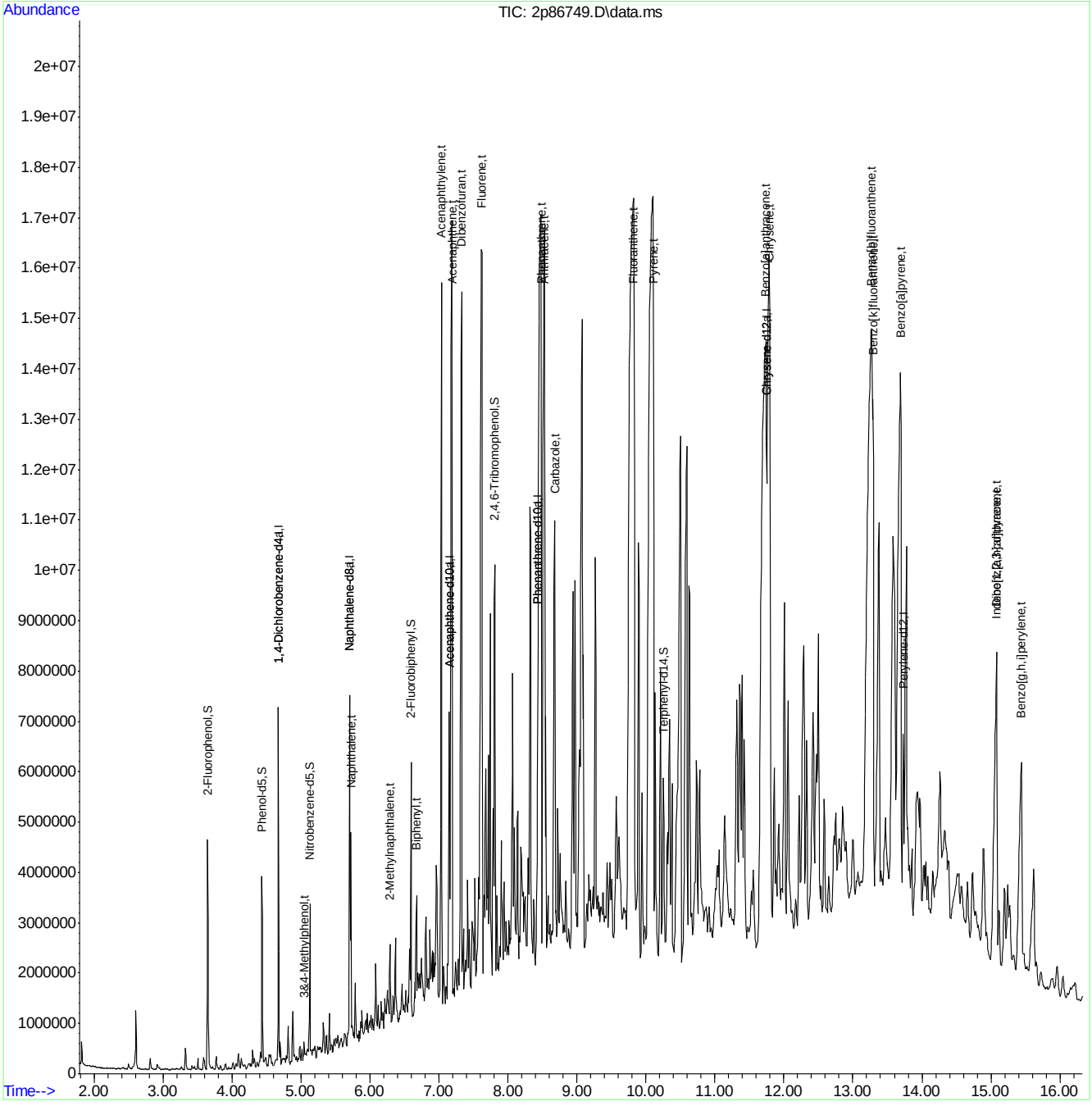
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) Indeno[1,2,3-cd]pyrene	15.078	276	4914461	121.05	ppm	98
98) Dibenz[a,h]anthracene	15.084	278	1488591	47.07	ppm	91
100) Benzo[g,h,i]perylene	15.442	276	3963827	123.34	ppm	96

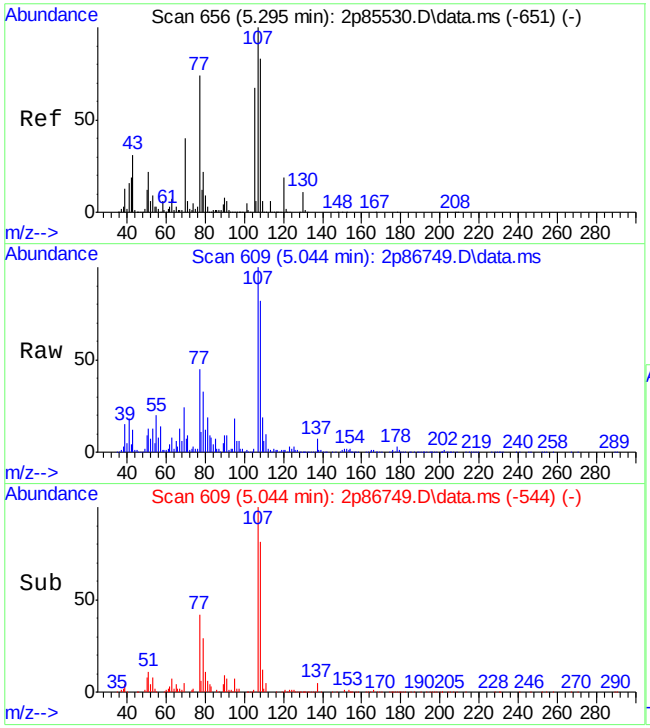
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:57:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

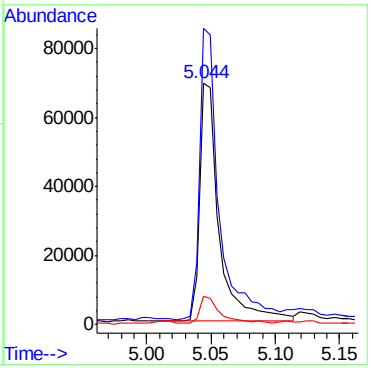


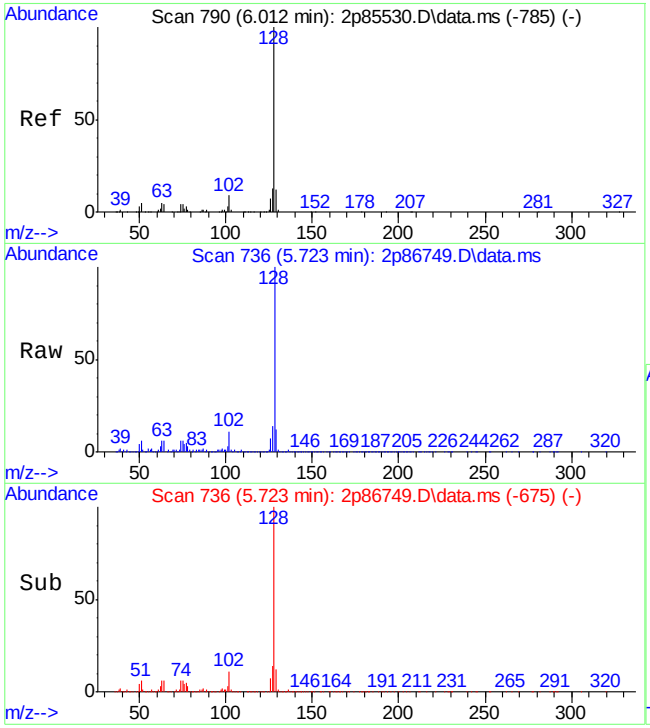


#21
3&4-Methylphenol
Concen: 3.14 ppm
RT: 5.044 min Scan# 609
Delta R.T. -0.155 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:108 Resp: 73769

Ion	Ratio	Lower	Upper
108	100		
107	121.4	90.6	150.6
90	10.4	0.0	39.9

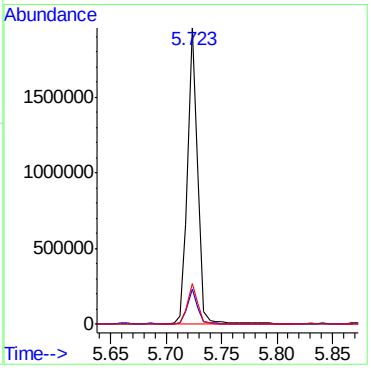


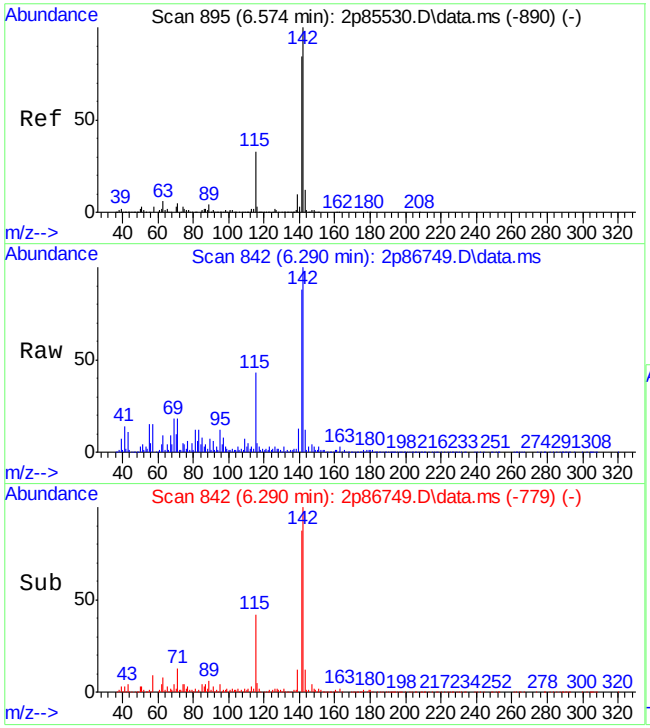


#38
Naphthalene
Concen: 24.29 ppm
RT: 5.723 min Scan# 736
Delta R.T. -0.172 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:128 Resp: 1233530

Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	41.2
127	13.7	0.0	43.7

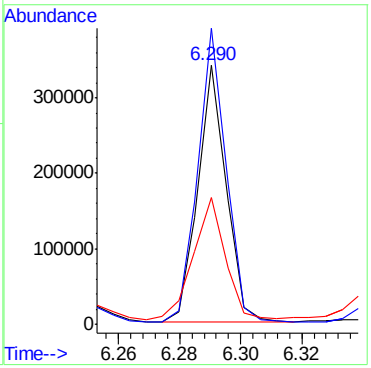


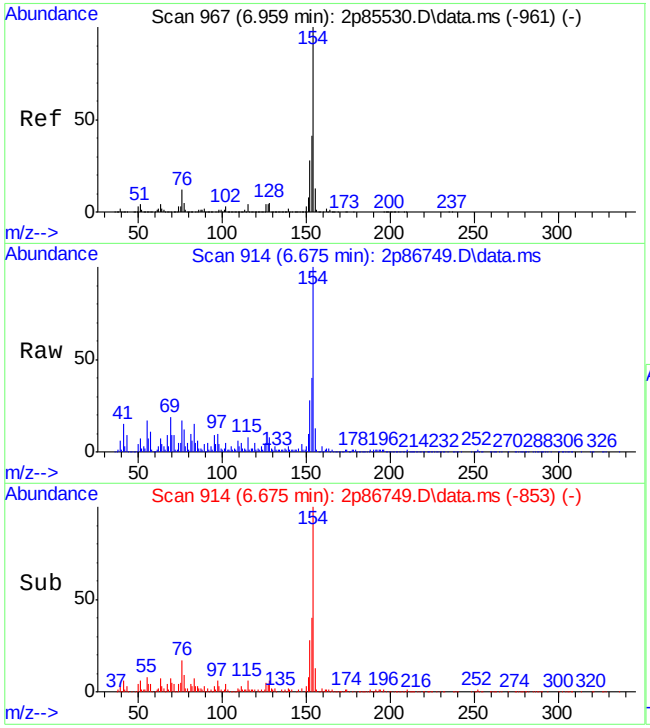


#44
2-Methylnaphthalene
Concen: 6.76 ppm
RT: 6.290 min Scan# 842
Delta R.T. -0.166 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:141 Resp: 218238

Ion	Ratio	Lower	Upper
141	100		
142	114.5	90.7	150.7
115	46.4	18.7	78.7

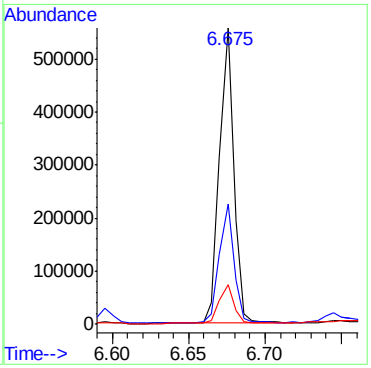


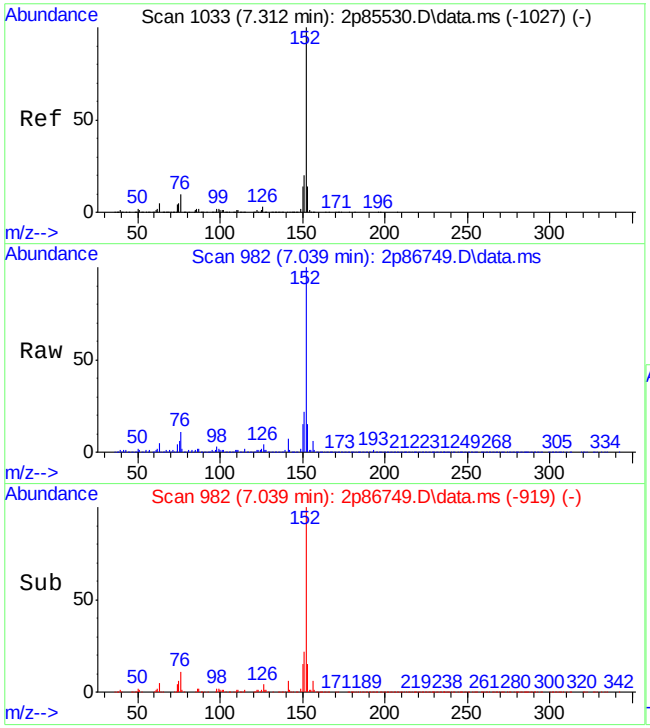


#53
Biphenyl
Concen: 10.85 ppm
RT: 6.675 min Scan# 914
Delta R.T. -0.172 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:154 Resp: 366797

Ion	Ratio	Lower	Upper
154	100		
153	40.1	11.1	71.1
155	13.0	0.0	43.4

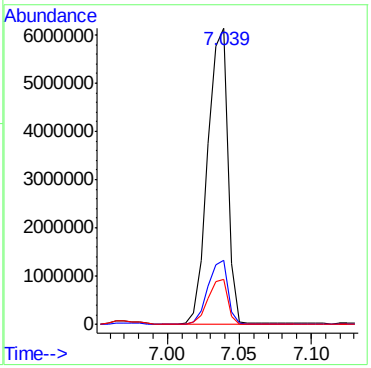


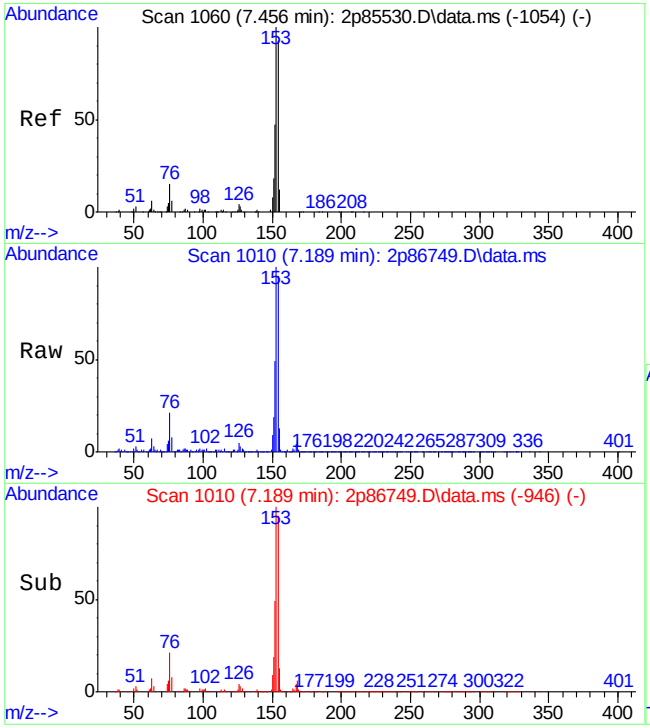


#56
Acenaphthylene
Concen: 144.63 ppm
RT: 7.039 min Scan# 982
Delta R.T. -0.161 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:152 Resp: 5969905

Ion	Ratio	Lower	Upper
152	100		
151	21.6	0.0	50.3
153	15.2	0.0	43.6

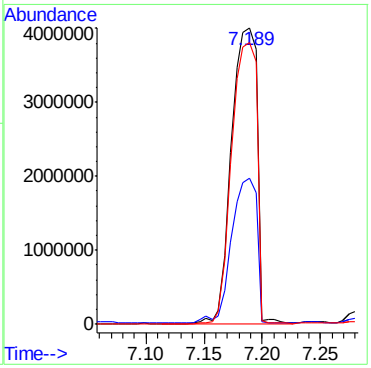


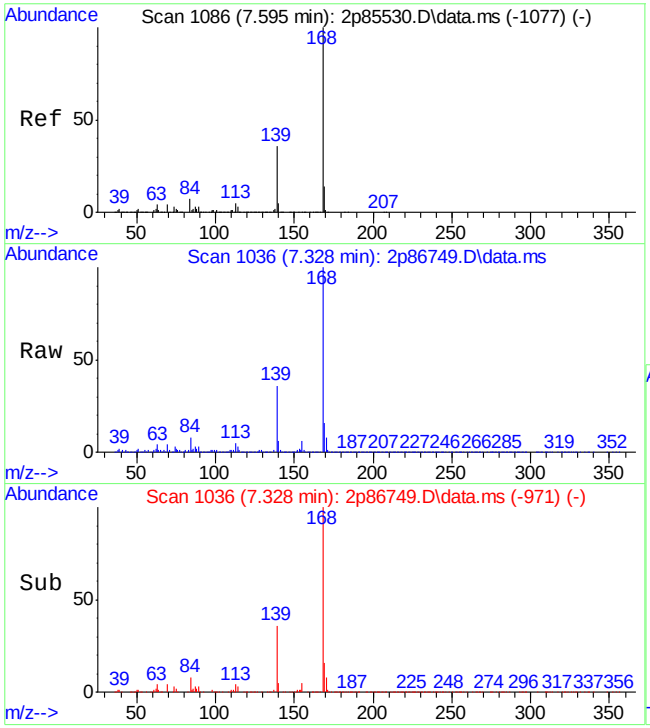


#59
Acenaphthene
Concen: 250.32 ppm
RT: 7.189 min Scan# 1010
Delta R.T. -0.155 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:153 Resp: 6064392

Ion	Ratio	Lower	Upper
153	100		
152	49.2	17.8	77.8
154	95.3	59.8	119.8

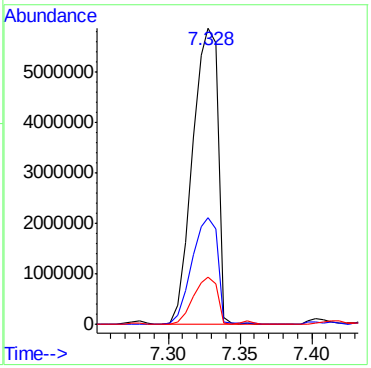


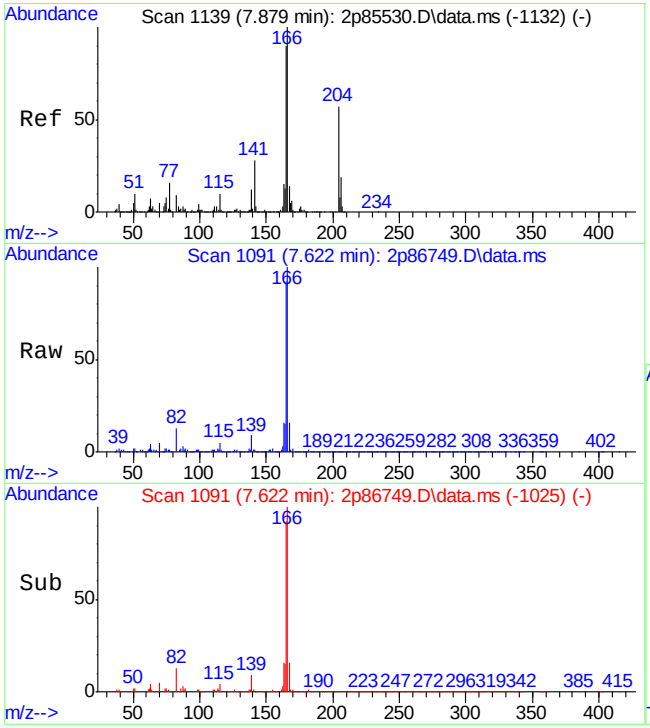


#62
Dibenzofuran
Concen: 217.26 ppm
RT: 7.328 min Scan# 1036
Delta R.T. -0.155 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:168 Resp: 7258778

Ion	Ratio	Lower	Upper
168	100		
139	36.0	9.2	69.2
169	15.8	0.0	44.1

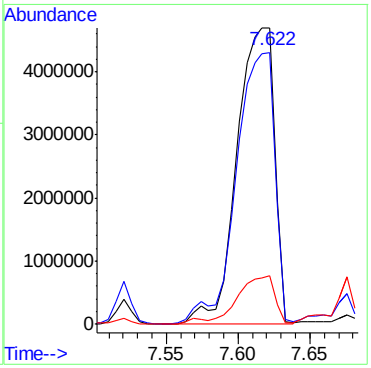


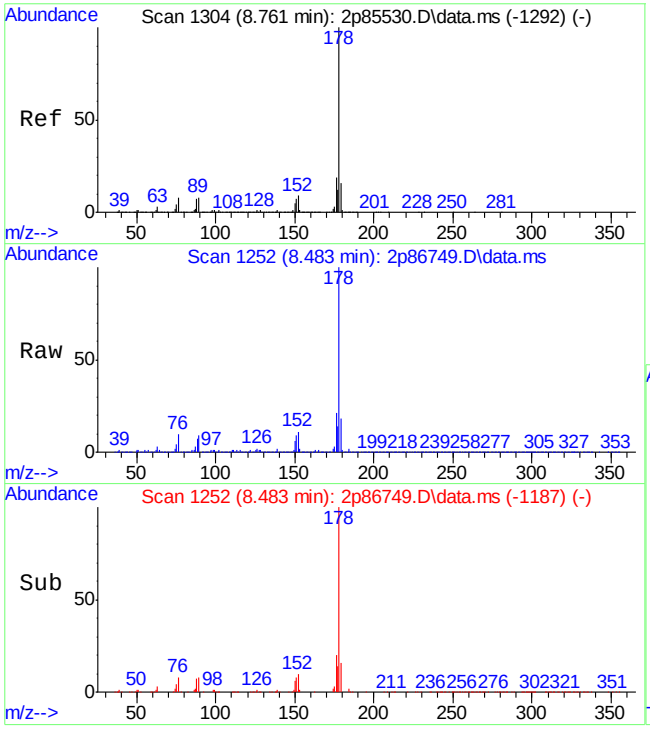


#66
Fluorene
Concen: 298.84 ppm
RT: 7.622 min Scan# 1091
Delta R.T. -0.145 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:166 Resp: 8563225

Ion	Ratio	Lower	Upper
166	100		
165	91.4	60.6	120.6
167	16.1	0.0	44.1

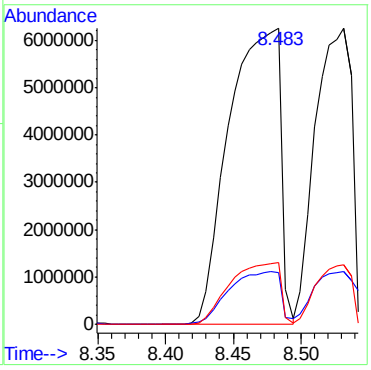


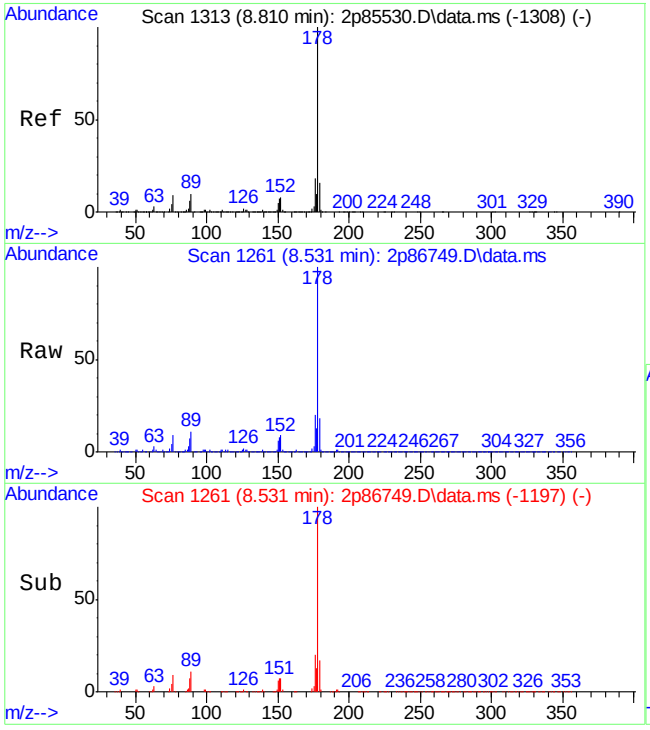


#77
Phenanthrene
Concen: 469.94 ppm
RT: 8.483 min Scan# 1252
Delta R.T. -0.150 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:178 Resp:16501027

Ion	Ratio	Lower	Upper
178	100		
179	16.6	0.0	46.0
176	20.9	0.0	49.2

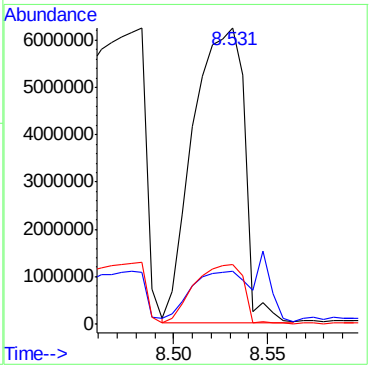


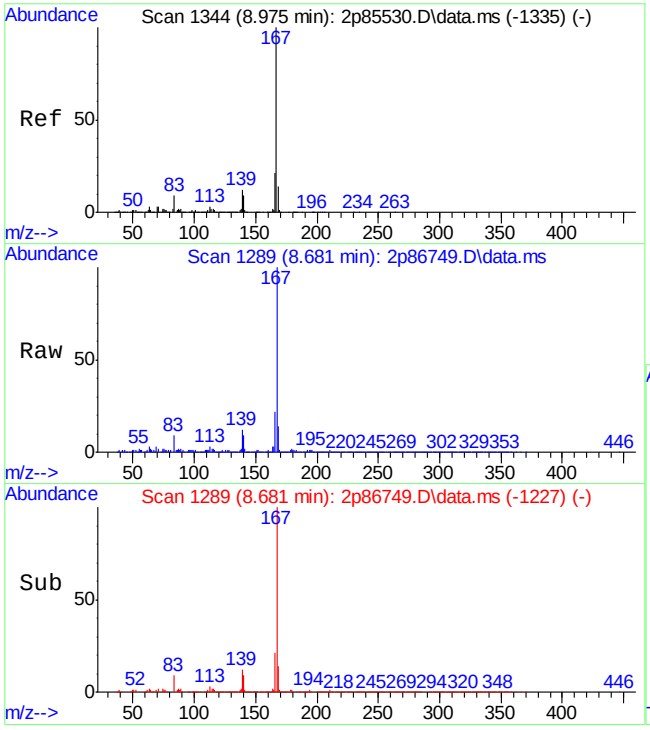


#78
Anthracene
Concen: 328.91 ppm
RT: 8.531 min Scan# 1261
Delta R.T. -0.156 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:178 Resp:11743567

Ion	Ratio	Lower	Upper
178	100		
179	16.5	0.0	45.7
176	20.2	0.0	48.6

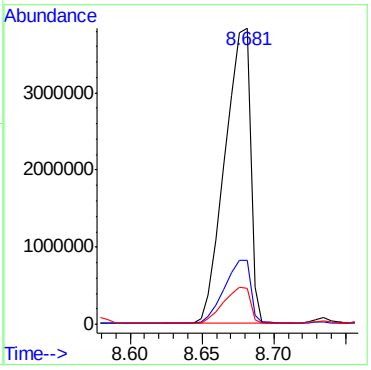


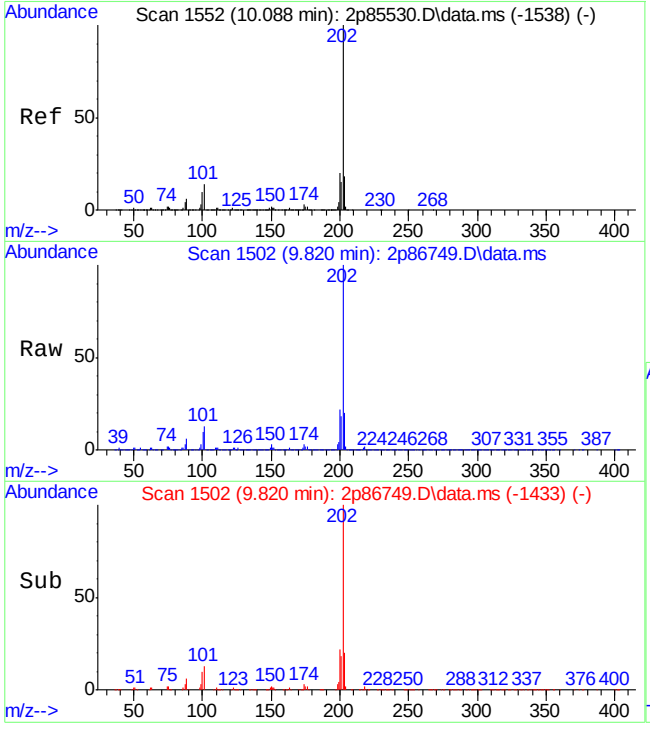


#79
Carbazole
Concen: 127.48 ppm
RT: 8.681 min Scan# 1289
Delta R.T. -0.171 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:167 Resp: 4706241

Ion	Ratio	Lower	Upper
167	100		
166	21.4	0.0	50.8
139	12.0	0.0	44.2

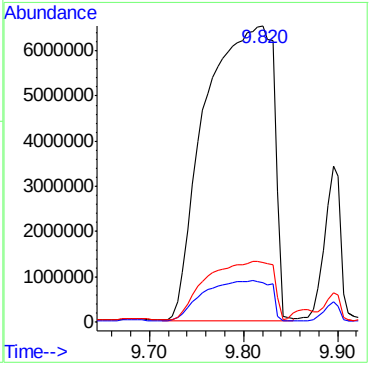


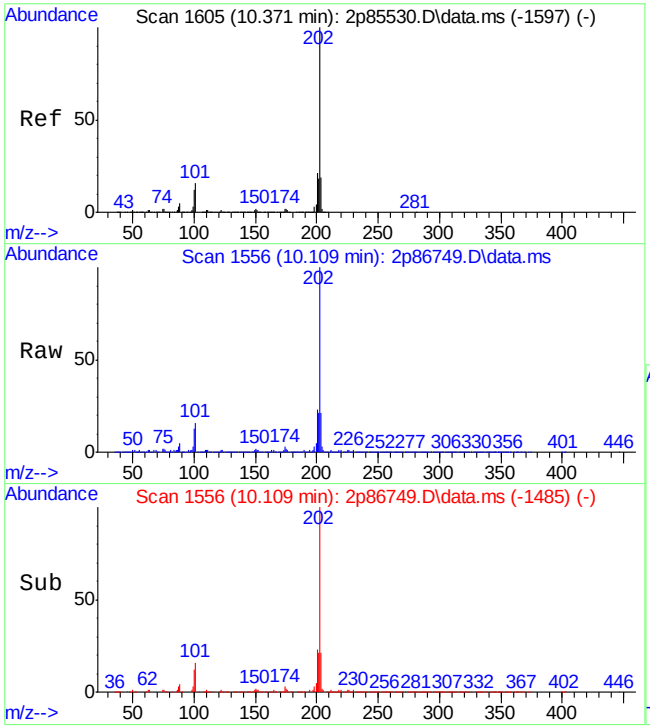


#81
Fluoranthene
Concen: 660.86 ppm
RT: 9.820 min Scan# 1502
Delta R.T. -0.129 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:202 Resp:32978441

Ion	Ratio	Lower	Upper
202	100		
101	13.0	0.0	43.7
203	18.5	0.0	48.6

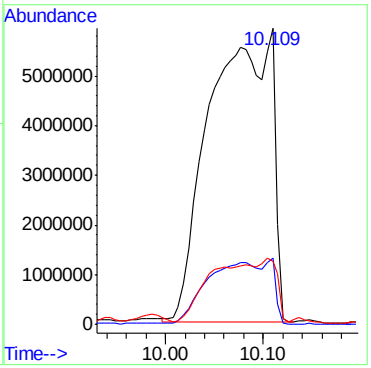


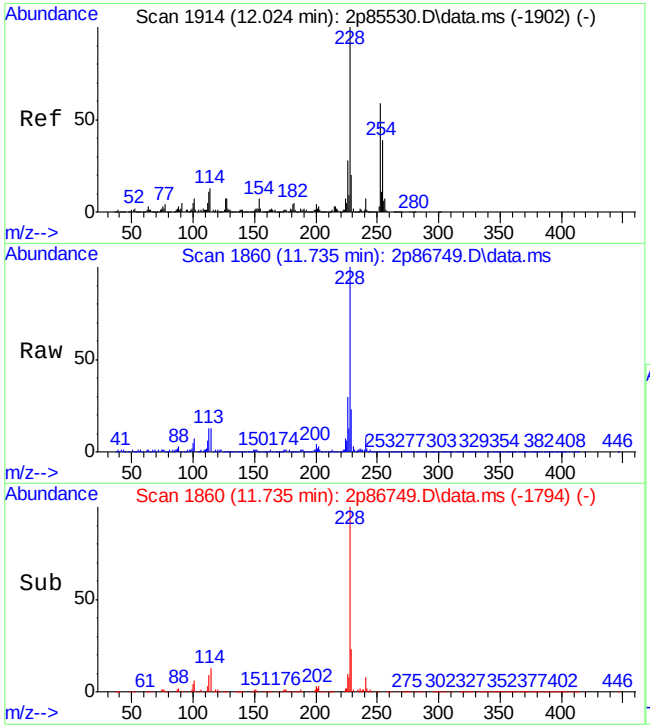


#84
Pyrene
Concen: 462.27 ppm m
RT: 10.109 min Scan# 1556
Delta R.T. -0.123 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:202 Resp:26171725

Ion	Ratio	Lower	Upper
202	100		
200	22.5	0.0	50.1
203	21.3	0.0	47.4

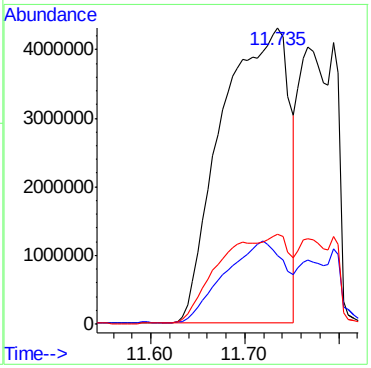


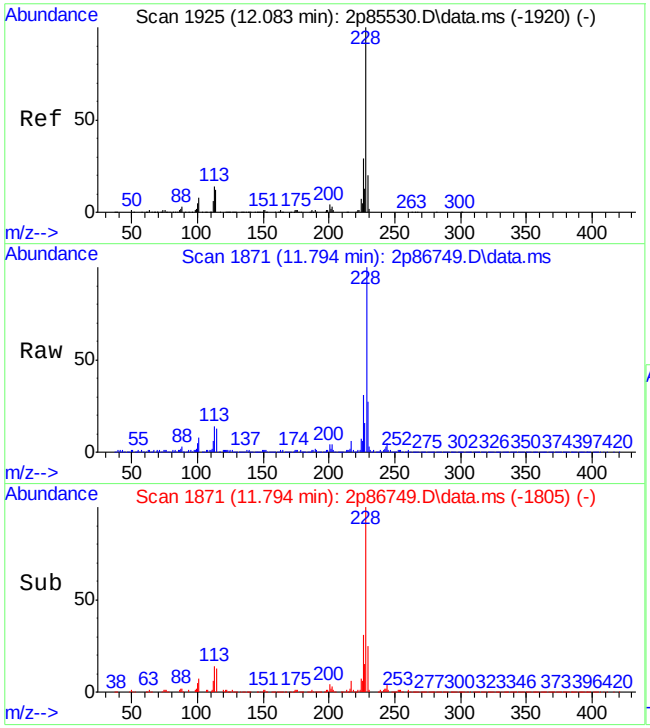


#87
Benzo[a]anthracene
Concen: 392.72 ppm
RT: 11.735 min Scan# 1860
Delta R.T. -0.145 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:228 Resp:21462856

Ion	Ratio	Lower	Upper
228	100		
229	22.4	0.0	50.3
226	29.5	0.0	57.9

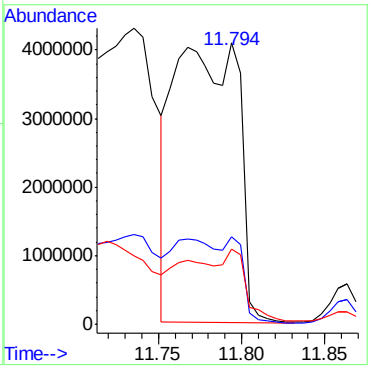


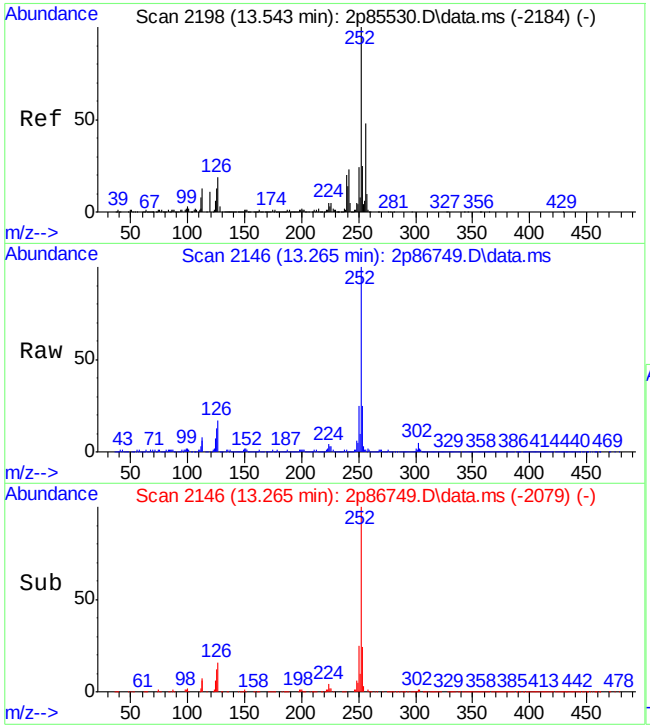


#89
Chrysene
Concen: 283.31 ppm m
RT: 11.794 min Scan# 1871
Delta R.T. -0.145 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:228 Resp:10984112

Ion	Ratio	Lower	Upper
228	100		
226	31.3	0.0	59.2
229	26.8	0.0	50.2

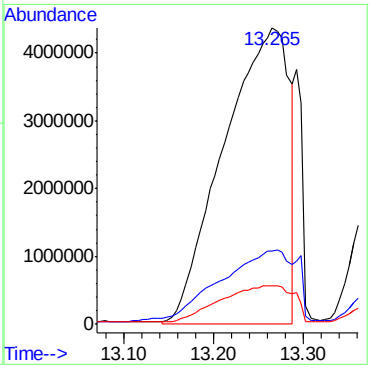


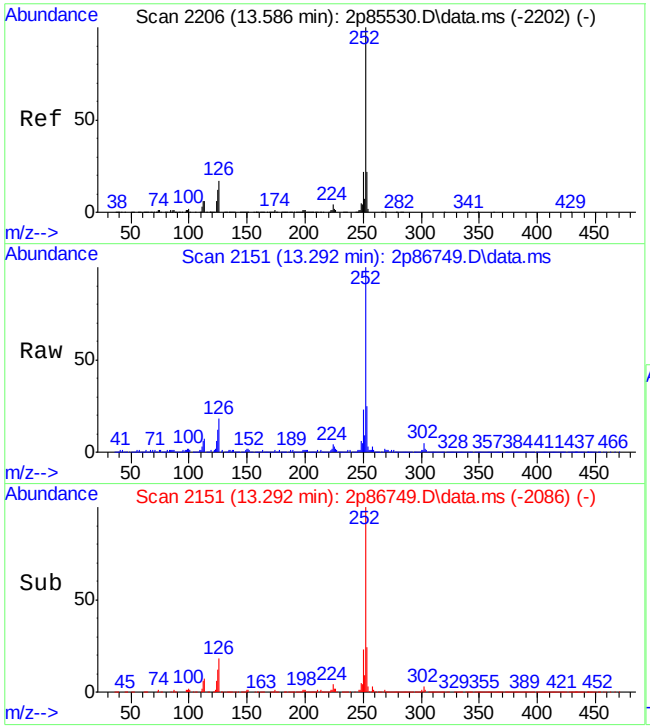


#93
Benzo[b]fluoranthene
Concen: 519.50 ppm m
RT: 13.265 min Scan# 2146
Delta R.T. -0.139 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:252 Resp:22019951

Ion	Ratio	Lower	Upper
252	100		
253	24.6	0.0	54.9
125	13.1	0.0	42.5

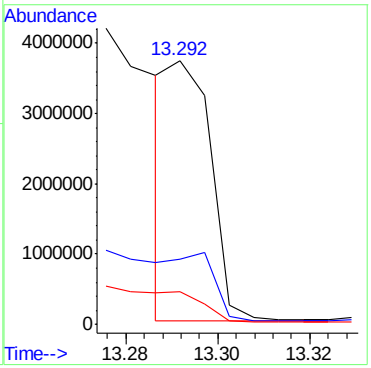


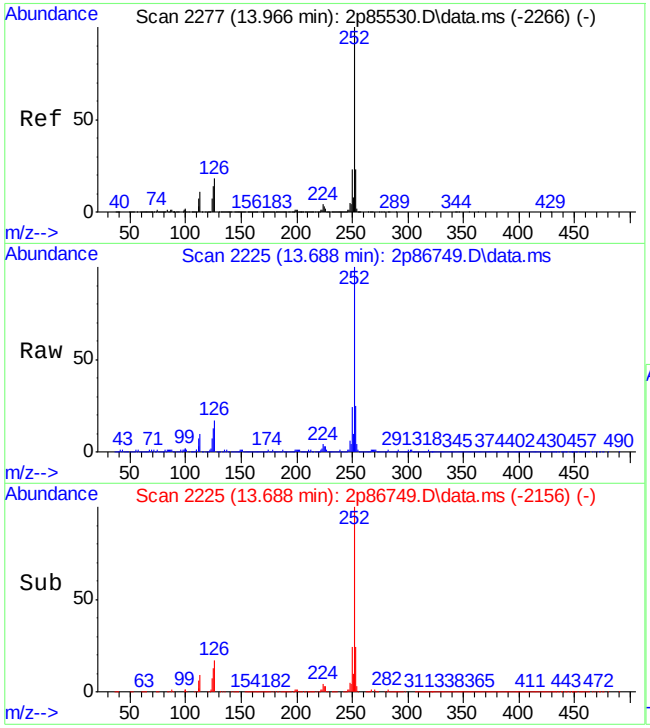


#94
Benzo[k]fluoranthene
Concen: 66.89 ppm m
RT: 13.292 min Scan# 2151
Delta R.T. -0.150 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:252 Resp: 2318505

Ion	Ratio	Lower	Upper
252	100		
253	24.9	0.0	52.4
125	12.3	0.0	40.8

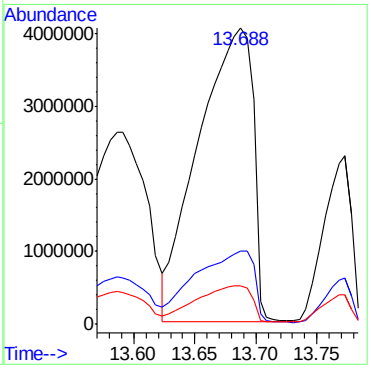


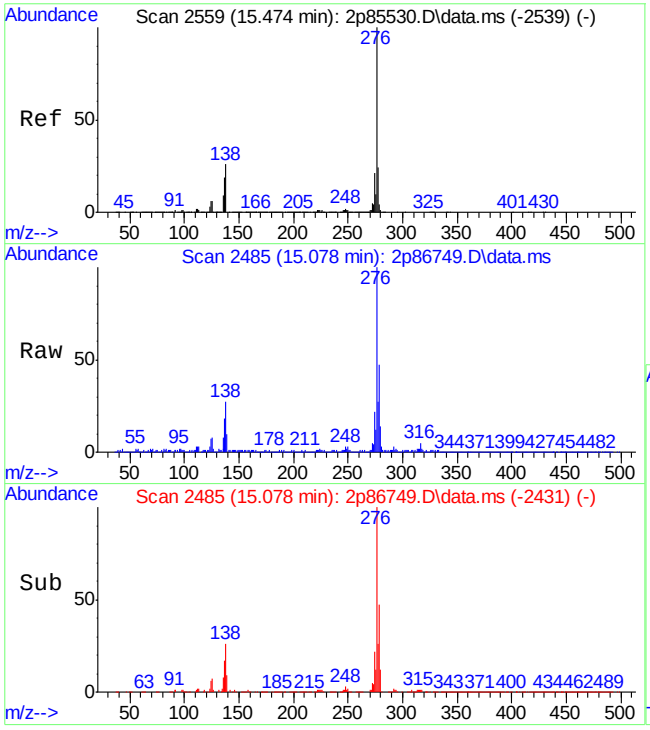


#95
Benzo[a]pyrene
Concen: 354.18 ppm
RT: 13.688 min Scan# 2225
Delta R.T. -0.133 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:252 Resp:12616394

Ion	Ratio	Lower	Upper
252	100		
253	23.7	0.0	52.1
125	12.5	0.0	42.5

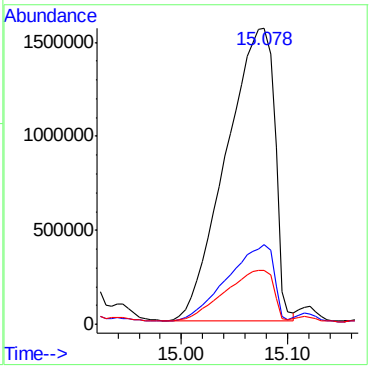


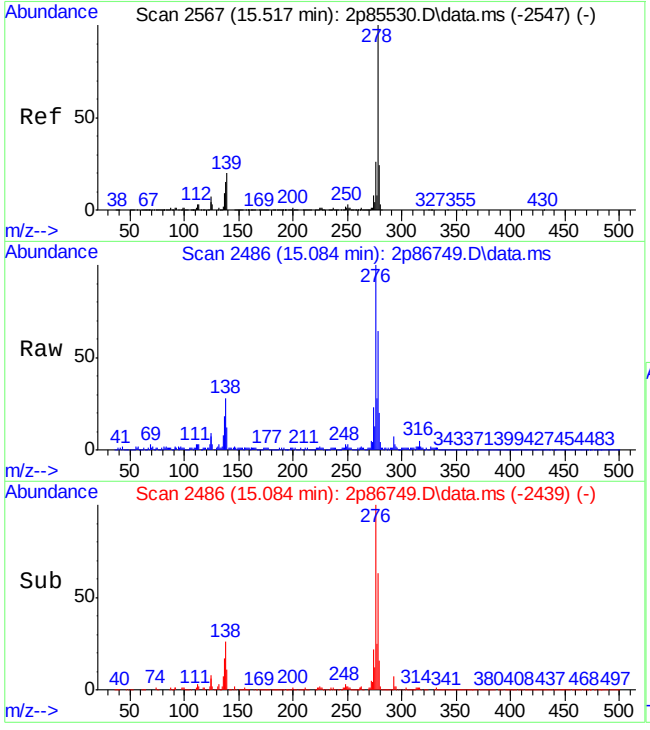


#96
Indeno[1,2,3-cd]pyrene
Concen: 121.05 ppm
RT: 15.078 min Scan# 2485
Delta R.T. -0.214 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:276 Resp: 4914461

Ion	Ratio	Lower	Upper
276	100		
138	25.9	0.0	55.3
137	17.3	0.0	48.5

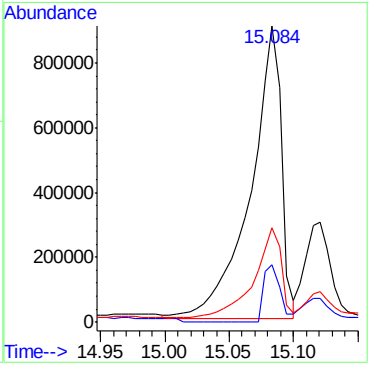


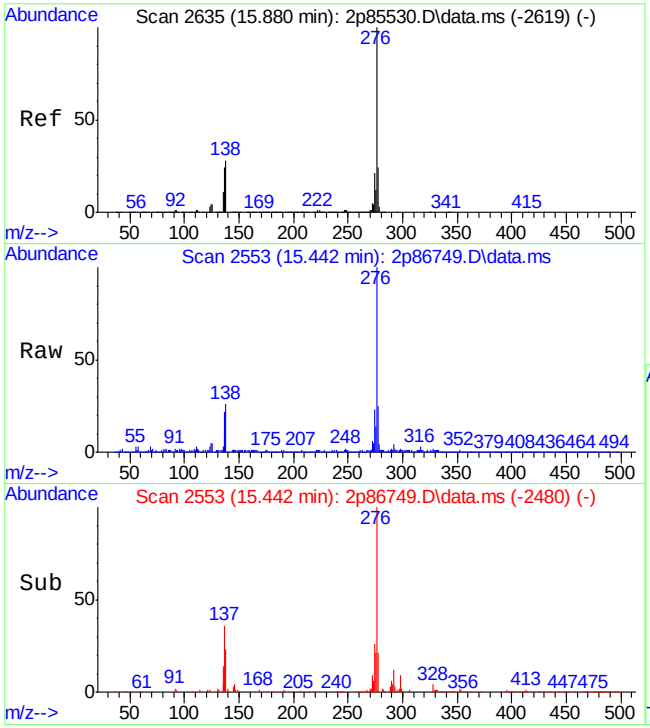


#98
Dibenz[a,h]anthracene
Concen: 47.07 ppm
RT: 15.084 min Scan# 2486
Delta R.T. -0.246 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:278 Resp: 1488591

Ion	Ratio	Lower	Upper
278	100		
139	18.3	0.0	50.3
279	31.0	0.0	54.3

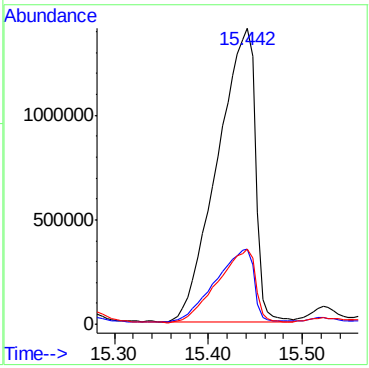




#100
Benzo[g,h,i]perylene
Concen: 123.34 ppm
RT: 15.442 min Scan# 2553
Delta R.T. -0.108 min
Lab File: 2p86749.D
Acq: 19 Apr 2019 6:16 am

Tgt Ion:276 Resp: 3963827

Ion	Ratio	Lower	Upper
276	100		
138	24.9	0.0	57.9
277	25.0	0.0	54.0



Manual Integration Approval Summary

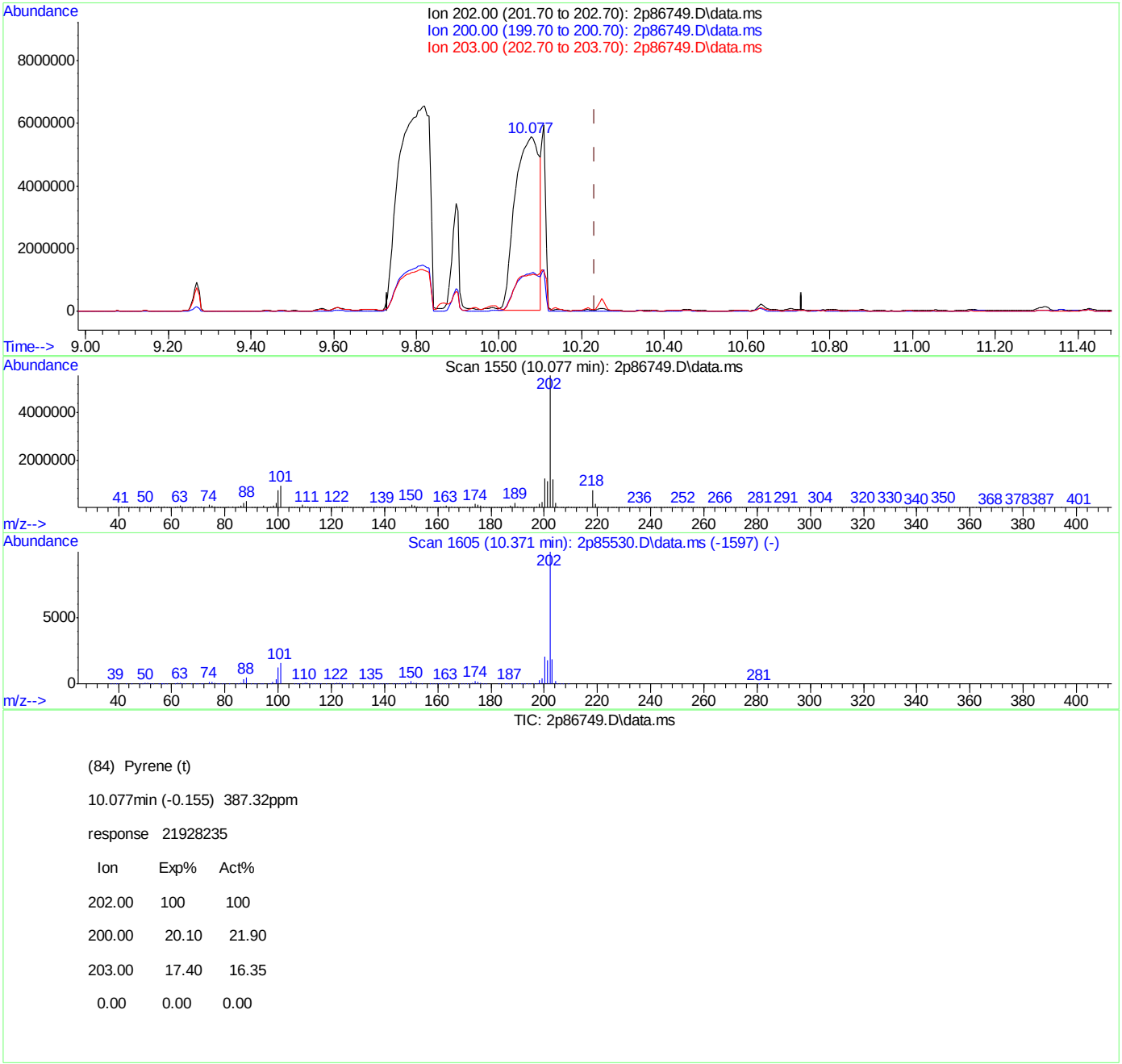
Sample Number: JC86406-11
Lab FileID: 2P86749.D
Injection Time: 04/19/19 06:16
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/29/19 11:27 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyrene	129-00-0		10.11	Poor instrument integration
Chrysene	218-01-9		11.79	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.26	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.29	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:54:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



TIC: 2p86749.D\data.ms

(84) Pyrene (t)

10.077min (-0.155) 387.32ppm

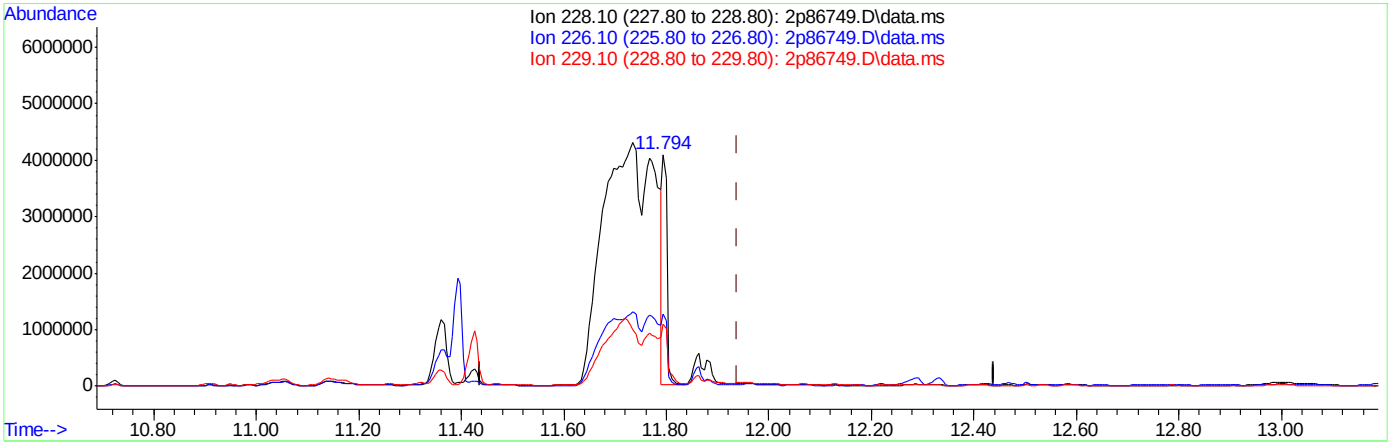
response 21928235

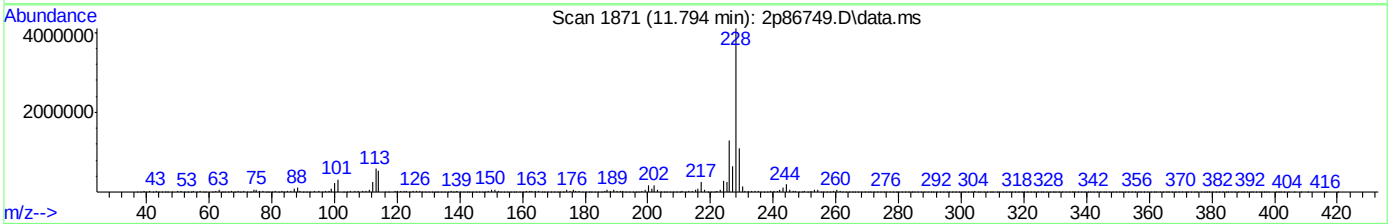
Ion	Exp%	Act%
202.00	100	100
200.00	20.10	21.90
203.00	17.40	16.35
0.00	0.00	0.00

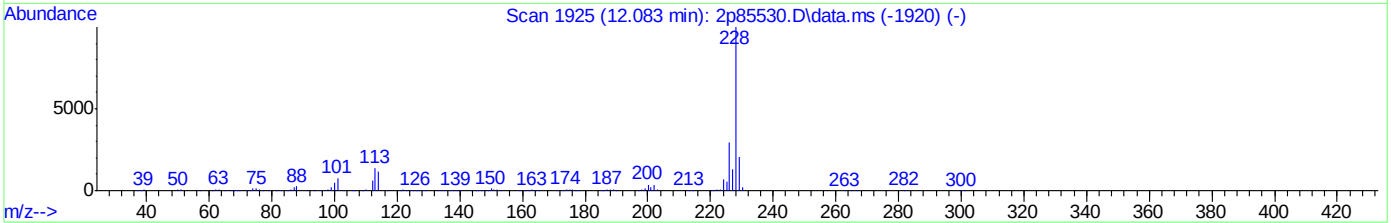
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:54:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86749.D\data.ms

(89) Chrysene (t)

11.794min (-0.145) 68.47ppm

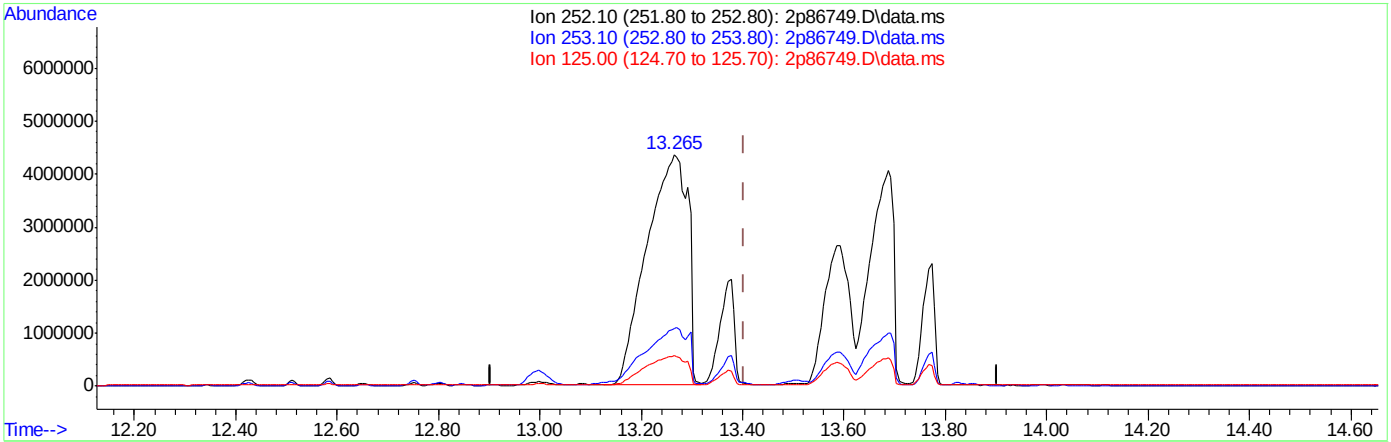
response 2654527

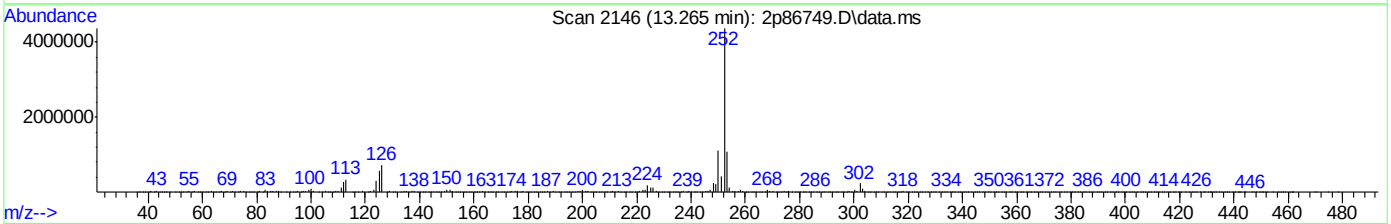
Ion	Exp%	Act%
228.10	100	100
226.10	29.20	31.10
229.10	20.20	27.46
0.00	0.00	0.00

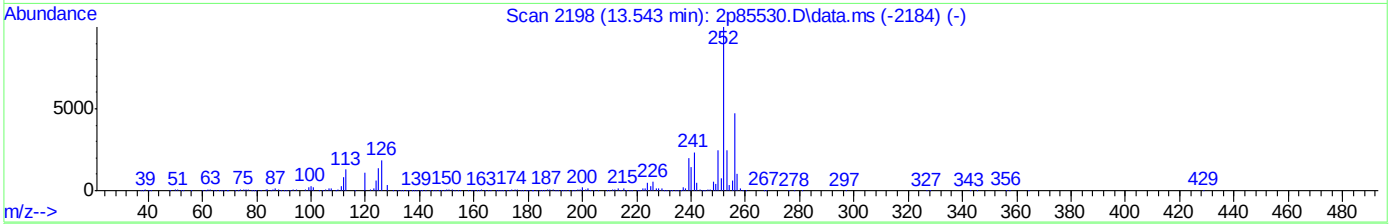
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:54:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86749.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.265min (-0.139) 569.64ppm

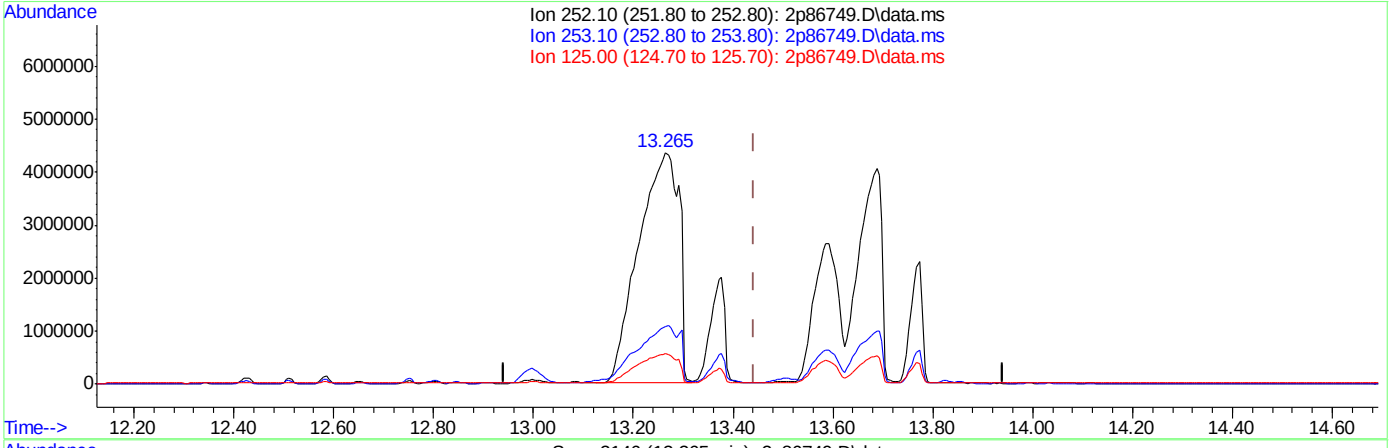
response 24144997

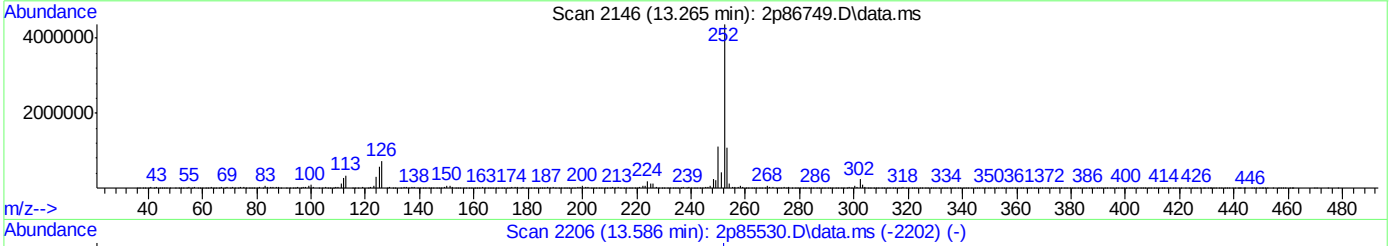
Ion	Exp%	Act%
252.10	100	100
253.10	24.90	23.52
125.00	12.50	12.57
0.00	0.00	0.00

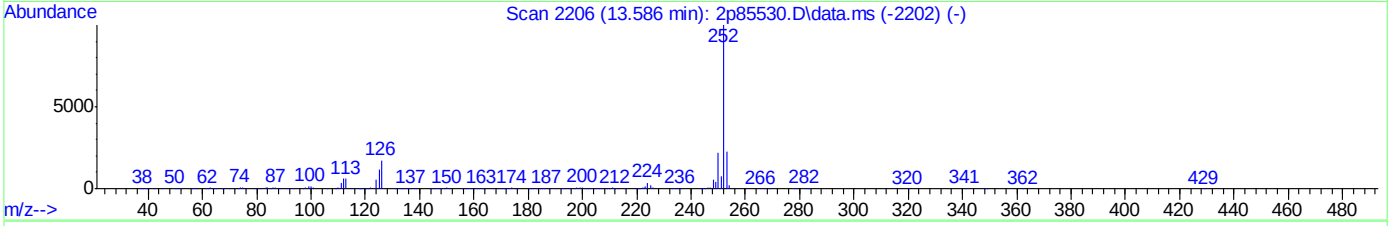
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86749.D
Acq On : 19 Apr 2019 6:16 am
Operator : carolb
Sample : jc86406-11
Misc : op19810,e2p3831,30.7,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 19 11:54:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86749.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.265min (-0.177) 697.19ppm

response 24163909

Ion	Exp%	Act%
252.10	100	100
253.10	22.40	23.52
125.00	10.80	12.57
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137309.D
Acq On : 26 Apr 2019 8:39 pm
Operator : angelar
Sample : jc86406-11
Misc : op19810,ez6764,30.7,,,1,20
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 29 10:54:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	66601	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	242678	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	124363	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	217285	40.00	ppm	-0.03
83) Chrysene-d12	11.204	240	186900	40.00	ppm	-0.04
91) Perylene-d12	13.234	264	184626	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	66601	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	217285	40.00	ppm	0.00
107) Chrysene-d12a	11.204	240	186900	40.00	ppm	0.01
109) Acenaphthene-d10a	6.231	164	124363	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	242678	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	217285	40.00	ppm	0.00
115) Chrysene-d12b	11.204	240	186900	40.00	ppb	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.074	112	2120	1.10	ppm	0.00
Spiked Amount 50.000			Recovery =	2.20%		
8) Phenol-d5	3.843	99	3613	1.34	ppm	-0.01
Spiked Amount 50.000			Recovery =	2.68%		
25) Nitrobenzene-d5	4.479	82	3277	1.46	ppm	-0.02
Spiked Amount 50.000			Recovery =	2.92%		
51) 2-Fluorobiphenyl	5.750	172	7471	1.78	ppm	-0.02
Spiked Amount 50.000			Recovery =	3.56%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	9.709	244	7681	1.98	ppm	-0.04
Spiked Amount 50.000			Recovery =	3.96%		
104) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	4.997	128	9411	1.49	ppm	98
44) 2-Methylnaphthalene	5.488	141	1277	0.36	ppm	85
53) Biphenyl	5.819	154	2805	0.59	ppm	99
56) Acenaphthylene	6.124	152	63494	10.80	ppm	99
59) Acenaphthene	6.258	153	70839	17.81	ppm	96
62) Dibenzofuran	6.396	168	72705	14.02	ppm	92
66) Fluorene	6.685	166	110366	25.56	ppm	98
77) Phenanthrene	7.641	178	252958	41.02	ppm	100
78) Anthracene	7.695	178	147311	23.96	ppm	99
79) Carbazole	7.898	167	43827	7.13	ppm	99
81) Fluoranthene	9.126	202	504380	75.15	ppm	99
84) Pyrene	9.425	202	363671	58.25	ppm	96
87) Benzo[a]anthracene	11.188	228	155686	26.75	ppm	98
89) Chrysene	11.236	228	132029	23.29	ppm	99
93) Benzo[b]fluoranthene	12.732	252	150632	25.70	ppm	92
94) Benzo[k]fluoranthene	12.764	252	53318	10.25	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137309.D
Acq On : 26 Apr 2019 8:39 pm
Operator : angelar
Sample : jc86406-11
Misc : op19810,ez6764,30.7,,,1,20
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 29 10:54:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

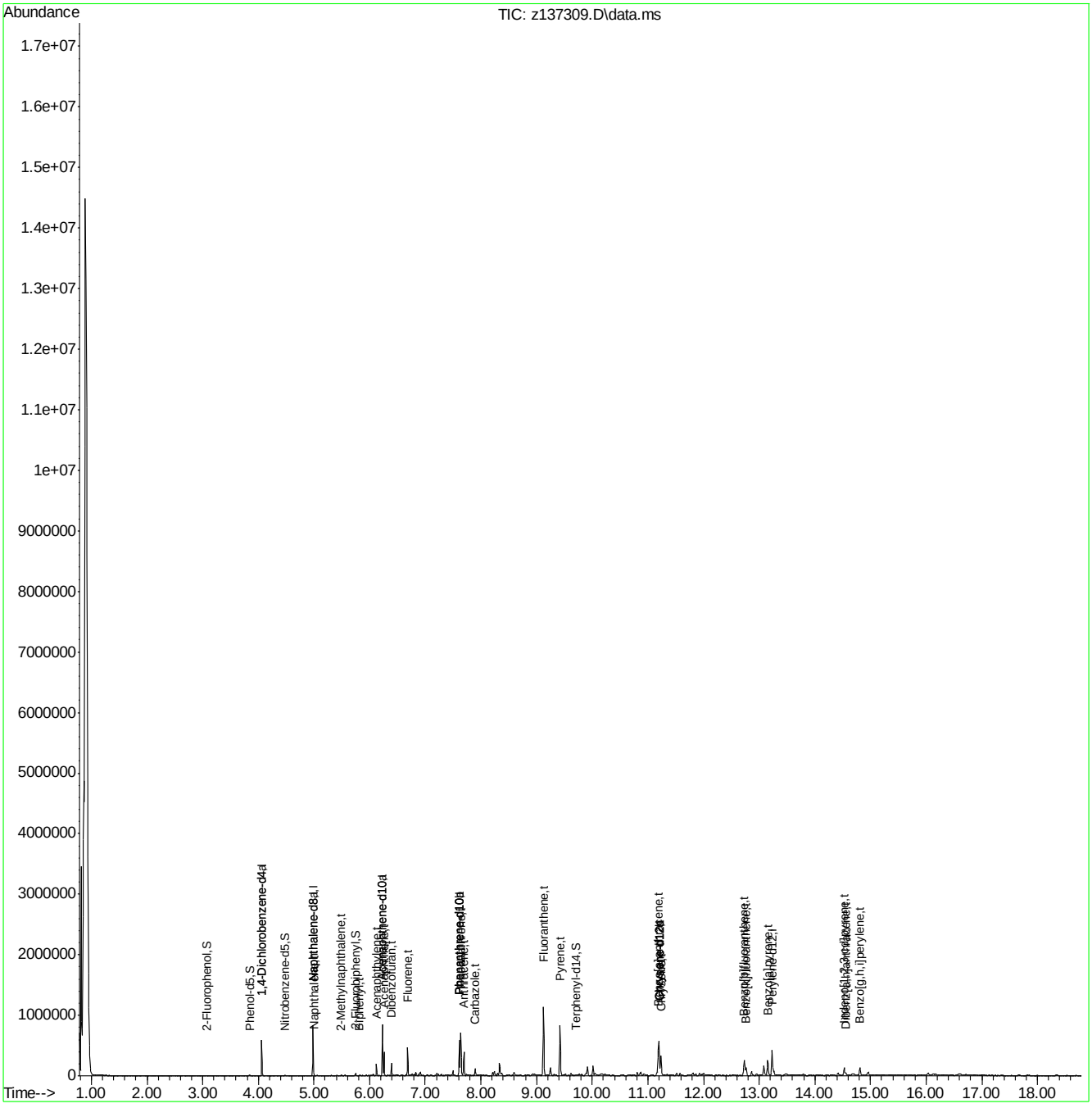
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	13.154	252	117238	24.46	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.527	276	68672	15.30	ppm	99
98) Dibenz[a,h]anthracene	14.559	278	19164	4.11	ppm	93
100) Benzo[g,h,i]perylene	14.810	276	59465	14.07	ppm	98

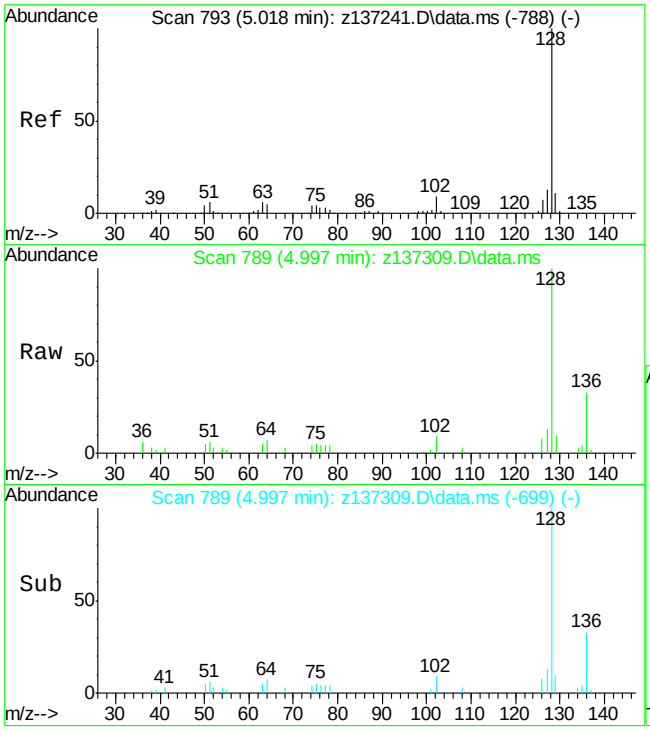
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137309.D
Acq On : 26 Apr 2019 8:39 pm
Operator : angelar
Sample : jc86406-11
Misc : op19810,ez6764,30.7,,,1,20
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 29 10:54:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

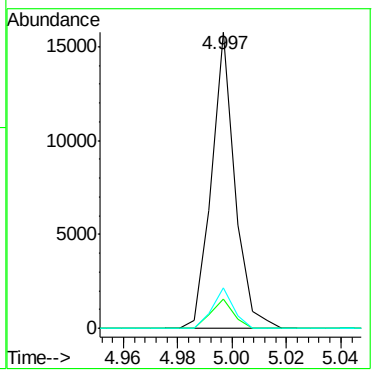


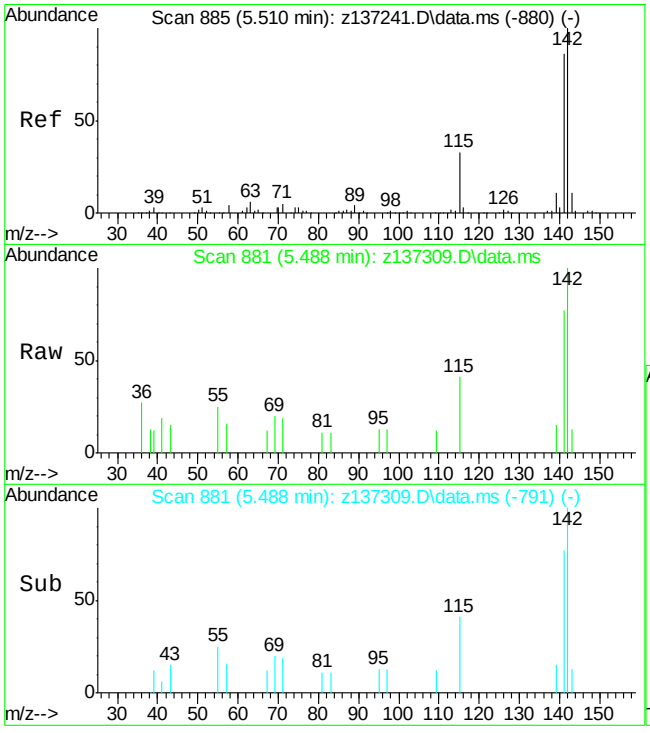


#38
Naphthalene
Concen: 1.49 ppm
RT: 4.997 min Scan# 789
Delta R.T. -0.021 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:128 Resp: 9411

Ion	Ratio	Lower	Upper
128	100		
129	10.0	0.0	40.7
127	13.5	0.0	42.9

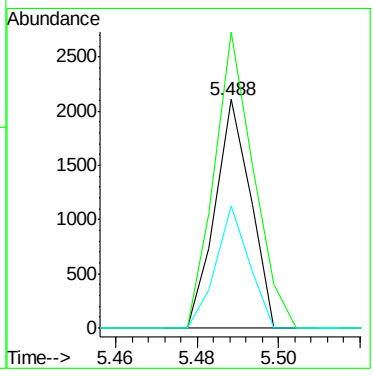


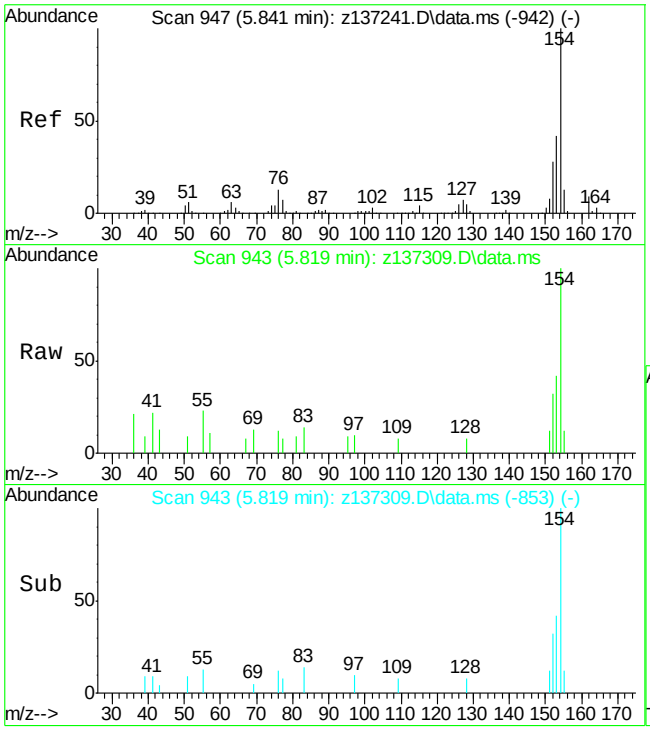


#44
2-Methylnaphthalene
Concen: 0.36 ppm
RT: 5.488 min Scan# 881
Delta R.T. -0.022 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:141 Resp: 1277

Ion	Ratio	Lower	Upper
141	100		
142	129.5	86.4	146.4
115	53.4	8.8	68.8

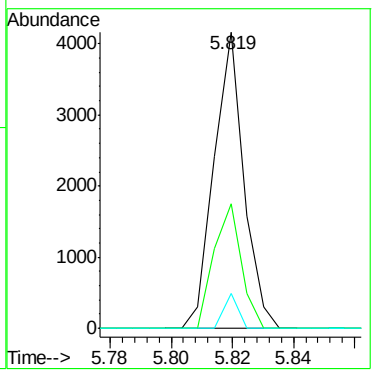


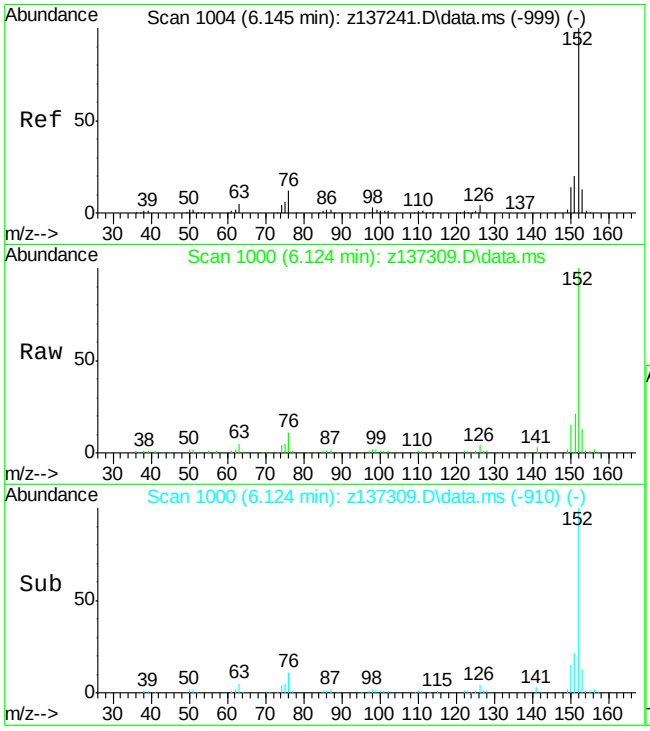


#53
Biphenyl
Concen: 0.59 ppm
RT: 5.819 min Scan# 943
Delta R.T. -0.022 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:154 Resp: 2805

Ion	Ratio	Lower	Upper
154	100		
153	42.1	11.8	71.8
155	11.7	0.0	42.7

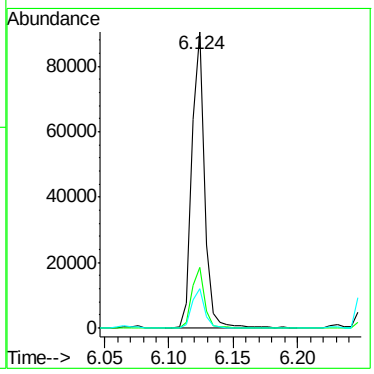


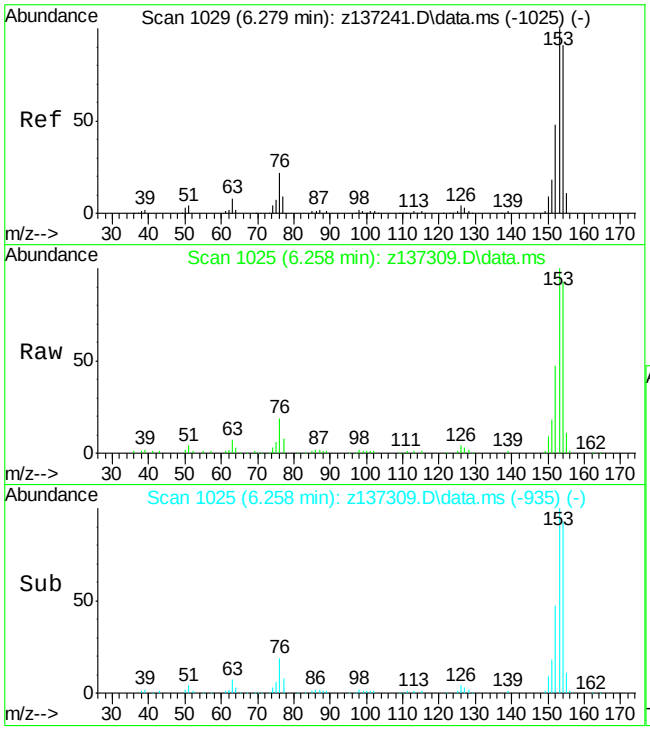


#56
Acenaphthylene
Concen: 10.80 ppm
RT: 6.124 min Scan# 1000
Delta R.T. -0.021 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:152 Resp: 63494

Ion	Ratio	Lower	Upper
152	100		
151	20.6	0.0	50.1
153	13.4	0.0	42.8

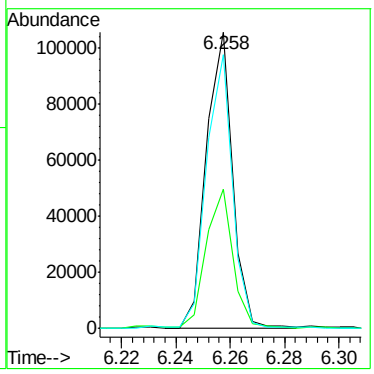


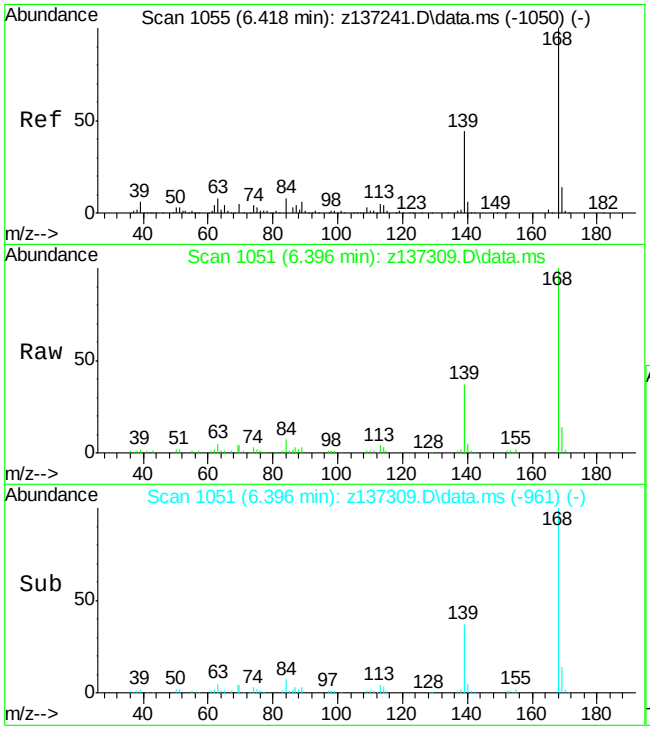


#59
Acenaphthene
Concen: 17.81 ppm
RT: 6.258 min Scan# 1025
Delta R.T. -0.021 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:153 Resp: 70839

Ion	Ratio	Lower	Upper
153	100		
152	47.0	17.7	77.7
154	92.4	56.7	116.7

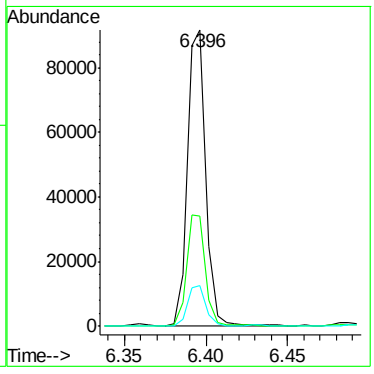


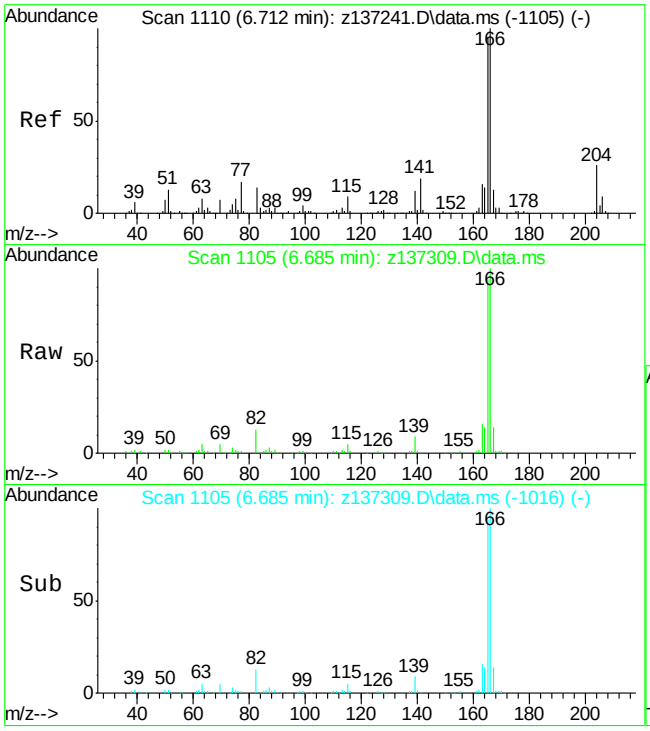


#62
Dibenzofuran
Concen: 14.02 ppm
RT: 6.396 min Scan# 1051
Delta R.T. -0.022 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:168 Resp: 72705

Ion	Ratio	Lower	Upper
168	100		
139	37.2	14.1	74.1
169	13.8	0.0	43.7

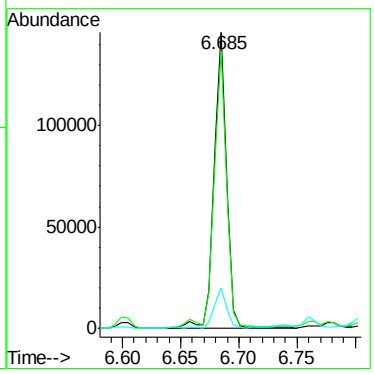


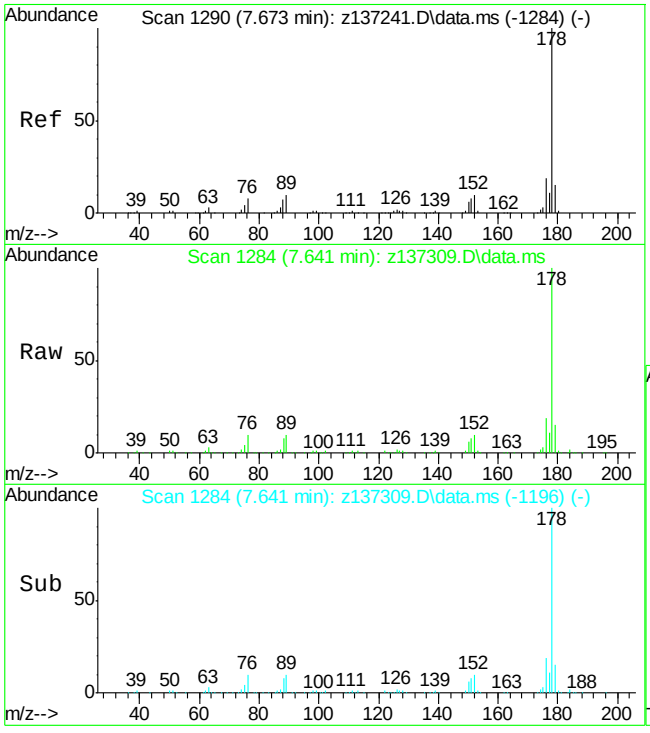


#66
Fluorene
Concen: 25.56 ppm
RT: 6.685 min Scan# 1105
Delta R.T. -0.027 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:166 Resp: 110366

Ion	Ratio	Lower	Upper
166	100		
165	93.4	65.5	125.5
167	13.5	0.0	43.1

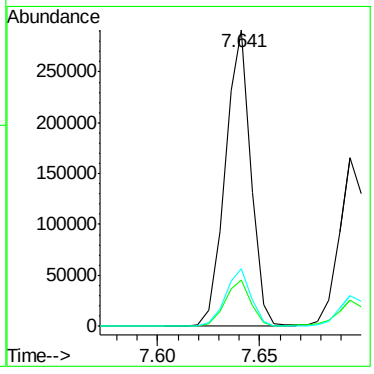


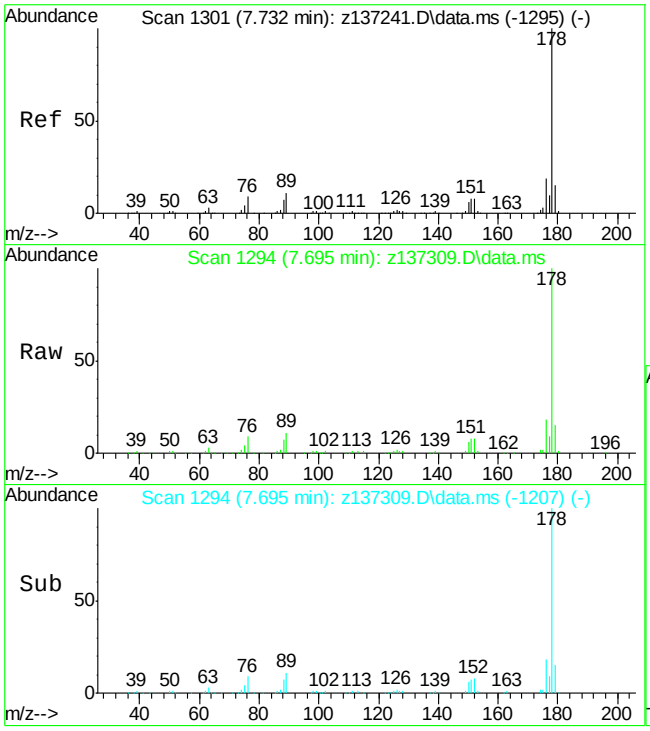


#77
Phenanthrene
Concen: 41.02 ppm
RT: 7.641 min Scan# 1284
Delta R.T. -0.032 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:178 Resp: 252958

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.3
176	19.4	0.0	49.0

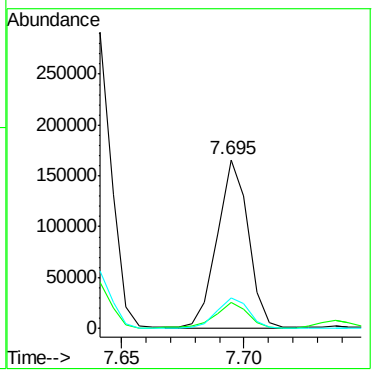


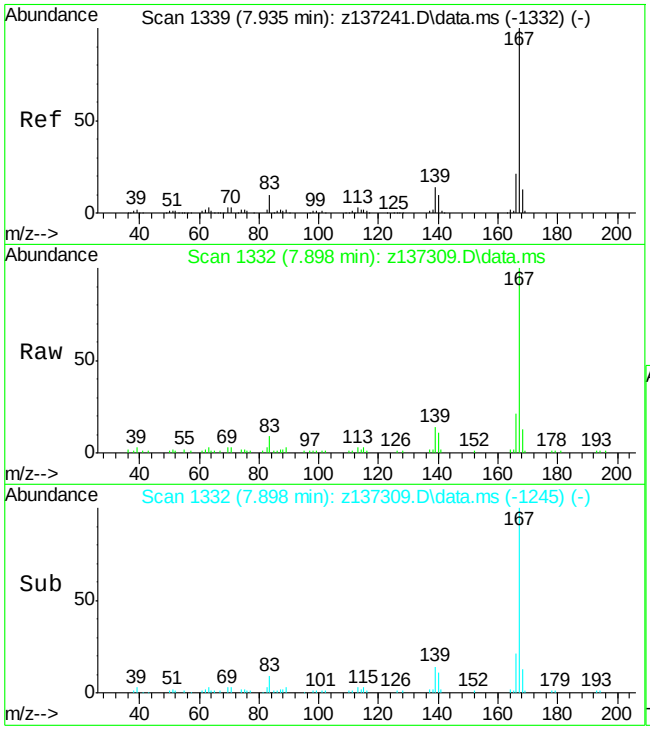


#78
Anthracene
Concen: 23.96 ppm
RT: 7.695 min Scan# 1294
Delta R.T. -0.037 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:178 Resp: 147311

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	44.8
176	18.0	0.0	48.9

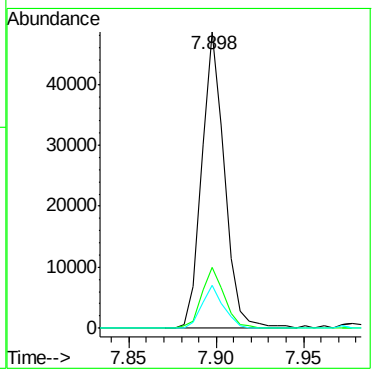


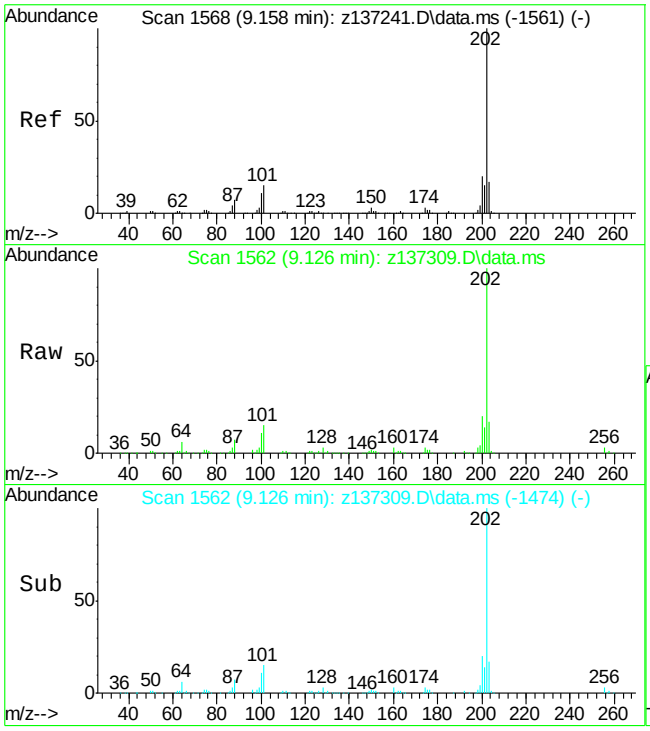


#79
Carbazole
Concen: 7.13 ppm
RT: 7.898 min Scan# 1332
Delta R.T. -0.037 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:167 Resp: 43827

Ion	Ratio	Lower	Upper
167	100		
166	20.6	0.0	51.2
139	14.3	0.0	43.7

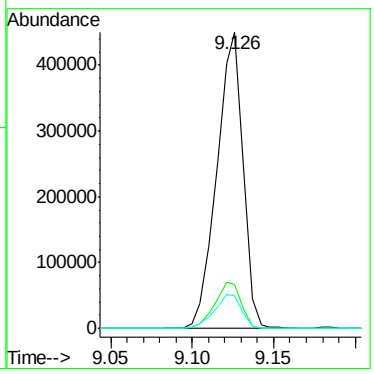


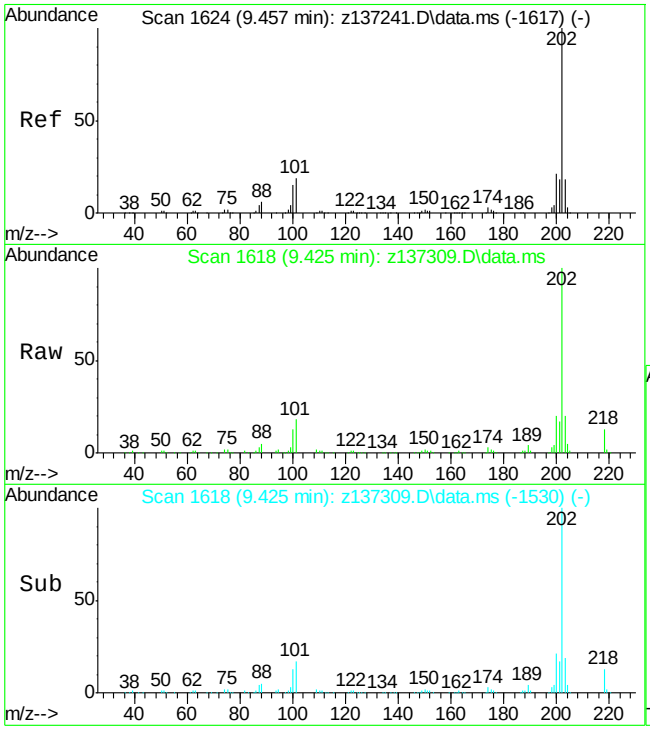


#81
Fluoranthene
Concen: 75.15 ppm
RT: 9.126 min Scan# 1562
Delta R.T. -0.032 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:202 Resp: 504380

Ion	Ratio	Lower	Upper
202	100		
101	14.8	0.0	45.0
100	10.9	0.0	41.4

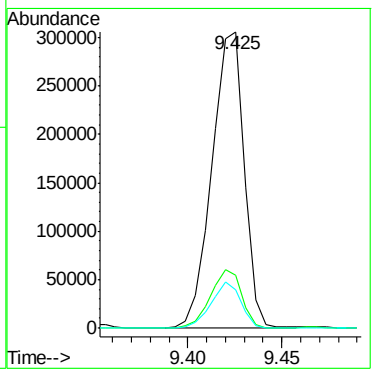


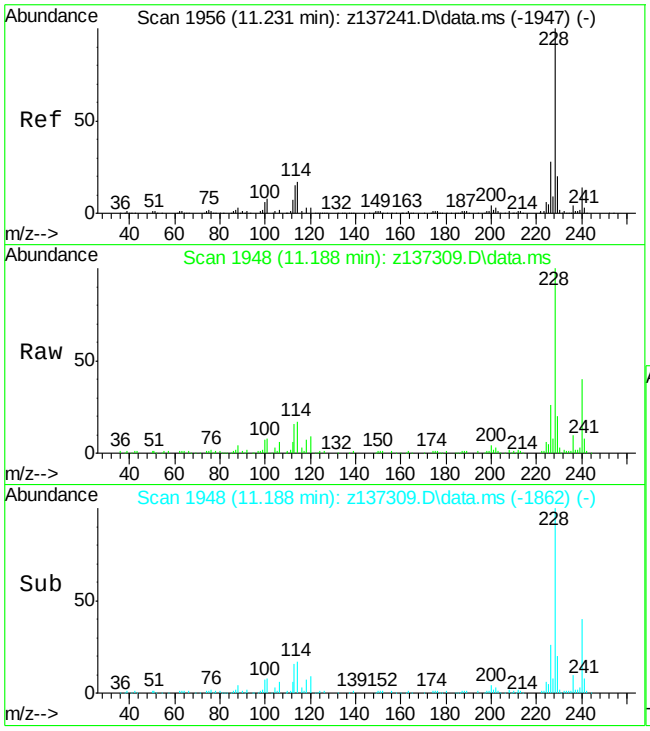


#84
Pyrene
Concen: 58.25 ppm
RT: 9.425 min Scan# 1618
Delta R.T. -0.032 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:202 Resp: 363671

Ion	Ratio	Lower	Upper
202	100		
101	17.7	0.0	49.1
100	12.9	0.0	45.4

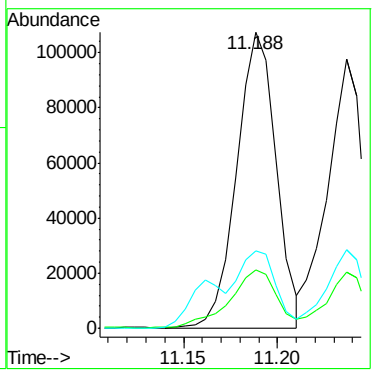


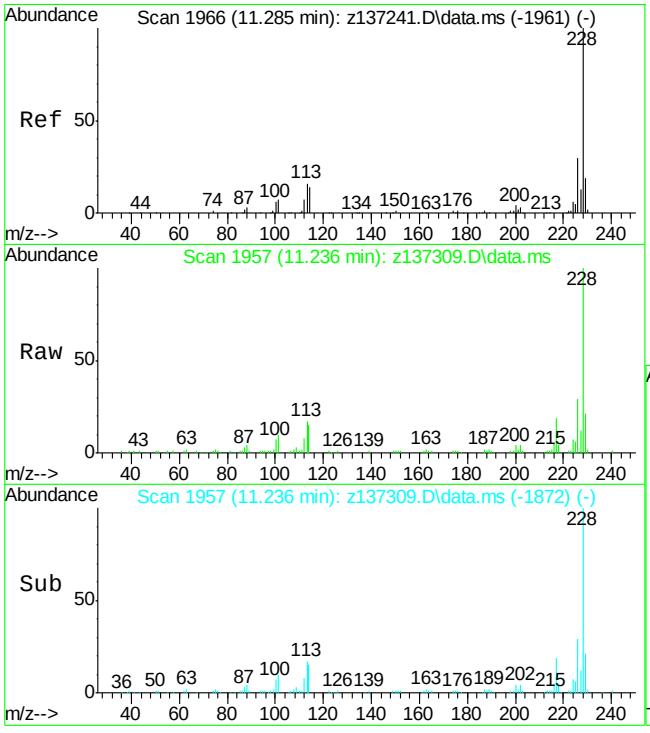


#87
Benzo[a]anthracene
Concen: 26.75 ppm
RT: 11.188 min Scan# 1948
Delta R.T. -0.043 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:228 Resp: 155686

Ion	Ratio	Lower	Upper
228	100		
229	19.2	0.0	49.7
226	26.1	0.0	57.2

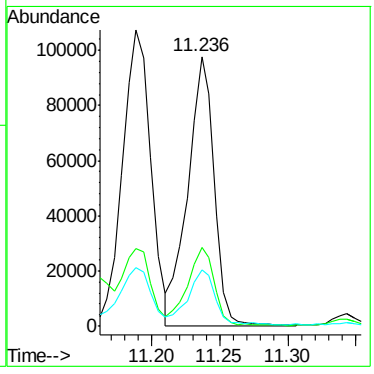


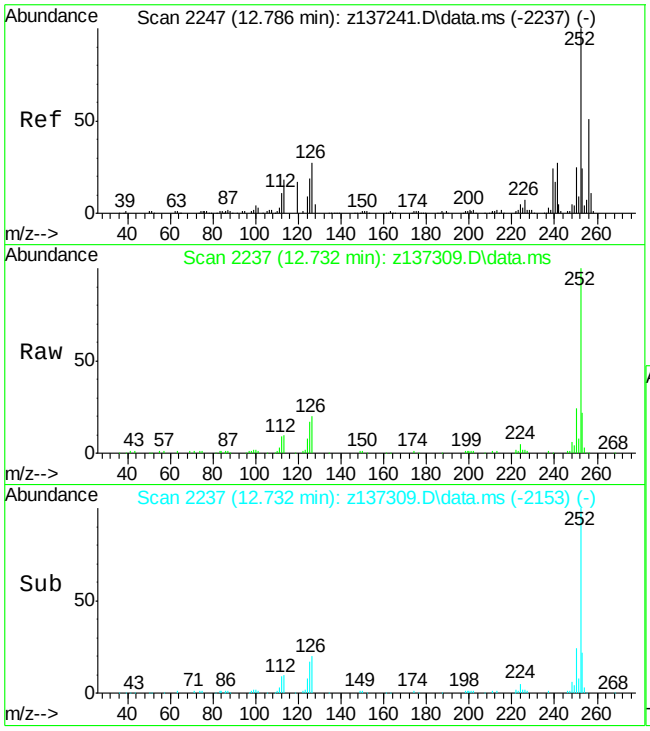


#89
Chrysene
Concen: 23.29 ppm
RT: 11.236 min Scan# 1957
Delta R.T. -0.049 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:228 Resp: 132029

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.9
229	20.0	0.0	49.4

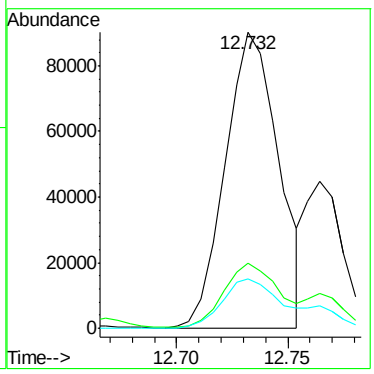


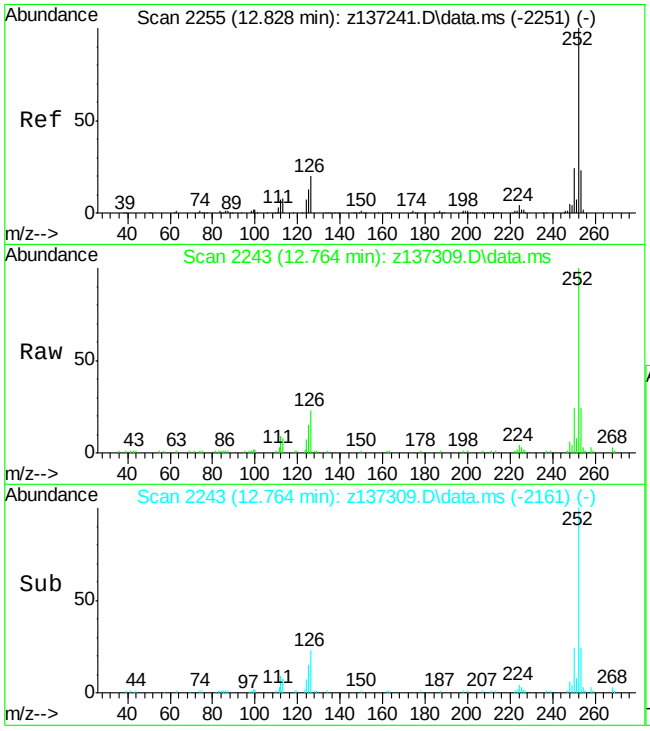


#93
Benzo[b]fluoranthene
Concen: 25.70 ppm
RT: 12.732 min Scan# 2237
Delta R.T. -0.054 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:252 Resp: 150632

Ion	Ratio	Lower	Upper
252	100		
253	21.0	0.0	54.8
125	16.0	0.0	49.4

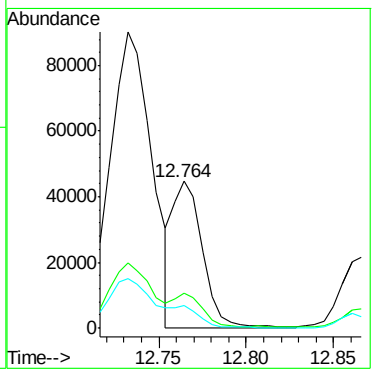


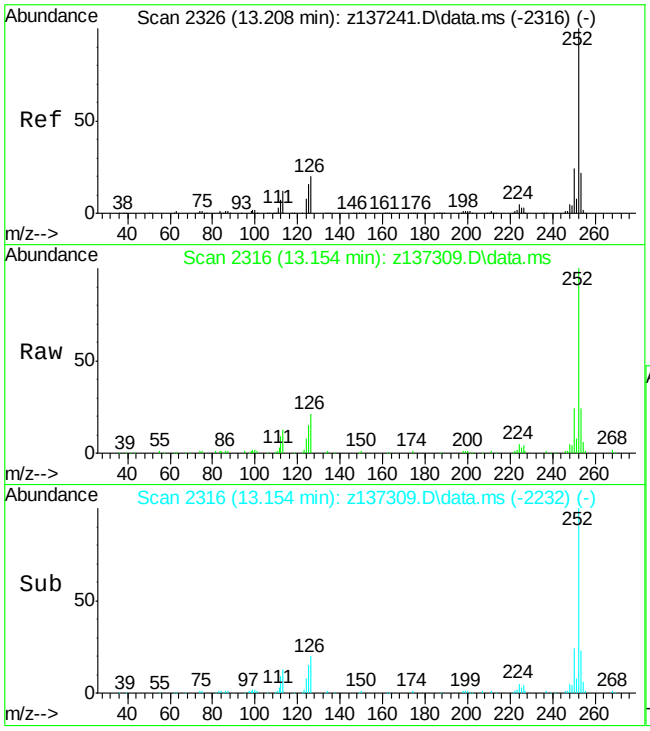


#94
Benzo[k]fluoranthene
Concen: 10.25 ppm
RT: 12.764 min Scan# 2243
Delta R.T. -0.064 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:252 Resp: 53318

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	52.7
125	13.2	0.0	43.8

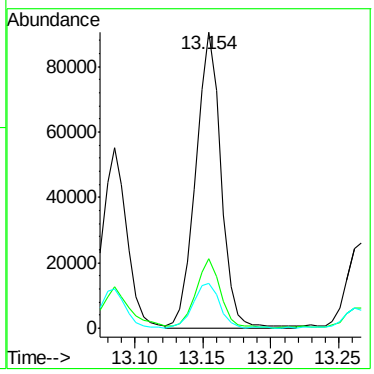


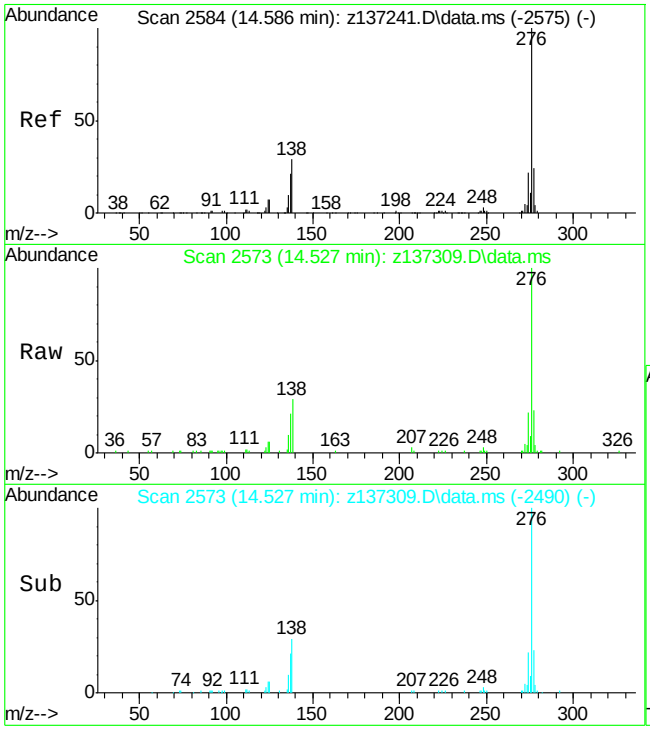


#95
Benzo[a]pyrene
Concen: 24.46 ppm
RT: 13.154 min Scan# 2316
Delta R.T. -0.054 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:252 Resp: 117238

Ion	Ratio	Lower	Upper
252	100		
253	23.1	0.0	51.8
125	15.1	0.0	45.9

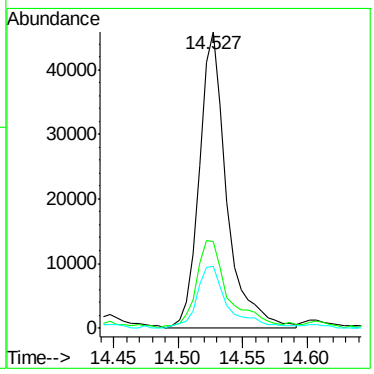


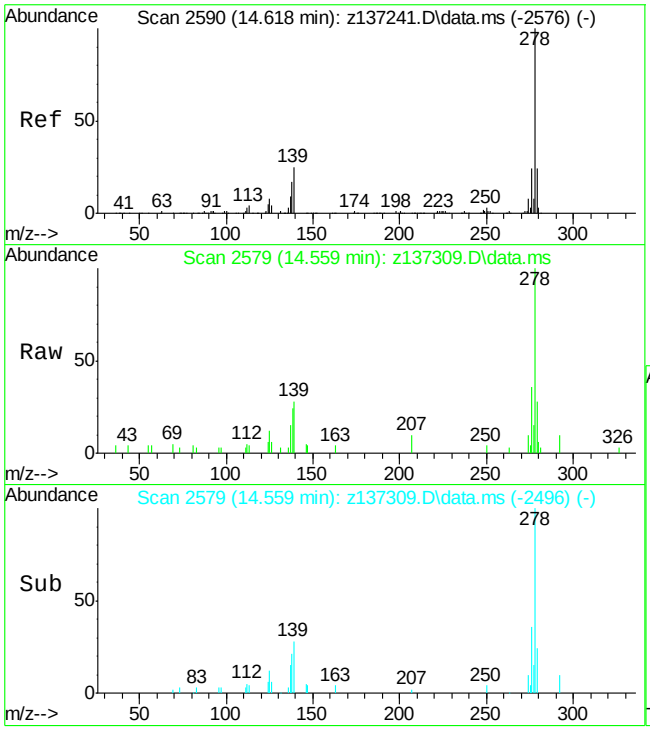


#96
Indeno[1,2,3-cd]pyrene
Concen: 15.30 ppm
RT: 14.527 min Scan# 2573
Delta R.T. -0.059 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:276 Resp: 68672

Ion	Ratio	Lower	Upper
276	100		
138	28.5	0.0	59.0
137	20.6	0.0	51.4

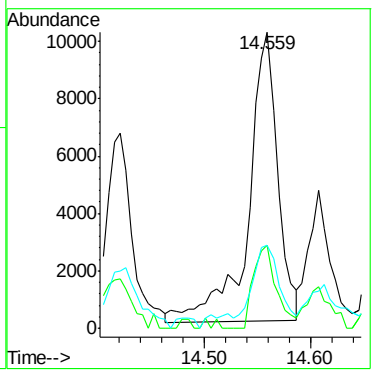


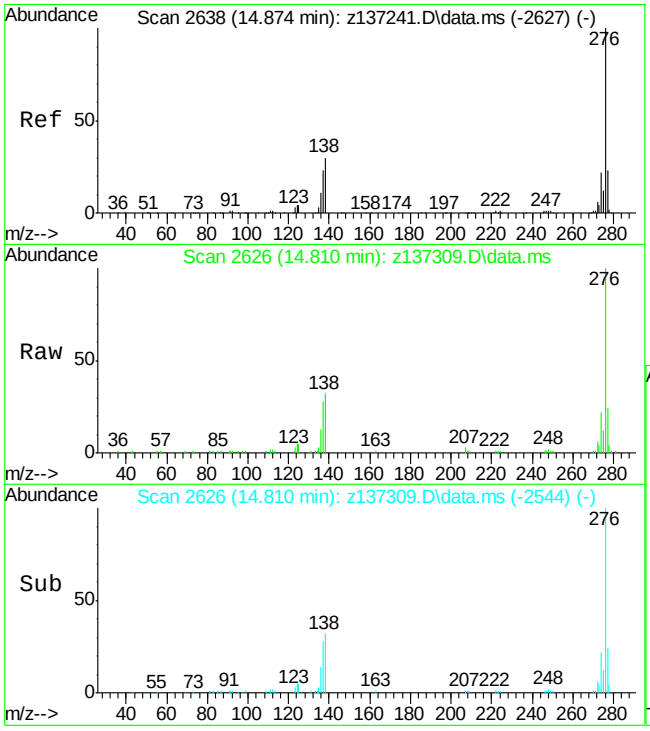


#98
Dibenz[a,h]anthracene
Concen: 4.11 ppm
RT: 14.559 min Scan# 2579
Delta R.T. -0.059 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:278 Resp: 19164

Ion	Ratio	Lower	Upper
278	100		
139	29.0	0.0	54.9
279	26.5	0.0	53.8

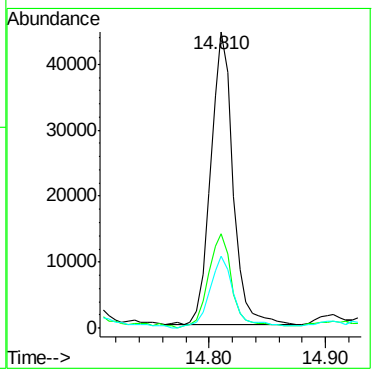




#100
Benzo[g,h,i]perylene
Concen: 14.07 ppm
RT: 14.810 min Scan# 2626
Delta R.T. -0.064 min
Lab File: z137309.D
Acq: 26 Apr 2019 8:39 pm

Tgt Ion:276 Resp: 59465

Ion	Ratio	Lower	Upper
276	100		
138	31.6	0.0	59.6
277	23.8	0.0	53.6



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 12:14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:11:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.659	152	541856	40.00	ppm	0.00
24) Naphthalene-d8	5.713	136	636231	40.00	ppm	0.02
47) Acenaphthene-d10	7.136	164	806422	40.00	ppm	0.01
69) Phenanthrene-d10	8.430	188	807535	40.00	ppm	0.04
83) Chrysene-d12	11.784	240	1279334	40.00	ppm	0.19
91) Perylene-d12	13.752	264	971832	40.00	ppm	0.17
101) 1,4-Dichlorobenzene-d4a	4.659	152	541856	40.00	ppm	0.00
103) Naphthalene-d8a	5.713	136	636106	40.00	ppm	# 0.02
105) Acenaphthene-d10a	7.136	164	806422	40.00	ppm	0.01
108) Chrysene-d12a	11.784	240	1279334	40.00	ppm	0.19
110) Phenanthrene-d10a	8.430	188	807535	40.00	ppm	# 0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.627	112	69841	2.56	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery =	5.12%#		
8) Phenol-d5	4.424	99	99147	3.32	ppm	0.01
Spiked Amount 50.000	Range 10 - 59		Recovery =	6.64%#		
25) Nitrobenzene-d5	5.130	82	84510	9.88	ppm	0.01
Spiked Amount 50.000	Range 19 - 61		Recovery =	19.76%		
51) 2-Fluorobiphenyl	6.585	172	86045	3.08	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery =	6.16%#		
73) 2,4,6-Tribromophenol	7.815	330	15814	5.58	ppm	0.03
Spiked Amount 50.000	Range 12 - 68		Recovery =	11.16%#		
85) Terphenyl-d14	10.248	244	111602	3.51	ppm	0.05
Spiked Amount 50.000	Range 16 - 65		Recovery =	7.02%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Phenol	4.434	94	55483	1.78	ppm	85
19) 2-Methylphenol	4.905	108	30040	1.89	ppm	86
21) 3&4-Methylphenol	5.039	108	65182	4.04	ppm	87
30) 2,4-Dimethylphenol	5.477	107	149401	24.65	ppm	96
38) Naphthalene	5.718	128	54107546m	3555.21	ppm	
44) 2-Methylnaphthalene	6.296	141	13611506	1406.25	ppm	94
53) Biphenyl	6.676	154	8262076	255.66	ppm	97
56) Acenaphthylene	7.029	152	18675229	473.44	ppm	95
59) Acenaphthene	7.189	153	9078268	392.12	ppm	92
62) Dibenzofuran	7.323	168	20848270	652.96	ppm	91
66) Fluorene	7.612	166	22541279	823.16	ppm	100
77) Phenanthrene	8.457	178	66298888m	3295.76	ppm	
78) Anthracene	8.574	178	16021257m	783.25	ppm	
79) Carbazole	8.713	167	20149551	952.67	ppm	96
81) Fluoranthene	9.799	202	67827166m	2372.47	ppm	
84) Pyrene	10.147	202	52717797m	1059.04	ppm	
87) Benzo[a]anthracene	11.741	228	65866528m	1370.70	ppm	
89) Chrysene	11.842	228	3774476m	110.73	ppm	
93) Benzo[b]fluoranthene	13.303	252	47827032m	1501.91	ppm	
94) Benzo[k]fluoranthene	13.329	252	3624167m	139.18	ppm	
95) Benzo[a]pyrene	13.714	252	21464433	802.05	ppm	96
96) Indeno[1,2,3-cd]pyrene	15.089	276	9206127	301.82	ppm	92
98) Dibenz[a,h]anthracene	15.089	278	3140486m	132.18	ppm	
100) Benzo[g,h,i]perylene	15.447	276	7594510	314.55	ppm	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:11:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

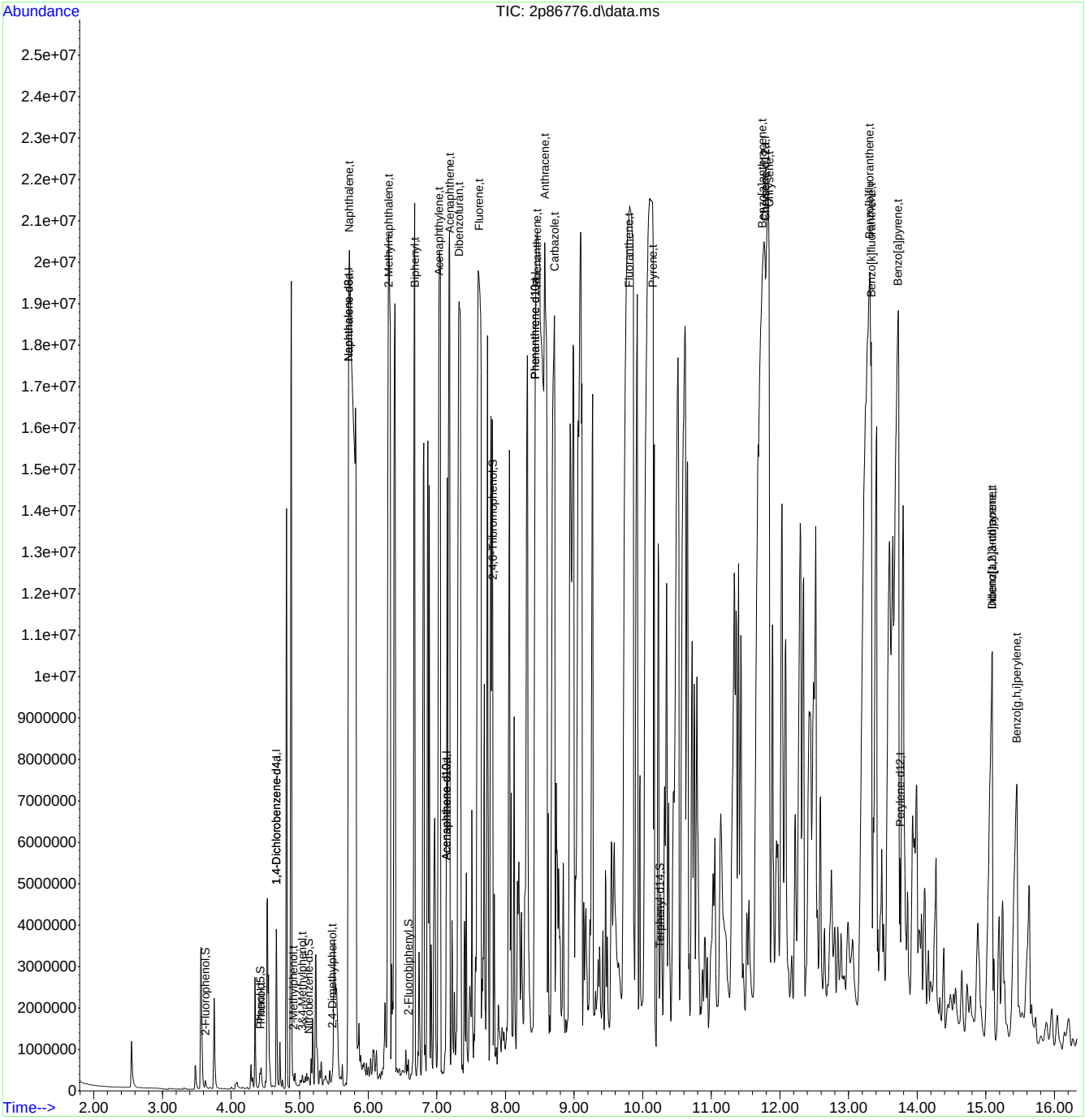
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

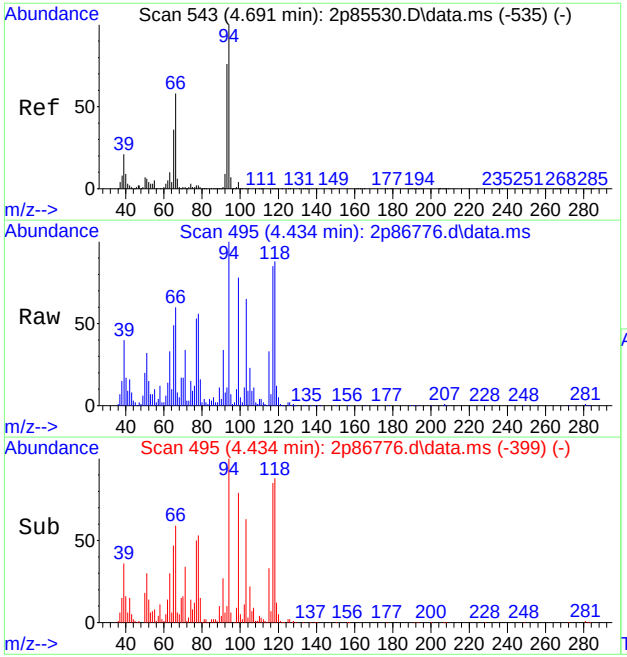
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:11:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

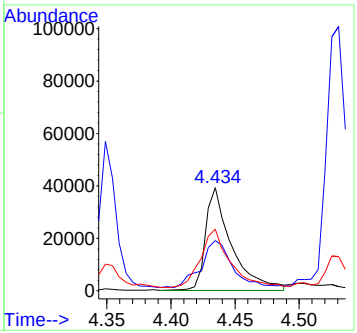


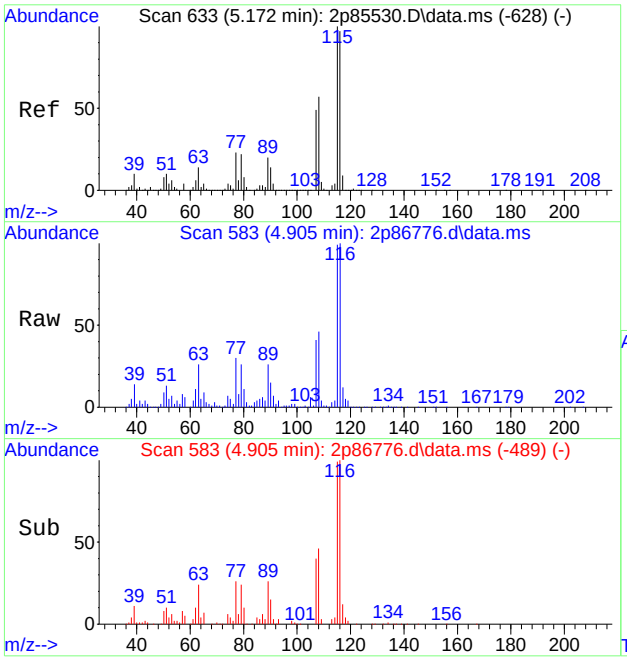


#9
Phenol
Concen: 1.78 ppm
RT: 4.434 min Scan# 495
Delta R.T. 0.011 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion: 94 Resp: 55483

Ion	Ratio	Lower	Upper
94	100		
65	46.1	4.7	64.7
66	57.8	19.9	79.9

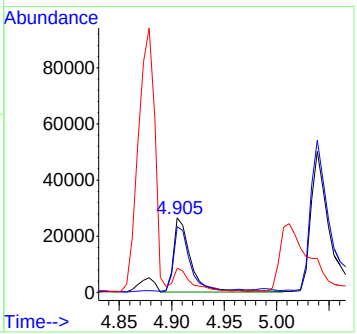


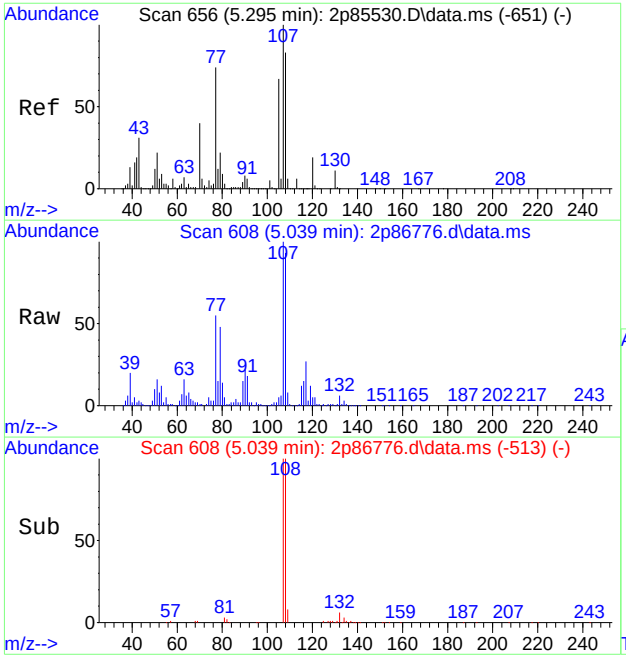


#19
2-Methylphenol
Concen: 1.89 ppm
RT: 4.905 min Scan# 583
Delta R.T. 0.000 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:108 Resp: 30040

Ion	Ratio	Lower	Upper
108	100		
107	86.7	59.9	119.9
90	0.0	0.0	56.3

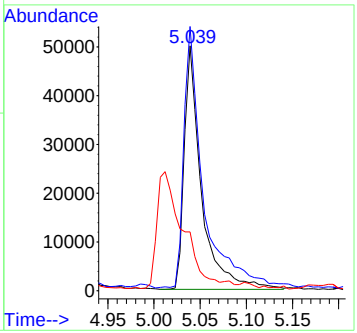


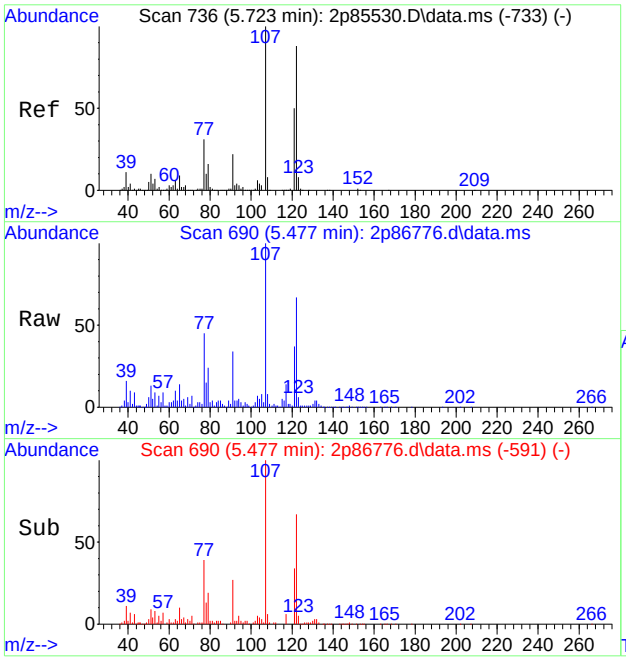


#21
3&4-Methylphenol
Concen: 4.04 ppm
RT: 5.039 min Scan# 608
Delta R.T. 0.006 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:108 Resp: 65182

Ion	Ratio	Lower	Upper
108	100		
107	106.7	89.8	149.8
90	0.0	0.0	40.4

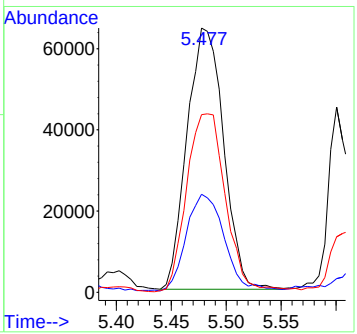


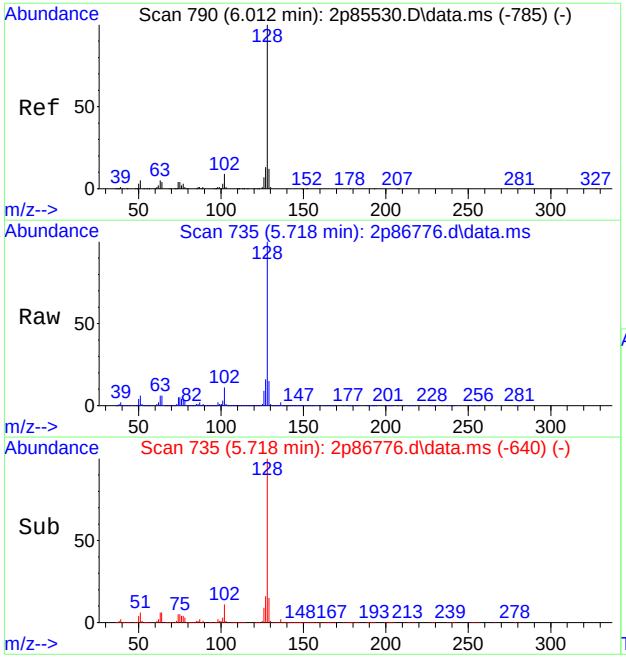


#30
2,4-Dimethylphenol
Concen: 24.65 ppm
RT: 5.477 min Scan# 690
Delta R.T. 0.027 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:107 Resp: 149401

Ion	Ratio	Lower	Upper
107	100		
121	36.8	9.5	69.5
122	67.1	40.1	100.1

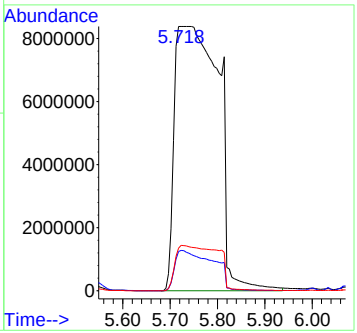


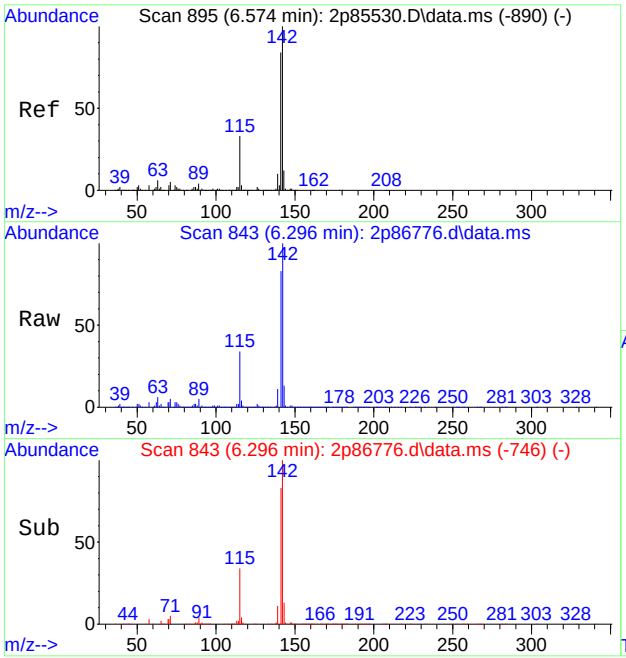


#38
Naphthalene
Concen: 3555.21 ppm m
RT: 5.718 min Scan# 735
Delta R.T. 0.006 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:128 Resp:54107546

Ion	Ratio	Lower	Upper
128	100		
129	14.8	0.0	41.5
127	16.1	0.0	43.5

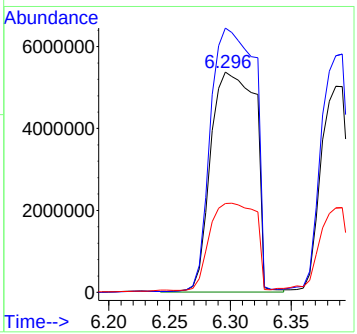


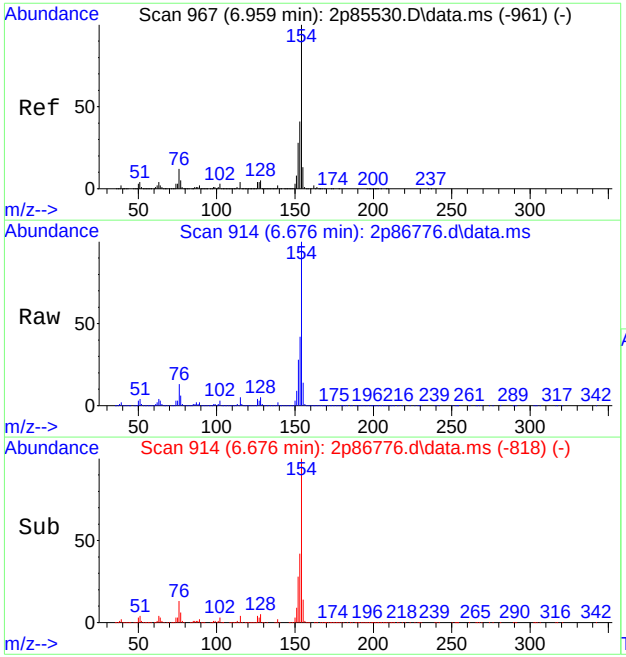


#44
2-Methylnaphthalene
Concen: 1406.25 ppm
RT: 6.296 min Scan# 843
Delta R.T. 0.016 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:141 Resp:13611506

Ion	Ratio	Lower	Upper
141	100		
142	120.1	88.5	148.5
115	39.3	20.8	80.8

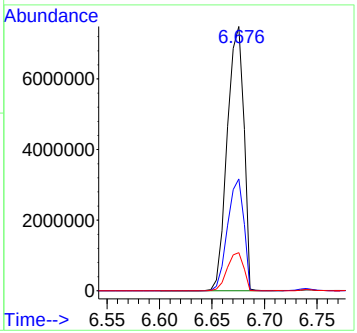


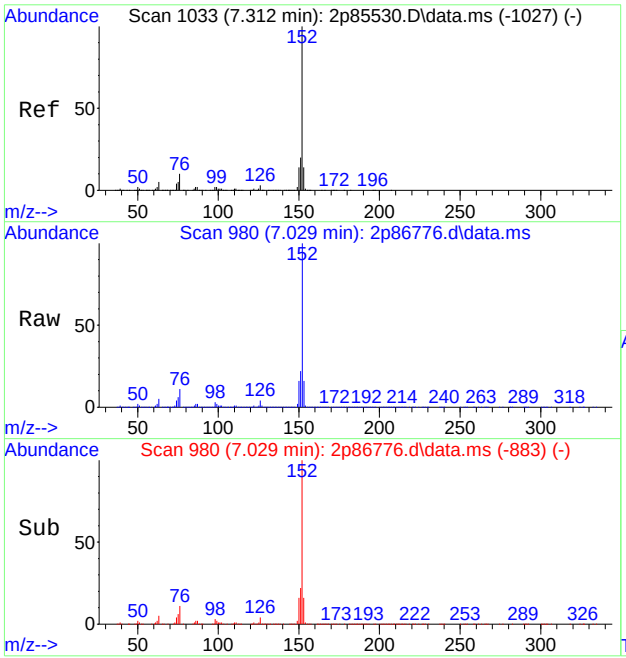


#53
Biphenyl
Concen: 255.66 ppm
RT: 6.676 min Scan# 914
Delta R.T. 0.011 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:154 Resp: 8262076

Ion	Ratio	Lower	Upper
154	100		
153	42.3	10.3	70.3
155	14.4	0.0	43.1

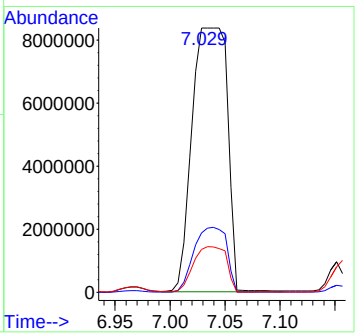


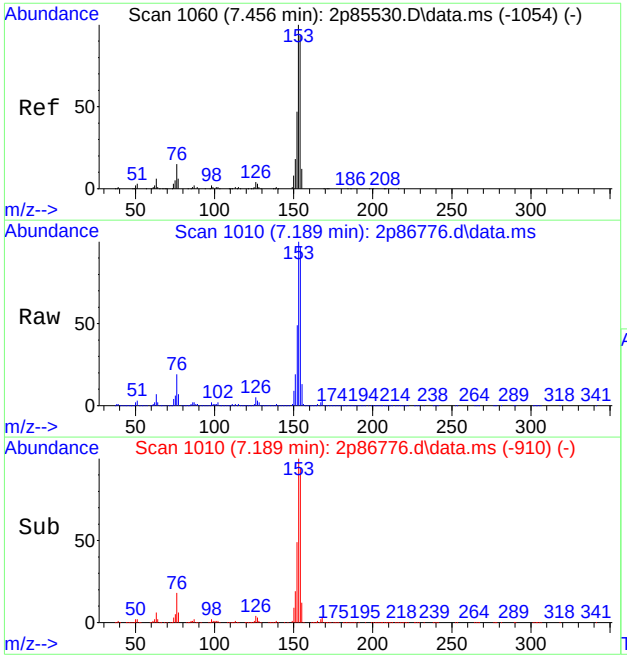


#56
Acenaphthylene
Concen: 473.44 ppm
RT: 7.029 min Scan# 980
Delta R.T. 0.016 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:152 Resp:18675229

Ion	Ratio	Lower	Upper
152	100		
151	22.4	0.0	50.2
153	16.1	0.0	43.6

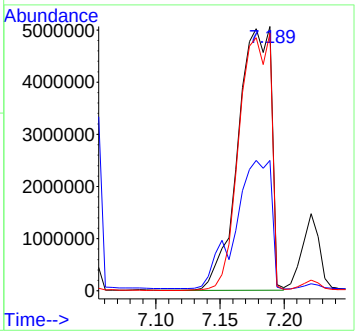


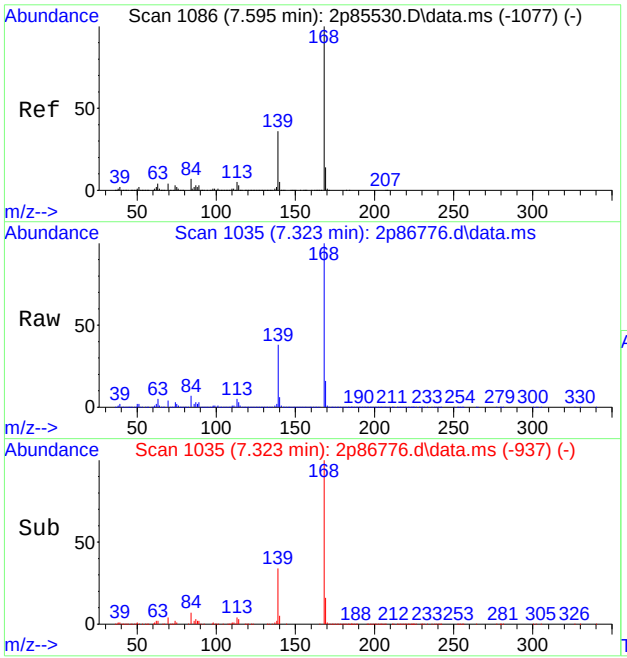


#59
Acenaphthene
Concen: 392.12 ppm
RT: 7.189 min Scan# 1010
Delta R.T. 0.032 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:153 Resp: 9078268

Ion	Ratio	Lower	Upper
153	100		
152	48.9	18.5	78.5
154	97.8	56.7	116.7

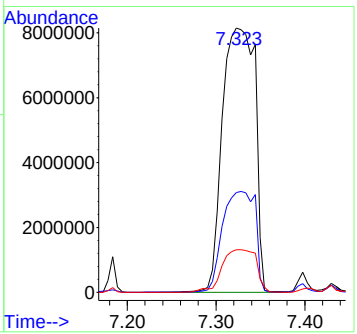


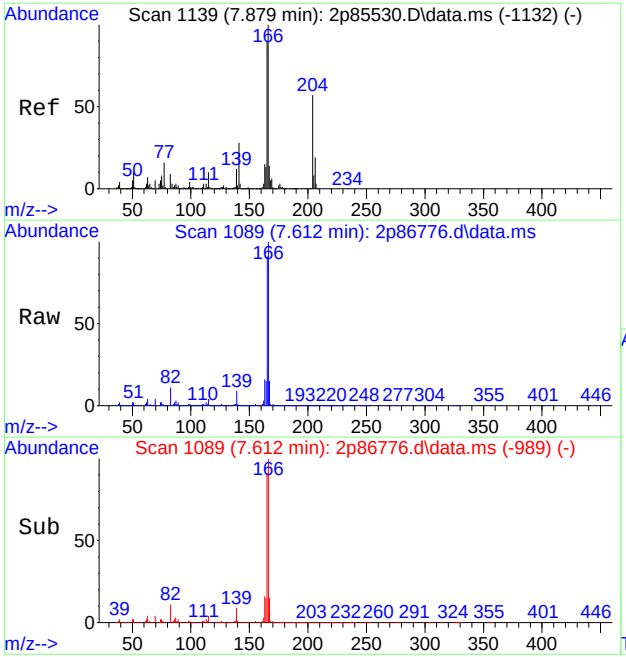


#62
Dibenzofuran
Concen: 652.96 ppm
RT: 7.323 min Scan# 1035
Delta R.T. 0.022 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:168 Resp:20848270

Ion	Ratio	Lower	Upper
168	100		
139	37.7	14.0	74.0
169	16.0	0.0	43.3

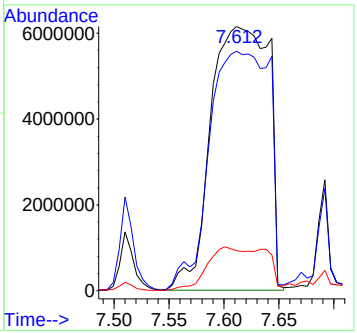


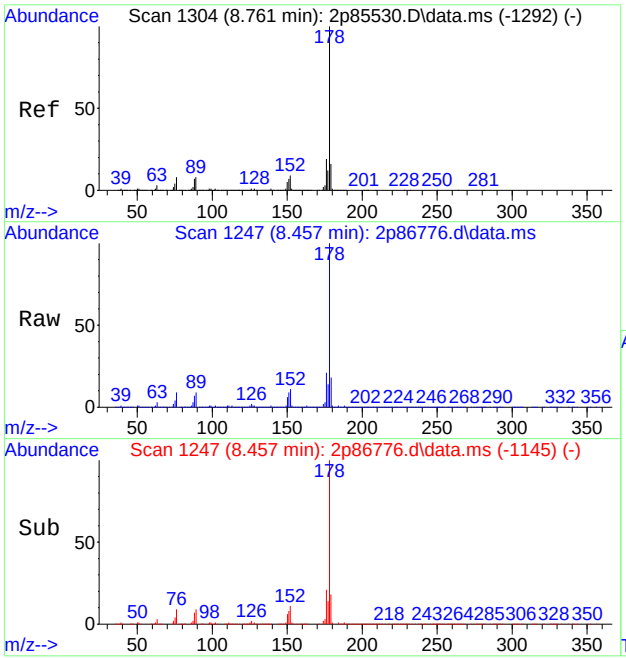


#66
Fluorene
Concen: 823.16 ppm
RT: 7.612 min Scan# 1089
Delta R.T. 0.032 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:166 Resp:22541279

Ion	Ratio	Lower	Upper
166	100		
165	90.0	60.3	120.3
167	14.3	0.0	43.9

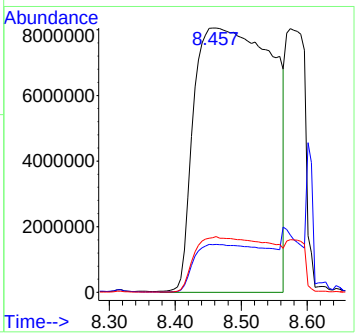


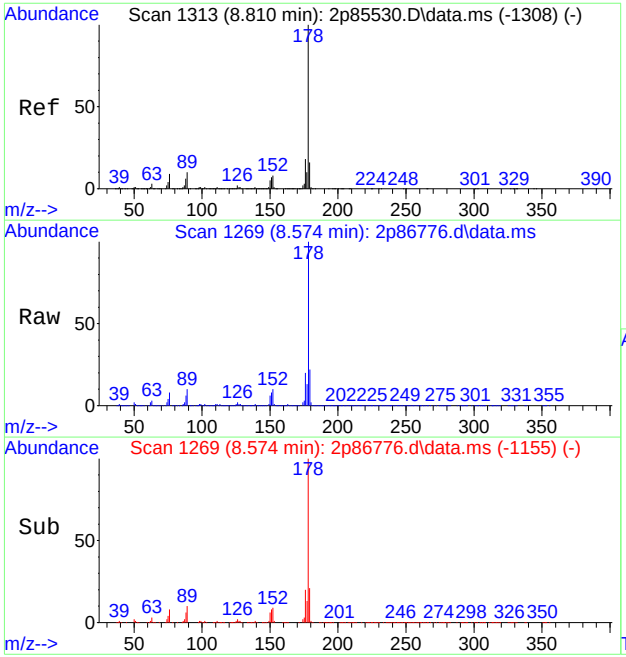


#77
Phenanthrene
Concen: 3295.76 ppm m
RT: 8.457 min Scan# 1247
Delta R.T. 0.043 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:178 Resp:66298888

Ion	Ratio	Lower	Upper
178	100		
179	18.0	0.0	45.8
176	20.7	0.0	49.9

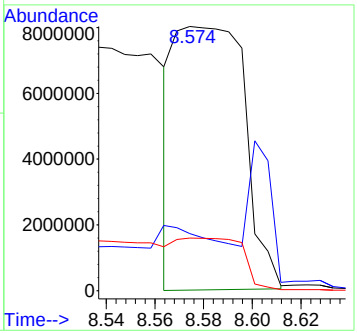


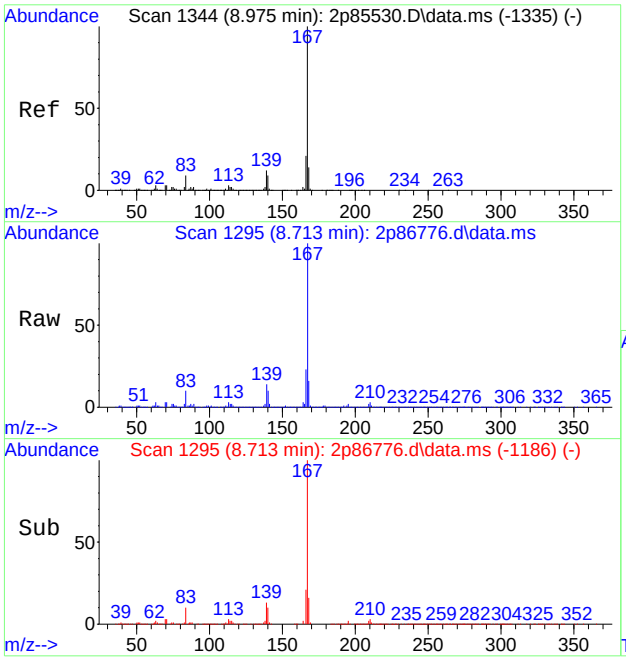


#78
Anthracene
Concen: 783.25 ppm m
RT: 8.574 min Scan# 1269
Delta R.T. 0.107 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:178 Resp:16021257

Ion	Ratio	Lower	Upper
178	100		
179	21.7	0.0	45.3
176	19.9	0.0	49.1

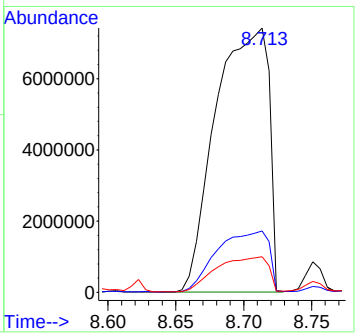


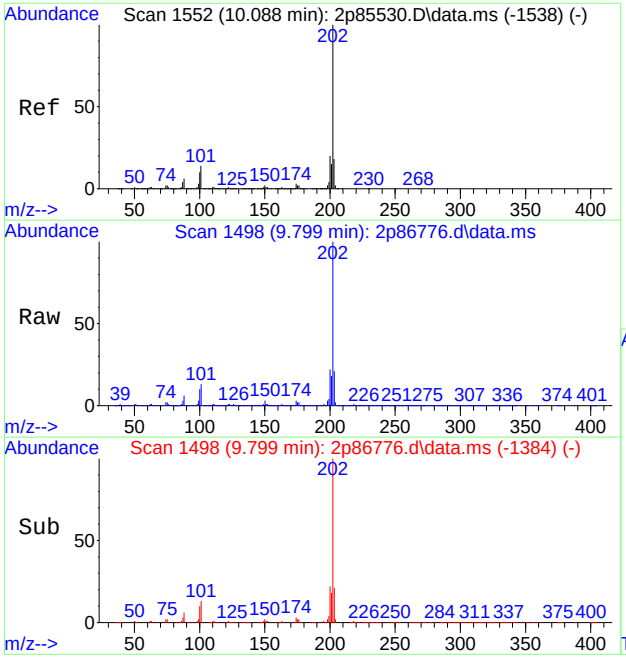


#79
Carbazole
Concen: 952.67 ppm
RT: 8.713 min Scan# 1295
Delta R.T. 0.080 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:167 Resp:20149551

Ion	Ratio	Lower	Upper
167	100		
166	23.1	0.0	51.0
139	13.2	0.0	45.1

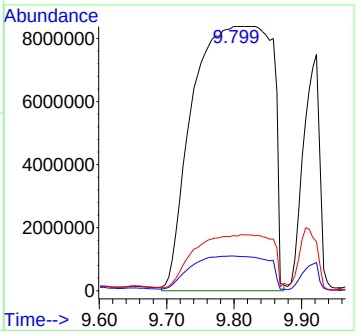


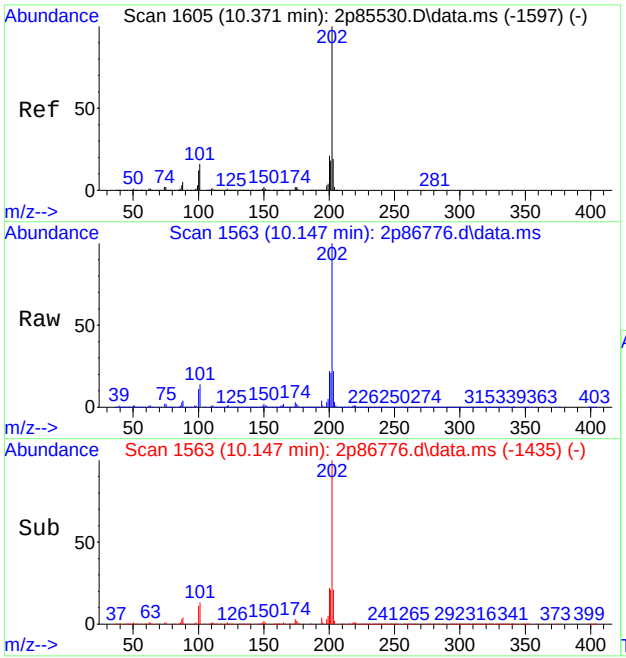


#81
Fluoranthene
Concen: 2372.47 ppm m
RT: 9.799 min Scan# 1498
Delta R.T. 0.107 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:202 Resp:67827166

Ion	Ratio	Lower	Upper
202	100		
101	13.2	0.0	45.0
203	20.9	0.0	48.2

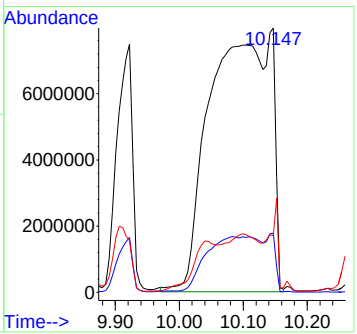


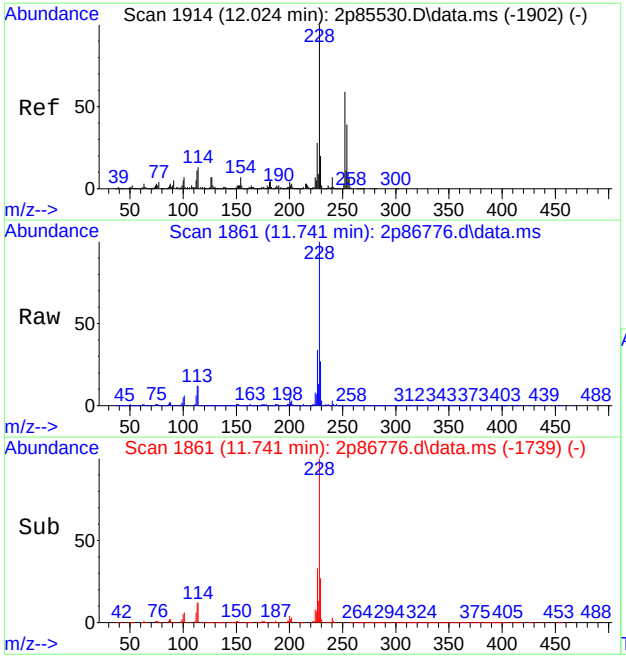


#84
Pyrene
Concen: 1059.04 ppm m
RT: 10.147 min Scan# 1563
Delta R.T. 0.182 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:202 Resp:52717797

Ion	Ratio	Lower	Upper
202	100		
200	22.3	0.0	51.2
203	21.5	0.0	48.2

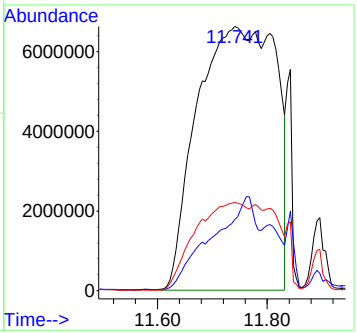


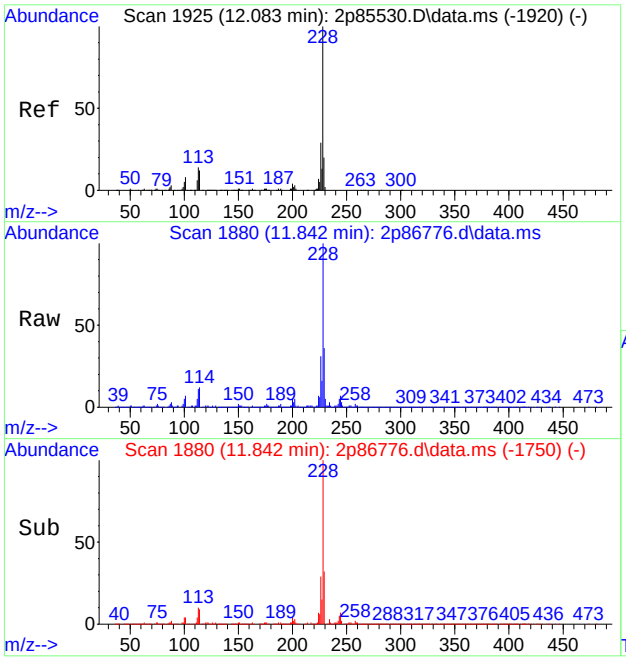


#87
Benzo[a]anthracene
Concen: 1370.70 ppm m
RT: 11.741 min Scan# 1861
Delta R.T. 0.150 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:228 Resp:65866528

Ion	Ratio	Lower	Upper
228	100		
229	27.0	0.0	49.9
226	33.5	0.0	57.1

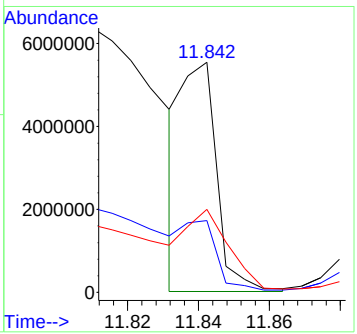


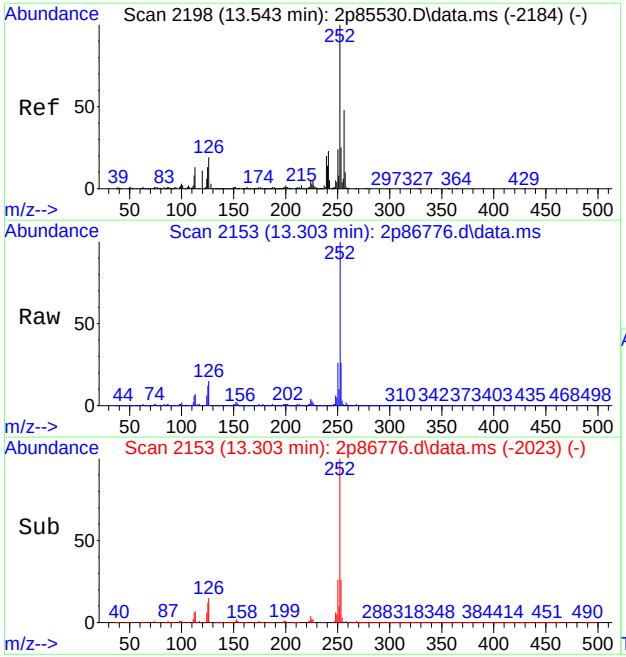


#89
Chrysene
Concen: 110.73 ppm m
RT: 11.842 min Scan# 1880
Delta R.T. 0.193 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:228 Resp: 3774476

Ion	Ratio	Lower	Upper
228	100		
226	31.2	0.0	59.7
229	36.0	0.0	49.5

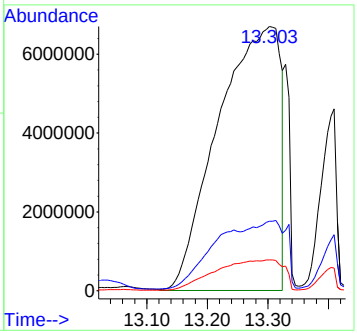


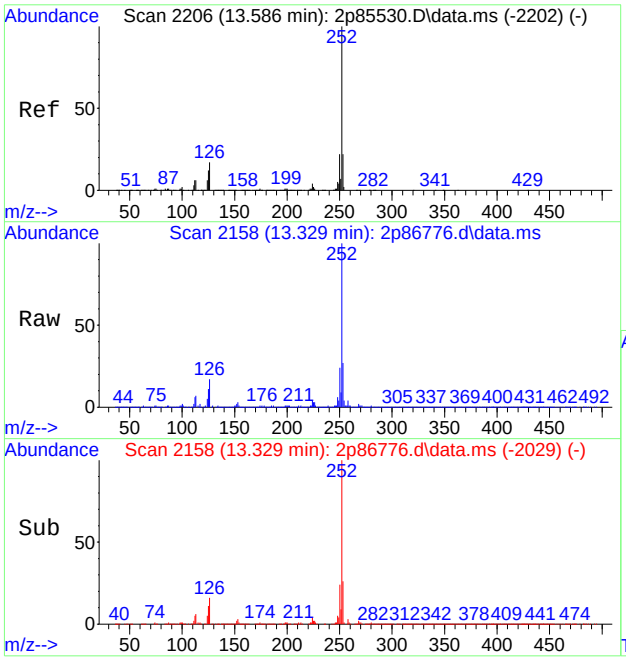


#93
Benzo[b]fluoranthene
Concen: 1501.91 ppm m
RT: 13.303 min Scan# 2153
Delta R.T. 0.193 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:252 Resp:47827032

Ion	Ratio	Lower	Upper
252	100		
253	26.4	0.0	51.8
125	11.7	0.0	42.6

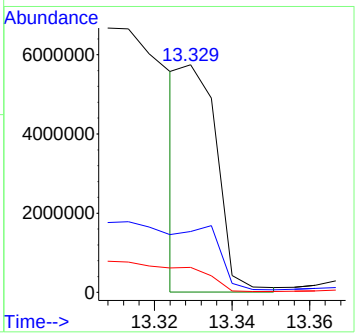


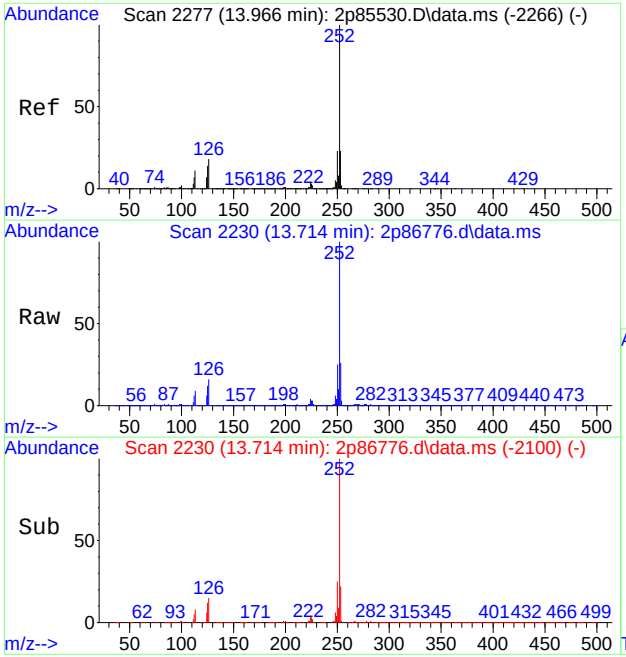


#94
Benzo[k]fluoranthene
Concen: 139.18 ppm m
RT: 13.329 min Scan# 2158
Delta R.T. 0.187 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:252 Resp: 3624167

Ion	Ratio	Lower	Upper
252	100		
253	26.7	0.0	52.1
125	11.0	0.0	42.9

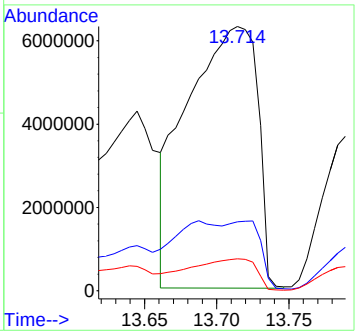


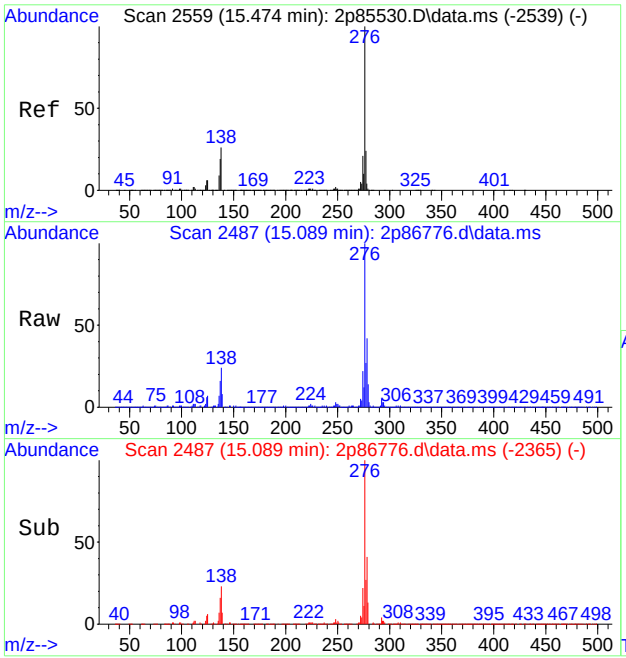


#95
Benzo[a]pyrene
Concen: 802.05 ppm
RT: 13.714 min Scan# 2230
Delta R.T. 0.193 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:252 Resp:21464433

Ion	Ratio	Lower	Upper
252	100		
253	24.4	0.0	53.0
125	12.0	0.0	44.7

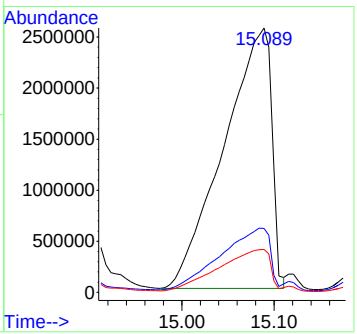


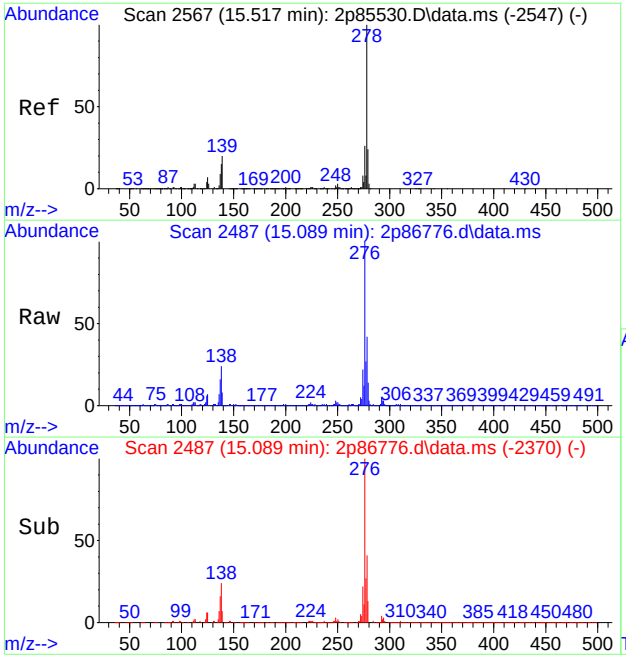


#96
Indeno[1,2,3-cd]pyrene
Concen: 301.82 ppm
RT: 15.089 min Scan# 2487
Delta R.T. 0.150 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:276 Resp: 9206127

Ion	Ratio	Lower	Upper
276	100		
138	22.9	0.0	58.1
137	15.6	0.0	48.2

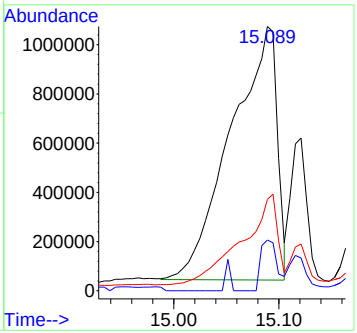


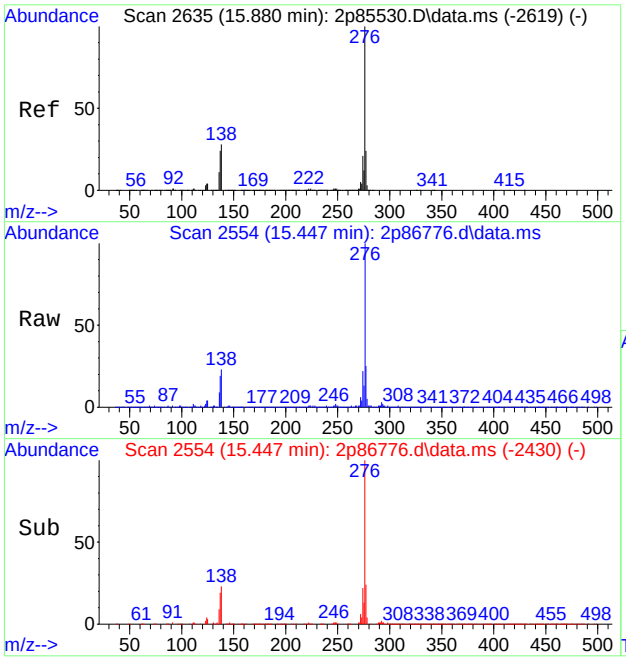


#98
Dibenz[a,h]anthracene
Concen: 132.18 ppm m
RT: 15.089 min Scan# 2487
Delta R.T. 0.123 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:278 Resp: 3140486

Ion	Ratio	Lower	Upper
278	100		
139	19.2	0.0	51.1
279	34.6	0.0	54.6

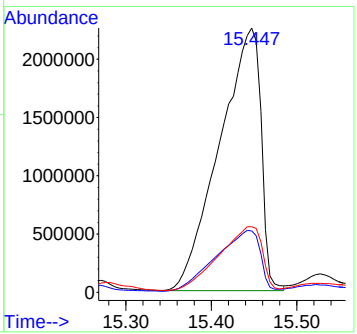




#100
Benzo[g,h,i]perylene
Concen: 314.55 ppm
RT: 15.447 min Scan# 2554
Delta R.T. 0.161 min
Lab File: 2p86776.d
Acq: 22 Apr 2019 9:22 pm

Tgt Ion:276 Resp: 7594510

Ion	Ratio	Lower	Upper
276	100		
138	22.7	0.0	59.8
277	24.0	0.0	53.4



Manual Integration Approval Summary

Sample Number: JC86406-12
Lab FileID: 2P86776.D
Injection Time: 04/22/19 21:22

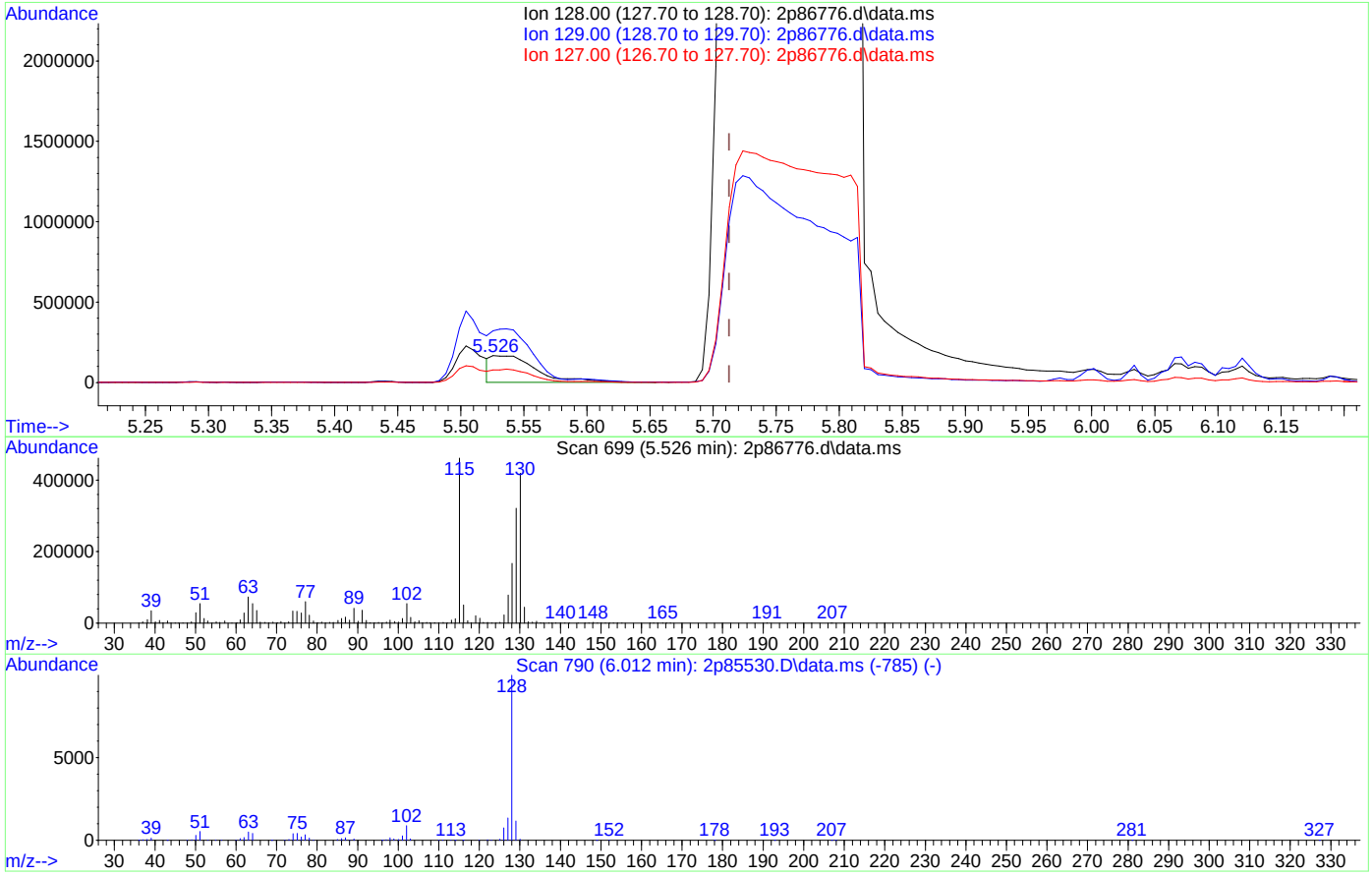
Method: SW846 8270D
Analyst approved: 04/23/19 06:13 Michelle Co
Supervisor approved: 04/29/19 12:14 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		5.72	Poor instrument integration
Phenanthrene	85-01-8		8.46	Poor instrument integration
Anthracene	120-12-7		8.57	Poor instrument integration
Fluoranthene	206-44-0		9.80	Poor instrument integration
Pyrene	129-00-0		10.15	Poor instrument integration
Benzo(a)anthracene	56-55-3		11.74	Poor instrument integration
Chrysene	218-01-9		11.84	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.30	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		13.33	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		15.09	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:22:36 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(38) Naphthalene (t)

5.526min (-0.187) 26.91ppm

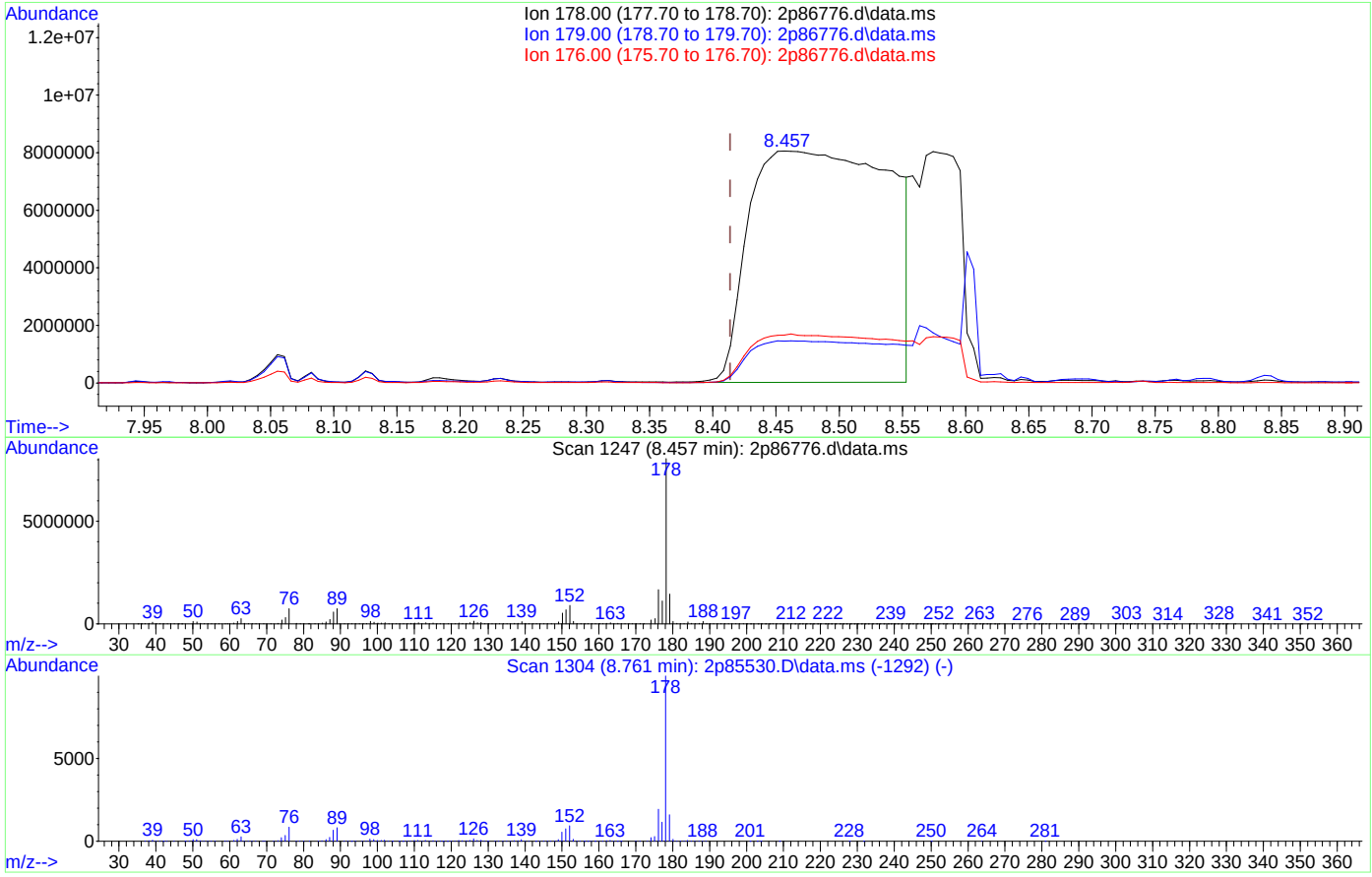
response 409483

Ion	Exp%	Act%
128.00	100	100
129.00	11.50	189.91#
127.00	13.50	46.90#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:22:36 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(77) Phenanthrene (t)

8.457min (+0.043) 3062.68ppm

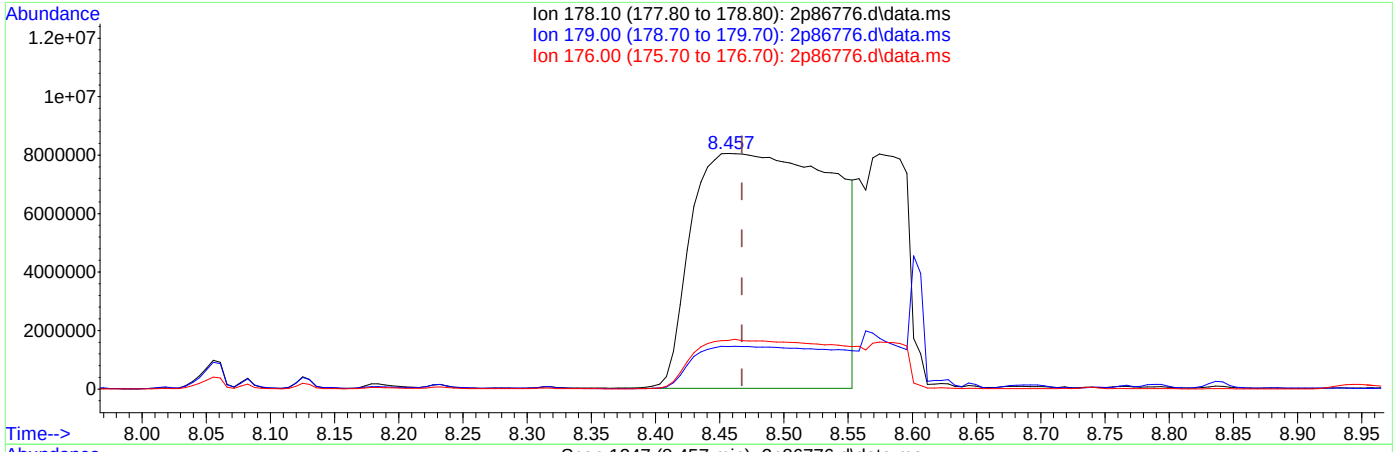
response 61610172

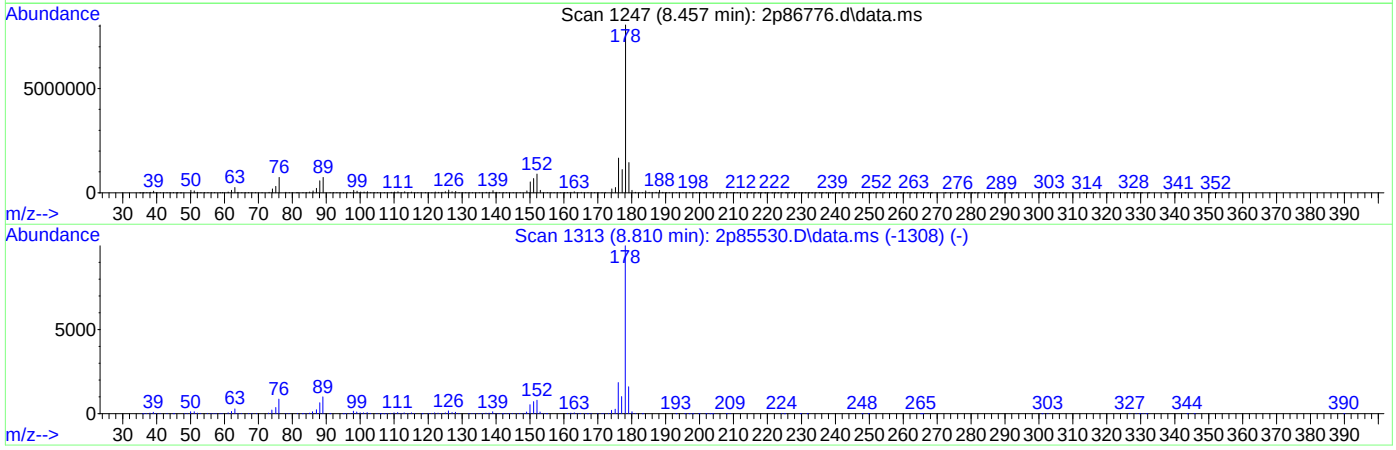
Ion	Exp%	Act%
178.00	100	100
179.00	15.80	17.67
176.00	19.90	20.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:22:36 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration





TIC: 2p86776.d\data.ms

(78) Anthracene (t)

8.457min (-0.011) 3008.98ppm

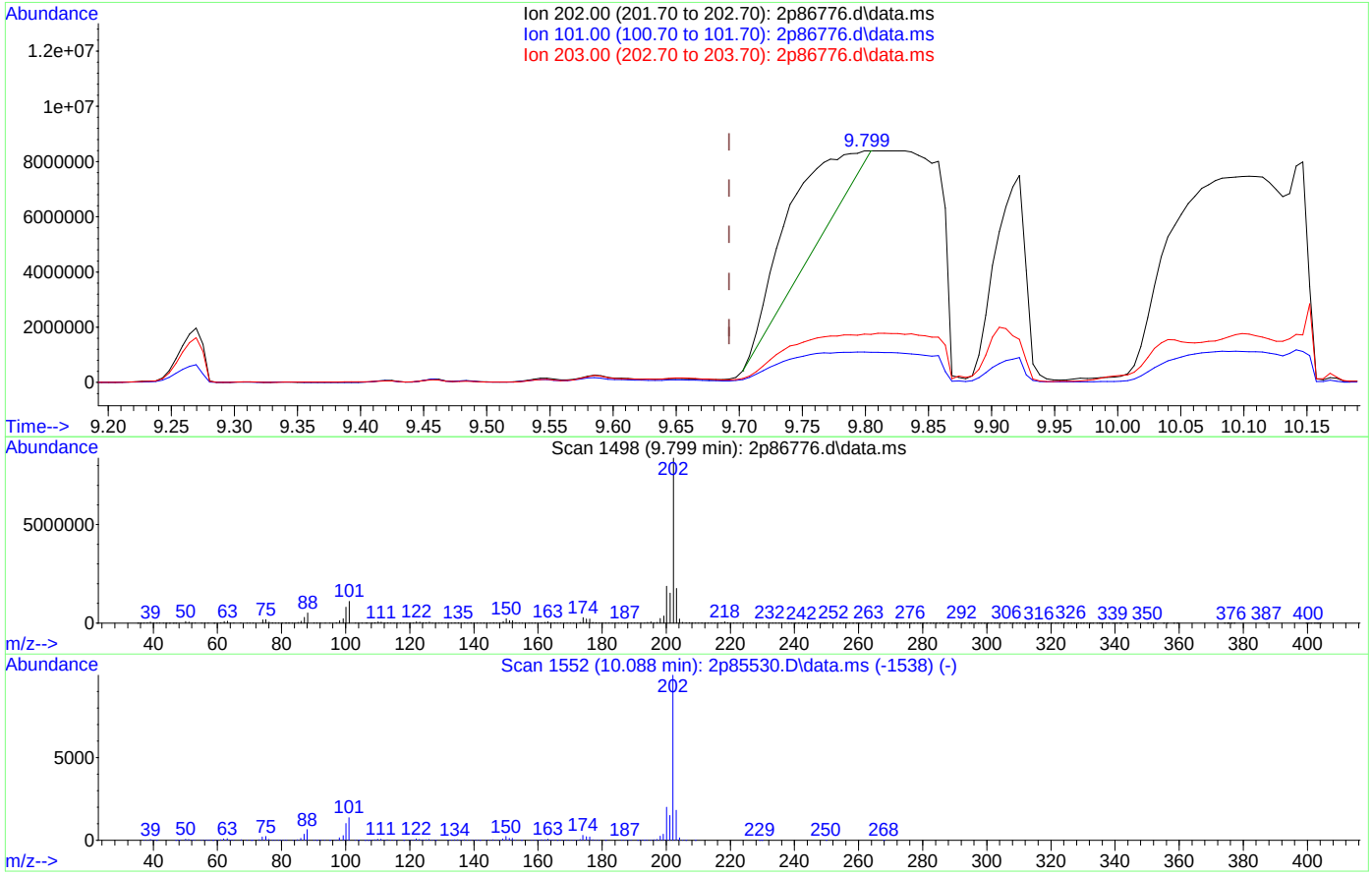
response 61548177

Ion	Exp%	Act%
178.10	100	100
179.00	15.30	17.67
176.00	19.10	20.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:22:36 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(81) Fluoranthene (t)

9.799min (+0.107) 427.49ppm

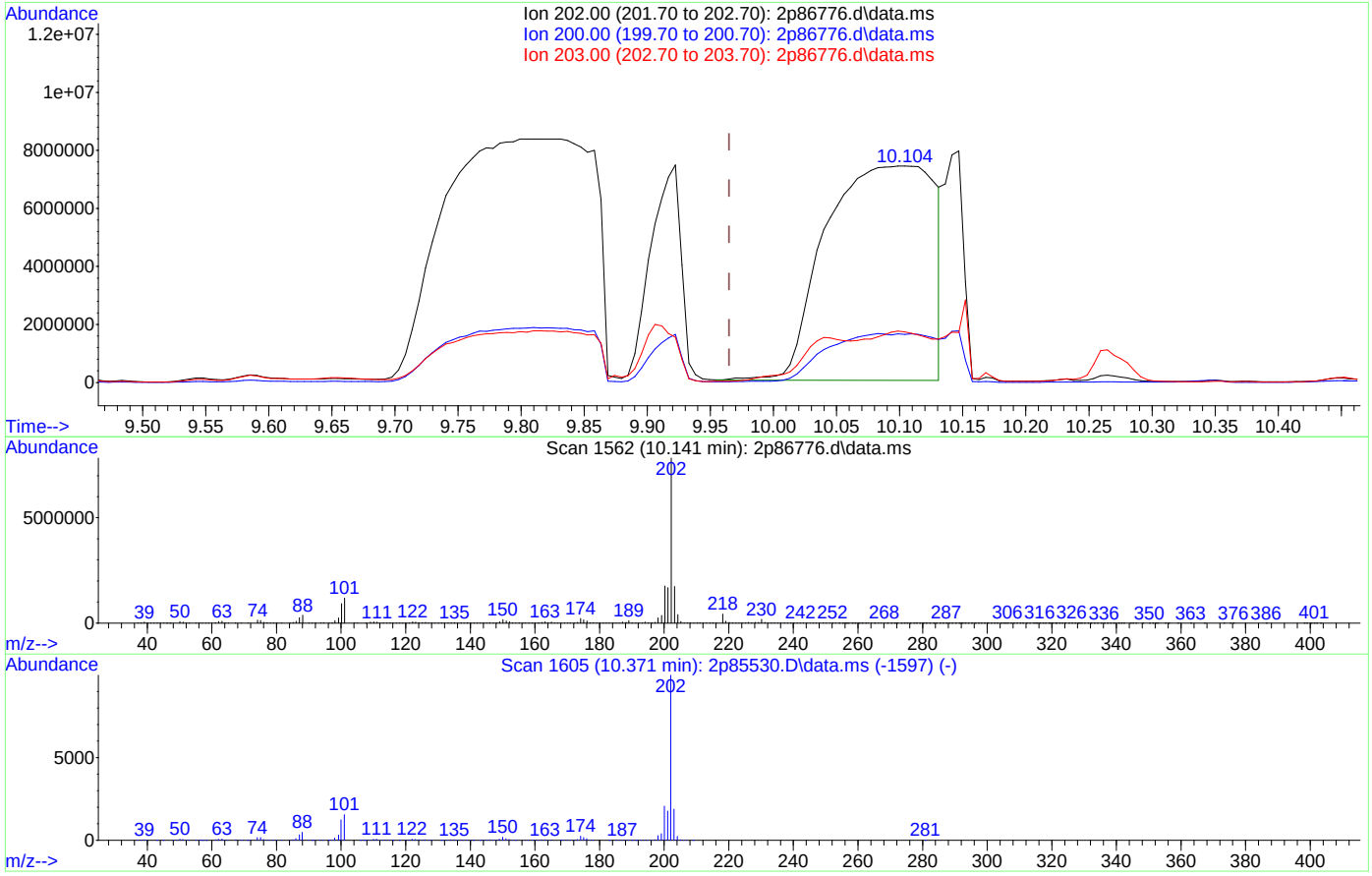
response 12221614

Ion	Exp%	Act%
202.00	100	100
101.00	15.00	12.67
203.00	18.20	20.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:22:36 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(84) Pyrene (t)

10.104min (+0.139) 879.28ppm

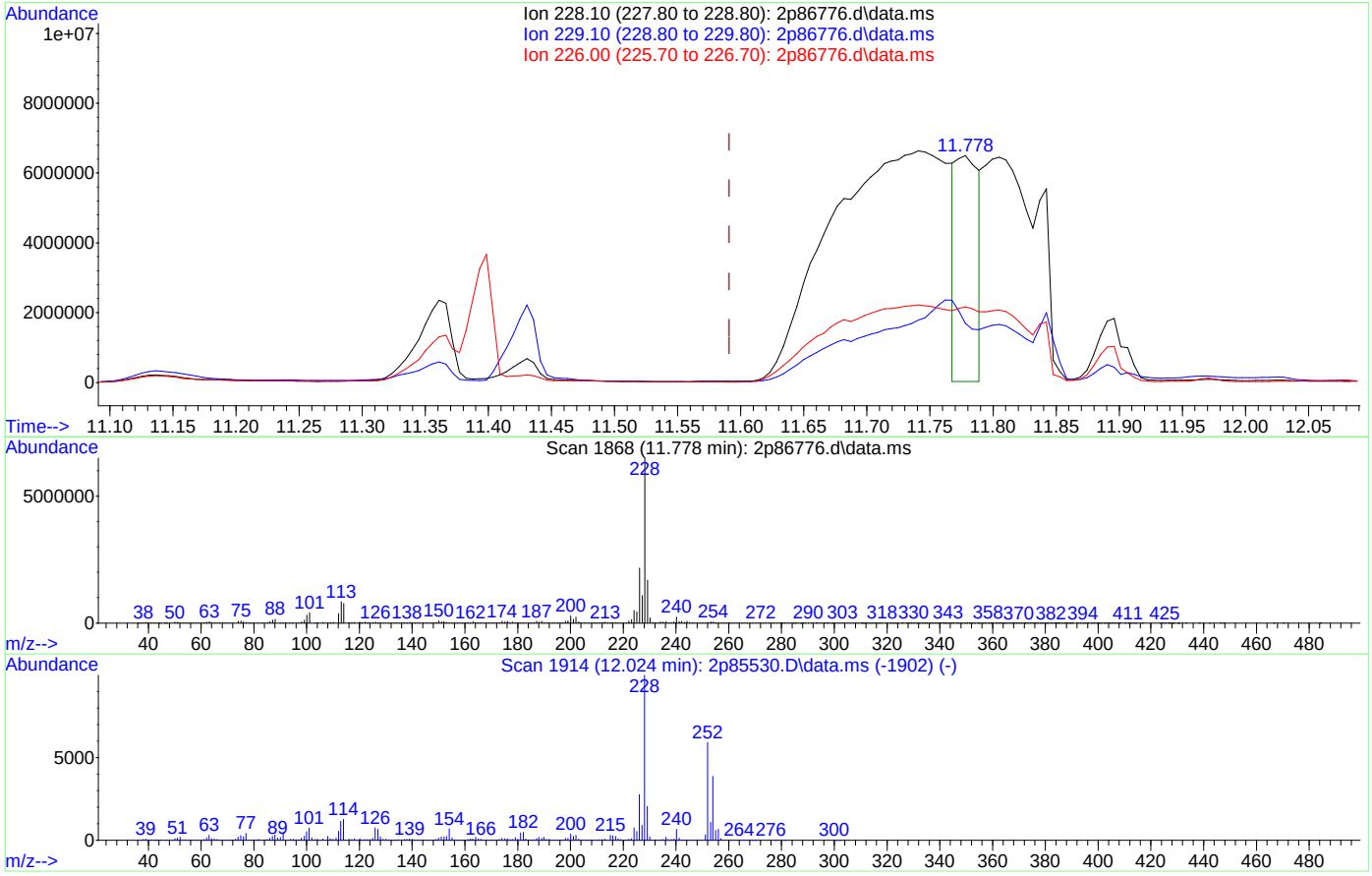
response 43769481

Ion	Exp%	Act%
202.00	100	100
200.00	21.20	22.27
203.00	18.20	24.15
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:09:10 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(87) Benzo[a]anthracene (t)

11.778min (+0.187) 167.70ppm

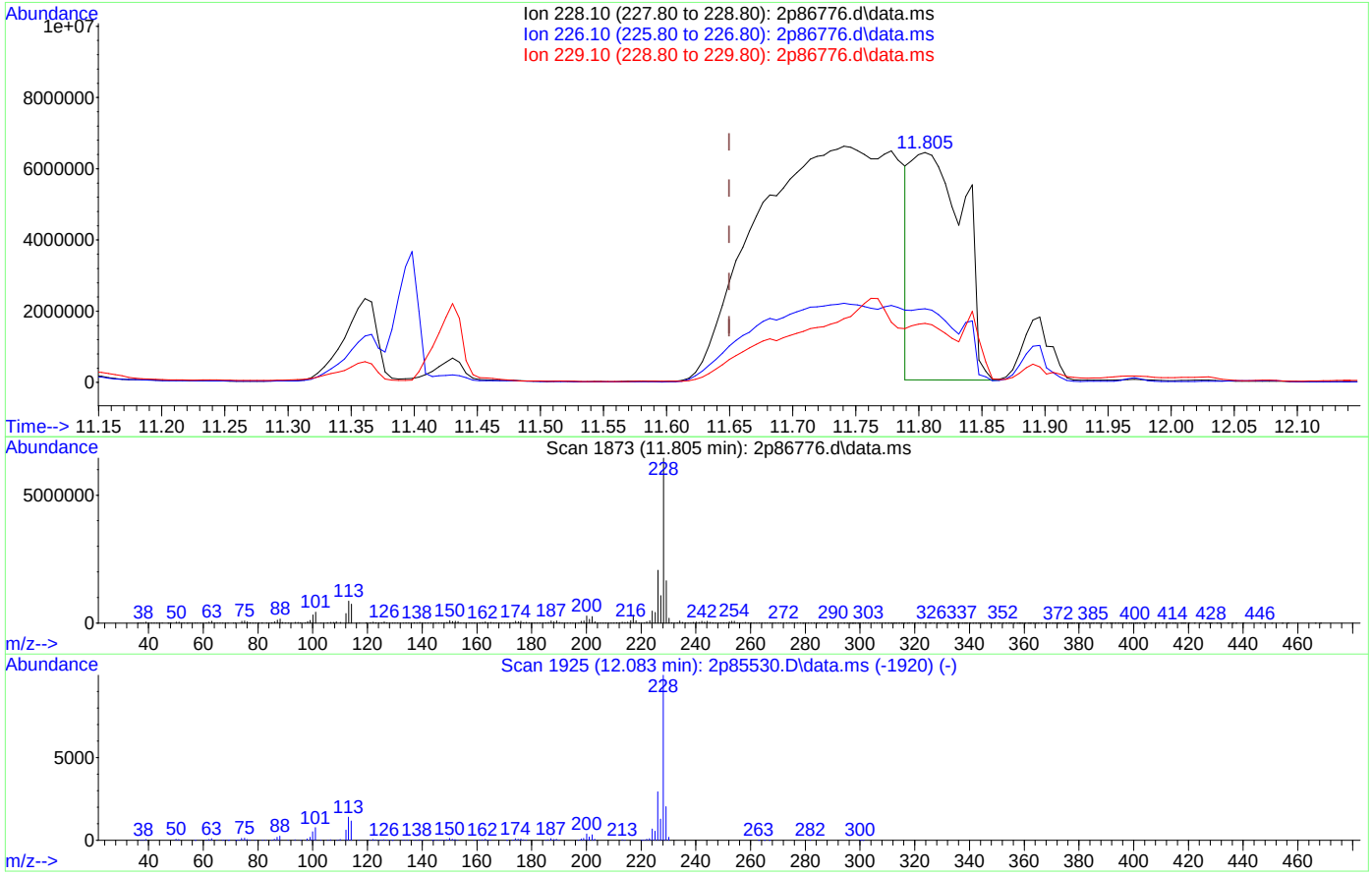
response 8058309

Ion	Exp%	Act%
228.10	100	100
229.10	19.90	0.00
226.00	27.10	37.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:09:10 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(89) Chrysene (t)

11.805min (+0.155) 540.14ppm

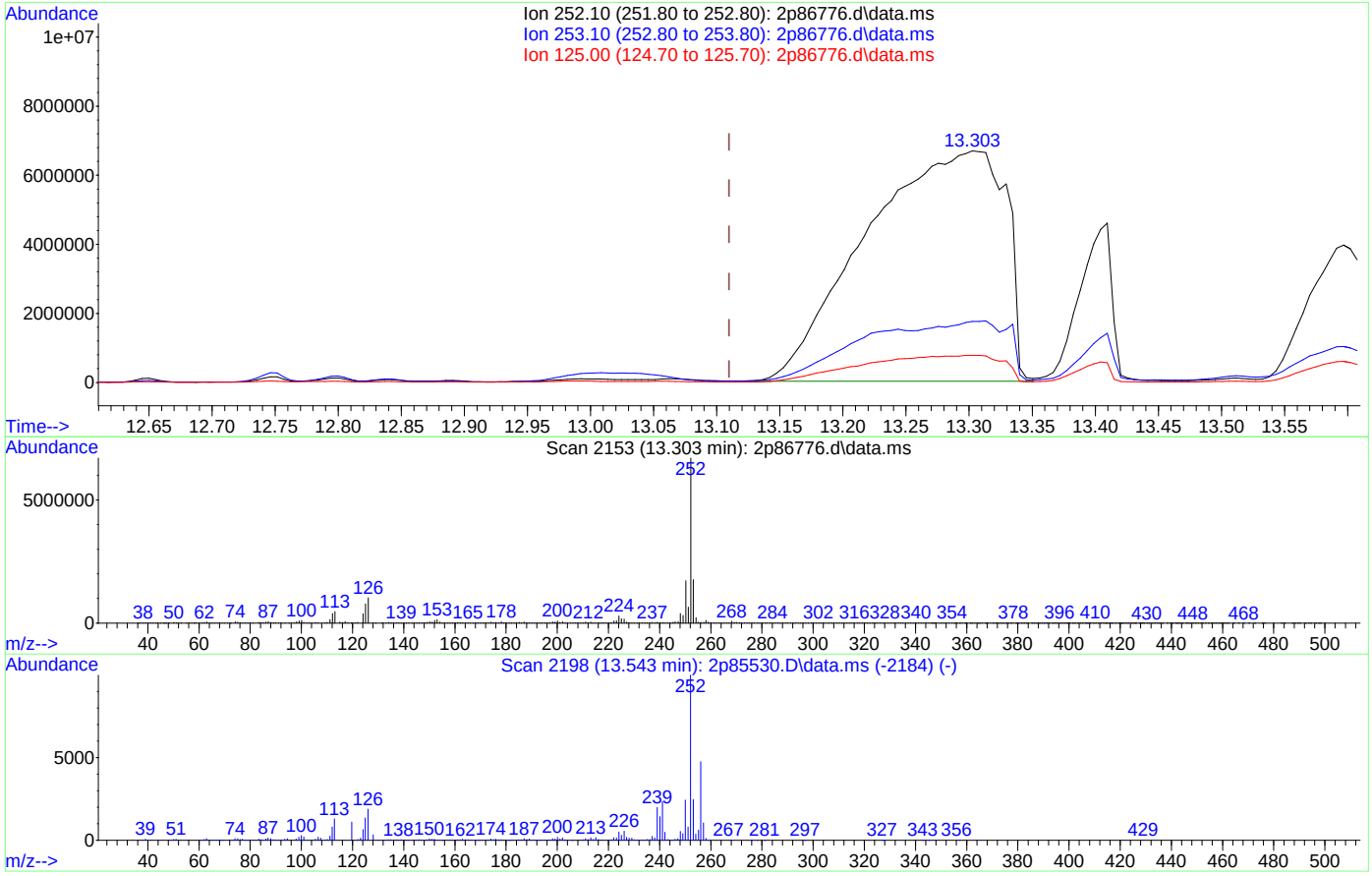
response 18412573

Ion	Exp%	Act%
228.10	100	100
226.10	29.70	30.40
229.10	19.50	25.53
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:09:10 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(93) Benzo[b]fluoranthene (t)

13.303min (+0.193) 1602.82ppm

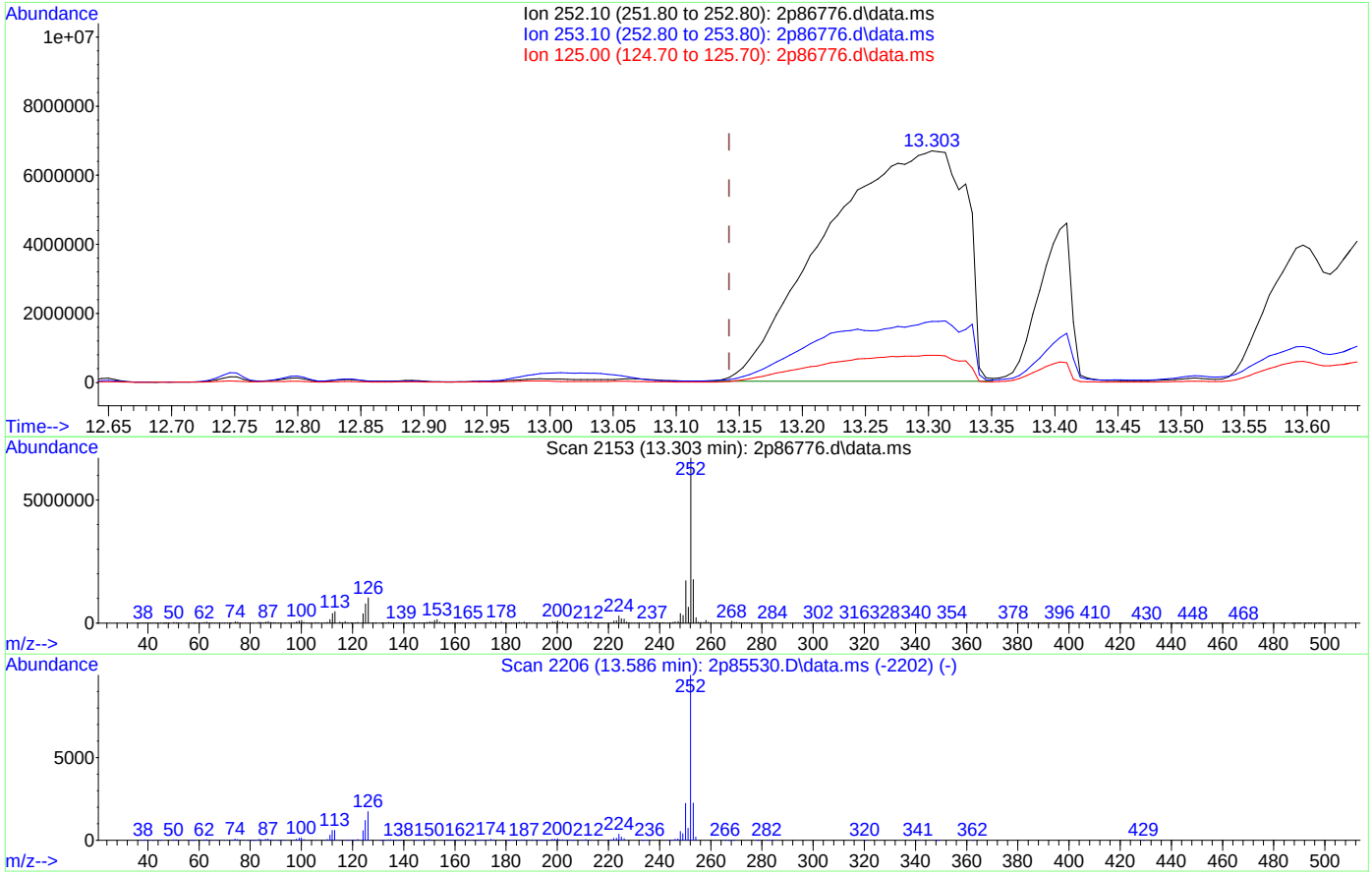
response 51040493

Ion	Exp%	Act%
252.10	100	100
253.10	21.80	25.80
125.00	12.60	11.53
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:09:10 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(94) Benzo[k]fluoranthene (t)

13.303min (+0.161) 1960.19ppm

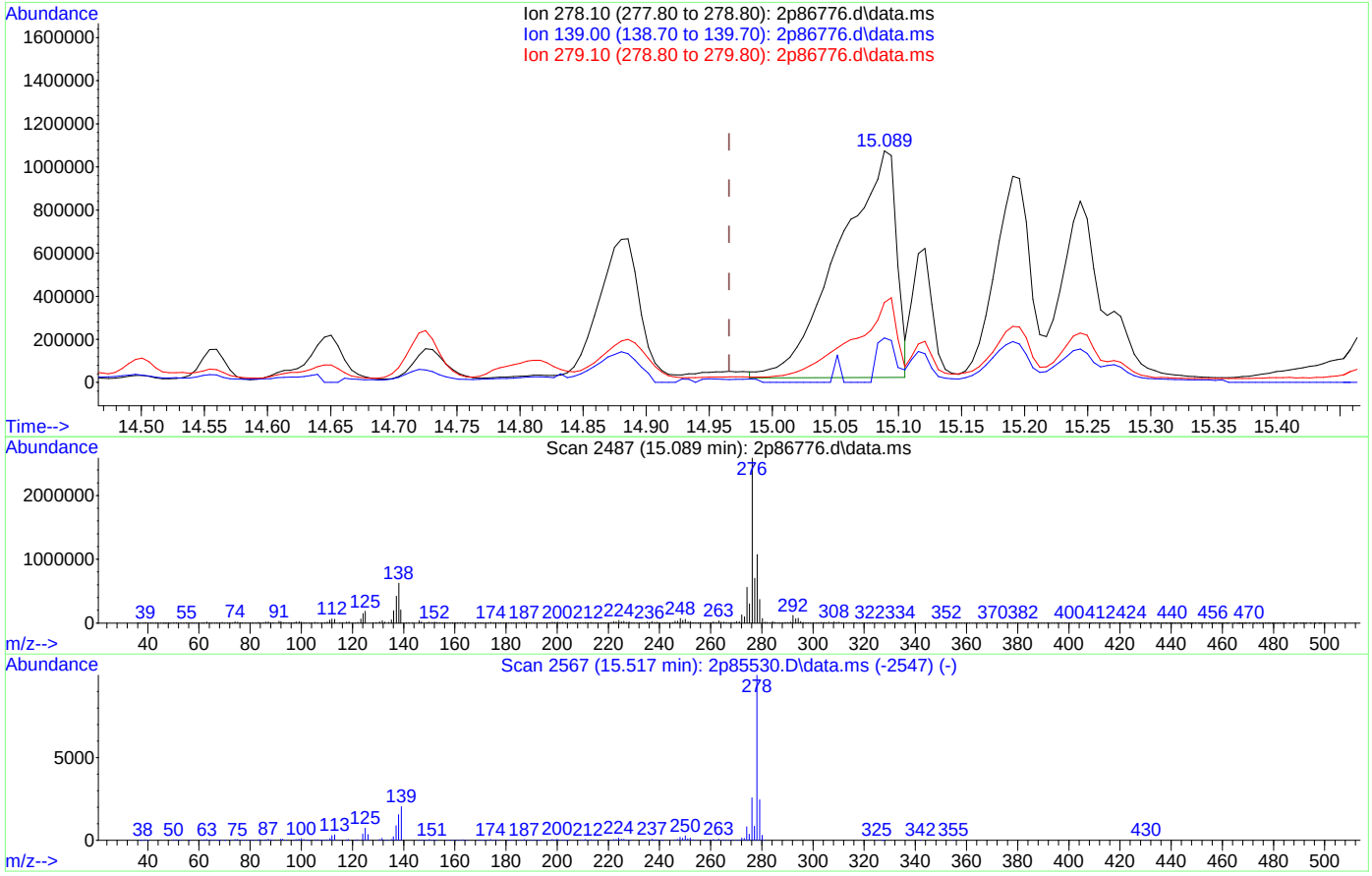
response 51040493

Ion	Exp%	Act%
252.10	100	100
253.10	22.10	25.80
125.00	12.90	11.53
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86776.d
Acq On : 22 Apr 2019 9:22 pm
Operator : yujiac
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3832,32.0,,,1,10
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 06:09:10 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86776.d\data.ms

(98) Dibenz[a,h]anthracene (t)

15.089min (+0.123) 139.10ppm

response 3304827

Ion	Exp%	Act%
278.10	100	100
139.00	21.10	17.79
279.10	24.60	33.91
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 12:14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86913.d
Acq On : 27 Apr 2019 6:09 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,1000
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 04:19:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration

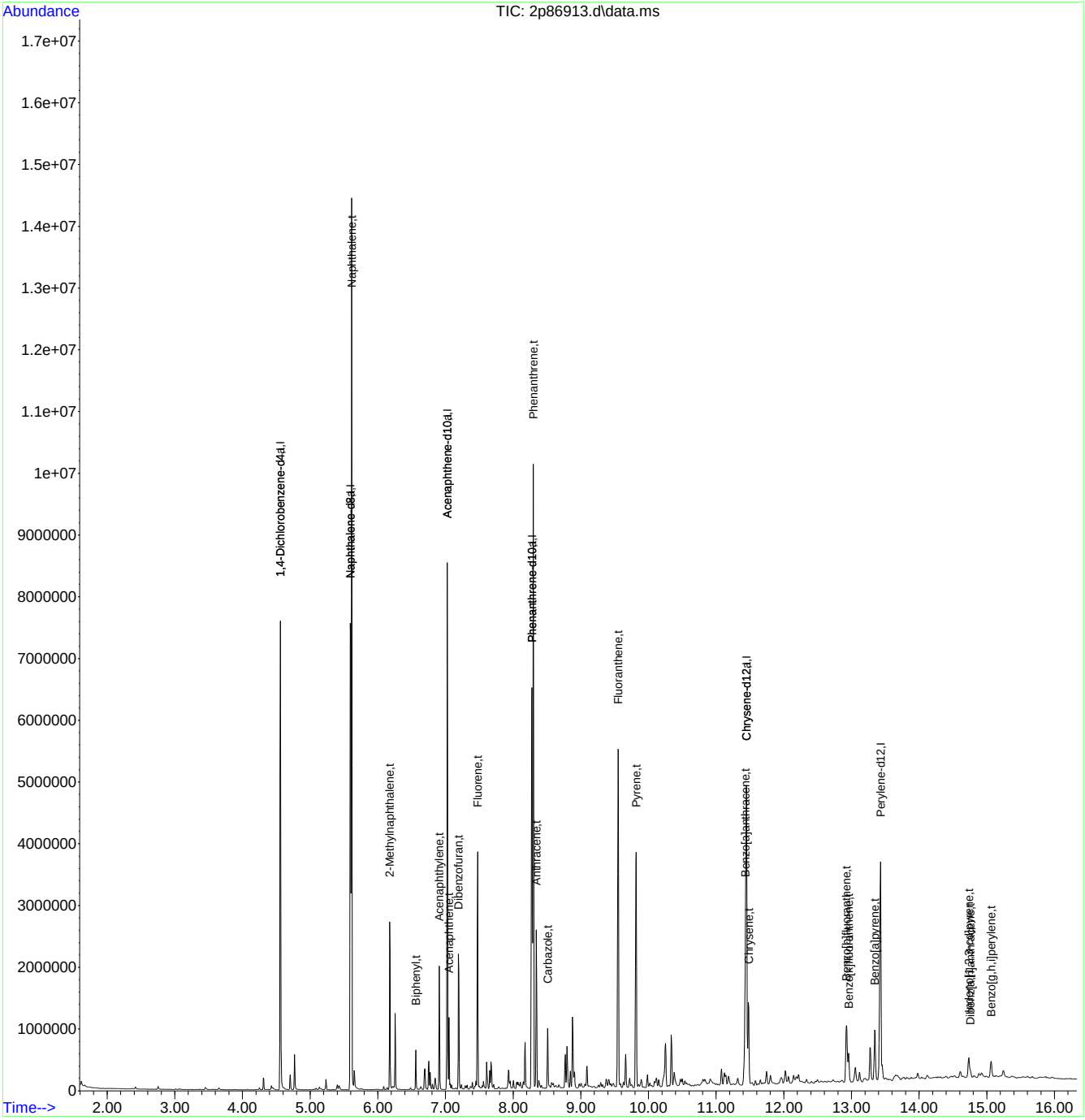
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.561	152	875972	40.00	ppm	0.00
24) Naphthalene-d8	5.593	136	2741203	40.00	ppm	0.00
47) Acenaphthene-d10	7.026	164	1247262	40.00	ppm	0.00
69) Phenanthrene-d10	8.278	188	2223679	40.00	ppm	0.00
83) Chrysene-d12	11.450	240	1815181	40.00	ppm	0.00
91) Perylene-d12	13.429	264	1583431	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.561	152	875972	40.00	ppm	0.00
103) Naphthalene-d8a	5.593	136	2741203	40.00	ppm	0.00
105) Acenaphthene-d10a	7.026	164	1247262	40.00	ppm	0.00
108) Chrysene-d12a	11.450	240	1815181	40.00	ppm	0.00
110) Phenanthrene-d10a	8.278	188	2223679	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
38) Naphthalene	5.614	128	4555370	69.47	ppm	98
44) 2-Methylnaphthalene	6.176	141	480440	11.52	ppm	97
53) Biphenyl	6.561	154	134850	2.70	ppm	97
56) Acenaphthylene	6.909	152	572090	9.38	ppm	100
59) Acenaphthene	7.053	153	192982	5.39	ppm	95
62) Dibenzofuran	7.192	168	621835	12.59	ppm	98
66) Fluorene	7.476	166	801803	18.93	ppm	99
77) Phenanthrene	8.299	178	2995569	54.08	ppm	99
78) Anthracene	8.342	178	754373	13.39	ppm	99
79) Carbazole	8.508	167	330305	5.67	ppm	98
81) Fluoranthene	9.551	202	2197433	27.91	ppm	100
84) Pyrene	9.818	202	1399189	19.81	ppm	99
87) Benzo[a]anthracene	11.434	228	672980	9.87	ppm	98
89) Chrysene	11.482	228	485285	10.03	ppm	98
93) Benzo[b]fluoranthene	12.926	252	514951	9.92	ppm	98
94) Benzo[k]fluoranthene	12.958	252	168308	3.97	ppm	96
95) Benzo[a]pyrene	13.343	252	368570	8.45	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.734	276	174333	3.51	ppm	96
98) Dibenz[a,h]anthracene	14.755	278	45247m	1.17	ppm	
100) Benzo[g,h,i]perylene	15.065	276	158166	4.02	ppm	98

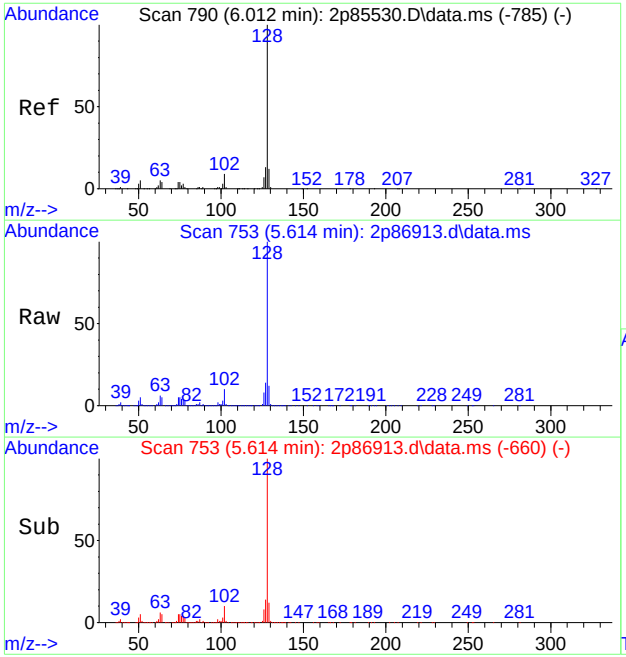
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86913.d
Acq On : 27 Apr 2019 6:09 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,1000
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 04:19:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration

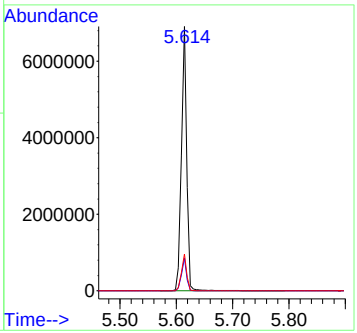


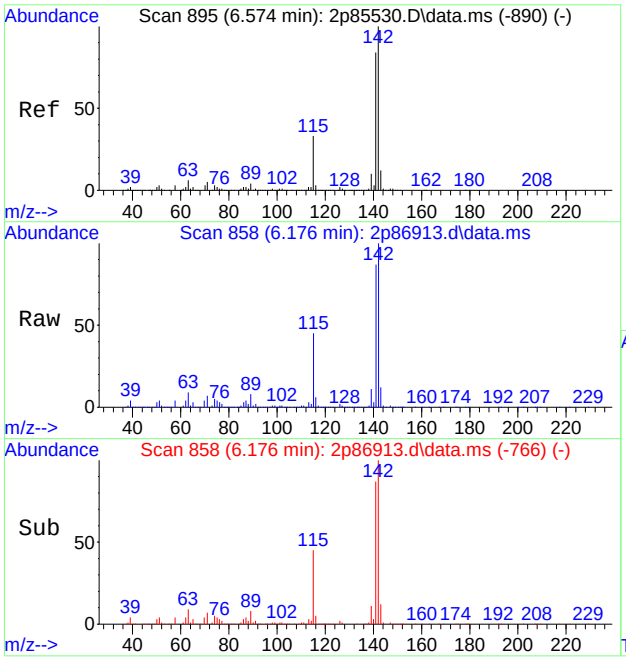


#38
Naphthalene
Concen: 69.47 ppm
RT: 5.614 min Scan# 753
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:128 Resp: 4555370

Ion	Ratio	Lower	Upper
128	100		
129	12.4	0.0	41.0
127	14.0	0.0	43.4

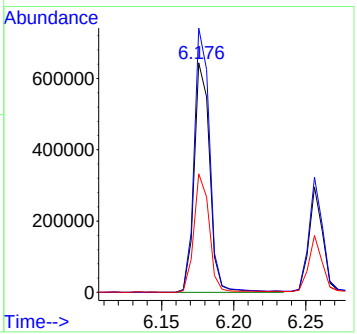


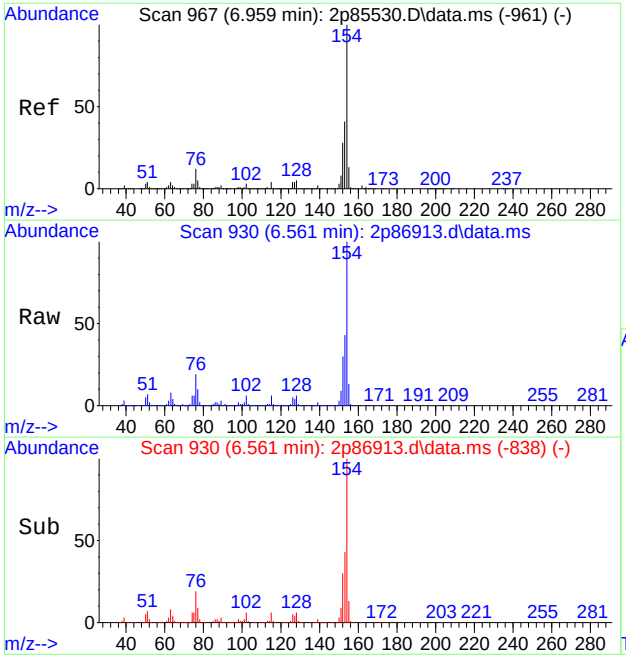


#44
2-Methylnaphthalene
Concen: 11.52 ppm
RT: 6.176 min Scan# 858
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:141 Resp: 480440

Ion	Ratio	Lower	Upper
141	100		
142	115.1	85.9	145.9
115	51.5	16.5	76.5

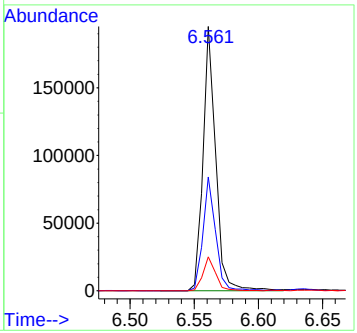


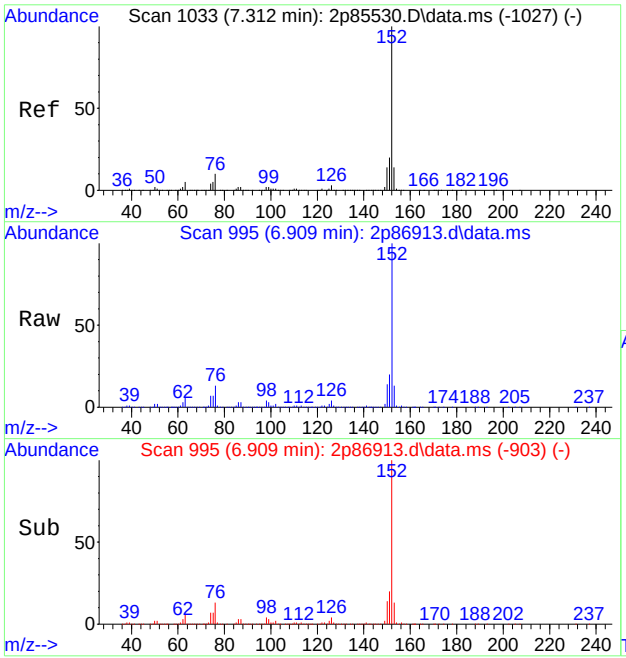


#53
Biphenyl
Concen: 2.70 ppm
RT: 6.561 min Scan# 930
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:154 Resp: 134850

Ion	Ratio	Lower	Upper
154	100		
153	43.0	10.3	70.3
155	12.8	0.0	42.9

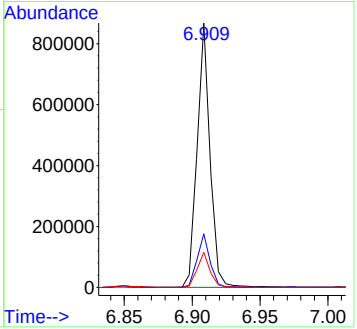


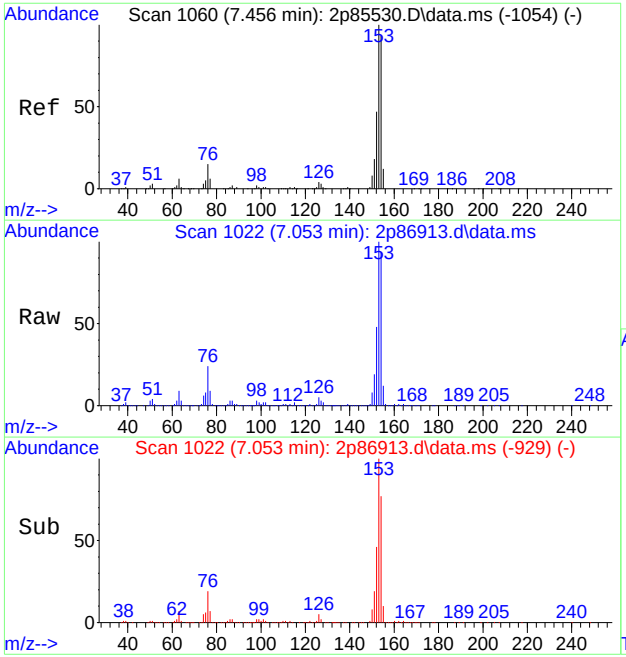


#56
Acenaphthylene
Concen: 9.38 ppm
RT: 6.909 min Scan# 995
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:152 Resp: 572090

Ion	Ratio	Lower	Upper
152	100		
151	20.2	0.0	50.2
153	13.2	0.0	42.9

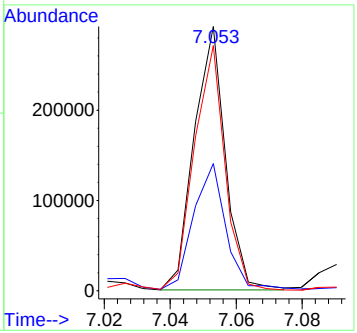


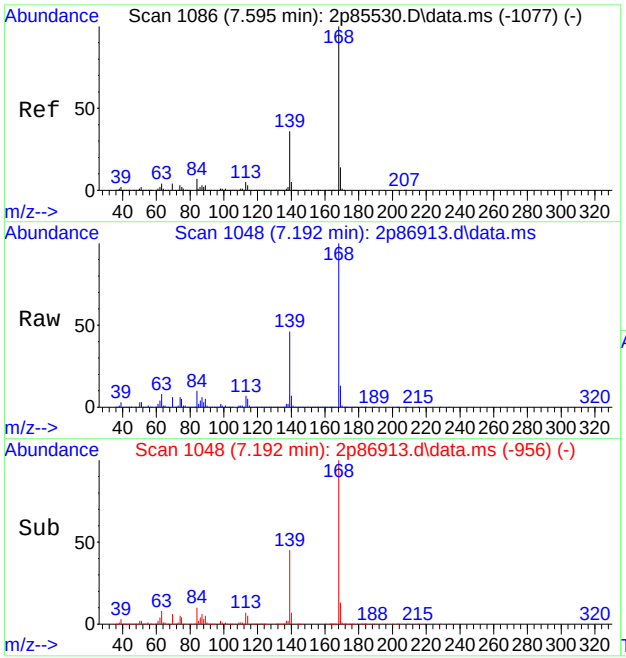


#59
Acenaphthene
Concen: 5.39 ppm
RT: 7.053 min Scan# 1022
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:153 Resp: 192982

Ion	Ratio	Lower	Upper
153	100		
152	47.6	17.9	77.9
154	93.0	56.6	116.6

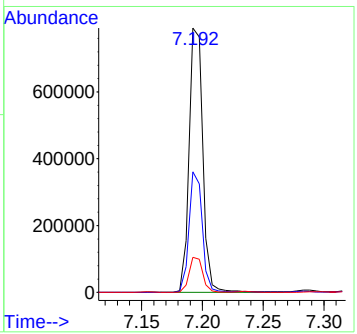


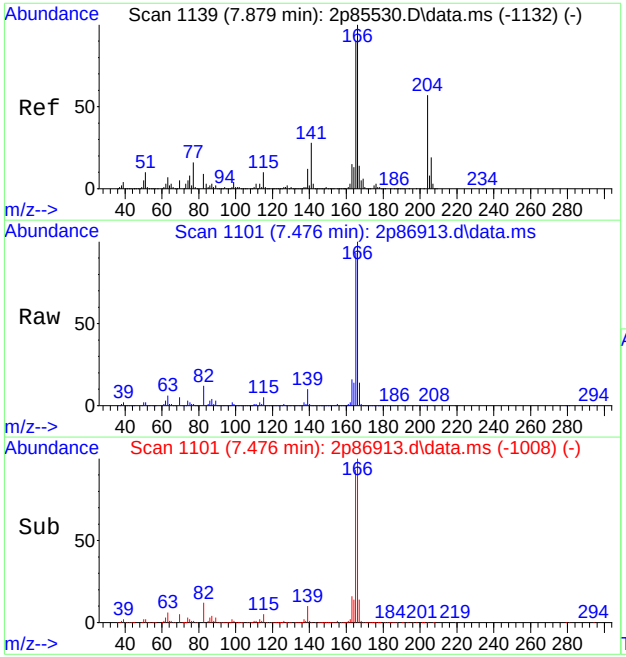


#62
Dibenzofuran
Concen: 12.59 ppm
RT: 7.192 min Scan# 1048
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:168 Resp: 621835

Ion	Ratio	Lower	Upper
168	100		
139	45.6	17.4	77.4
169	13.2	0.0	43.6

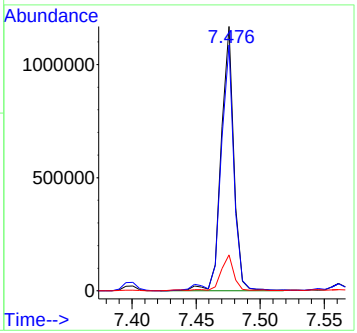


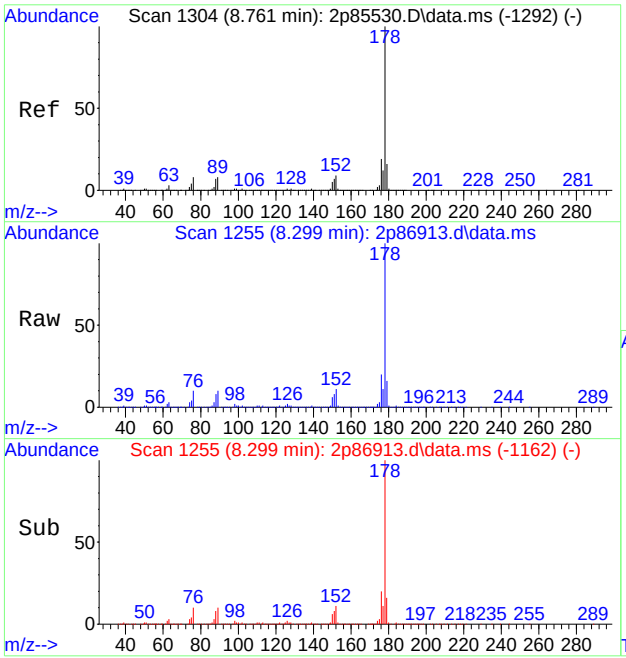


#66
Fluorene
Concen: 18.93 ppm
RT: 7.476 min Scan# 1101
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:166 Resp: 801803

Ion	Ratio	Lower	Upper
166	100		
165	92.8	63.6	123.6
167	13.5	0.0	43.9

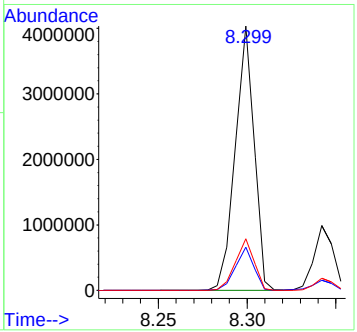


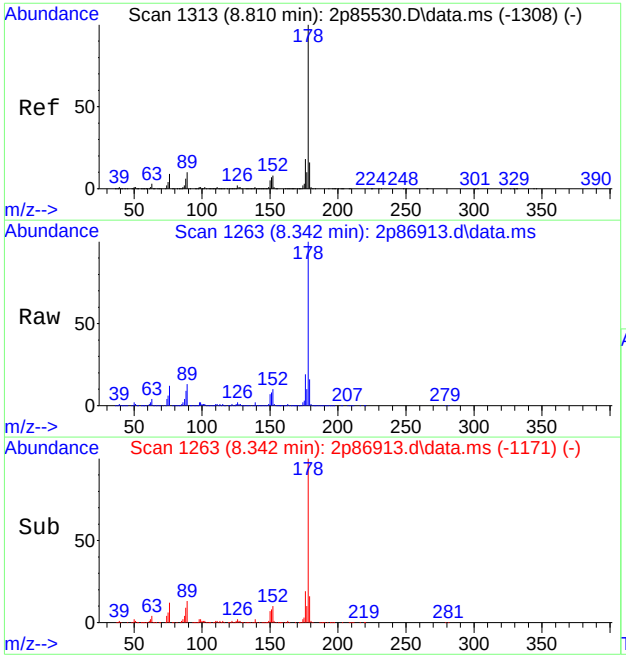


#77
Phenanthrene
Concen: 54.08 ppm
RT: 8.299 min Scan# 1255
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:178 Resp: 2995569

Ion	Ratio	Lower	Upper
178	100		
179	16.3	0.0	45.6
176	19.5	0.0	49.5

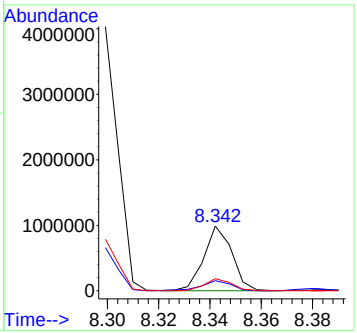


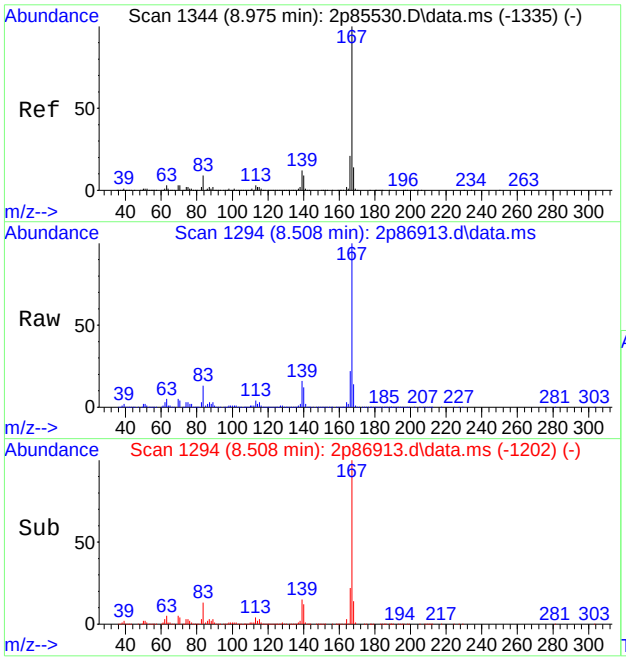


#78
Anthracene
Concen: 13.39 ppm
RT: 8.342 min Scan# 1263
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:178 Resp: 754373

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.8
176	18.7	0.0	49.0

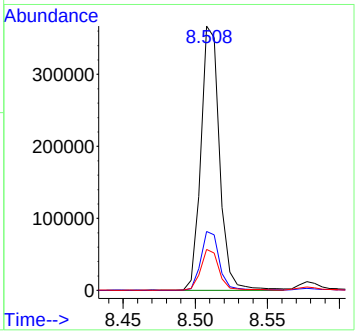


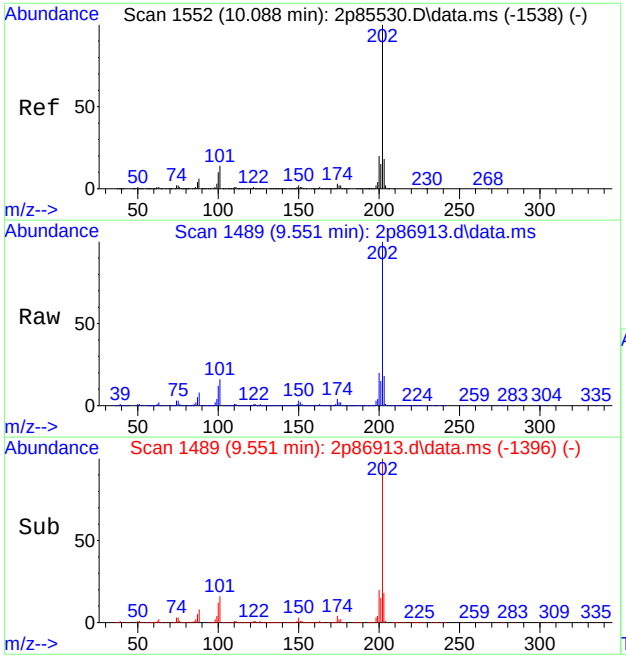


#79
Carbazole
Concen: 5.67 ppm
RT: 8.508 min Scan# 1294
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:167 Resp: 330305

Ion	Ratio	Lower	Upper
167	100		
166	22.2	0.0	51.3
139	15.4	0.0	44.2

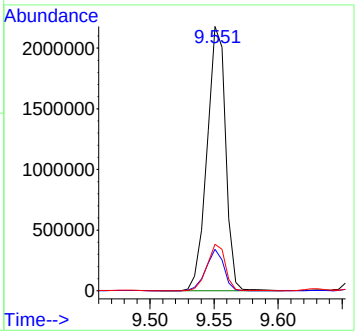


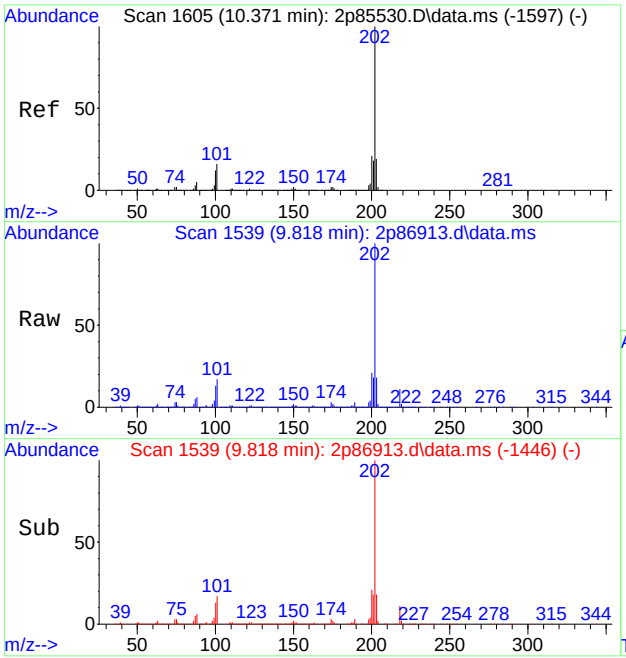


#81
Fluoranthene
Concen: 27.91 ppm
RT: 9.551 min Scan# 1489
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:202 Resp: 2197433

Ion	Ratio	Lower	Upper
202	100		
101	15.7	0.0	45.8
203	17.6	0.0	47.7

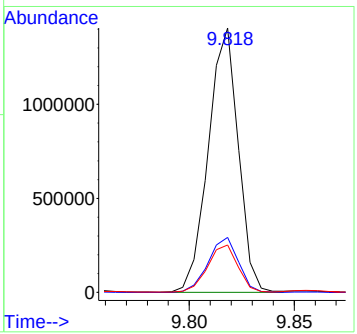


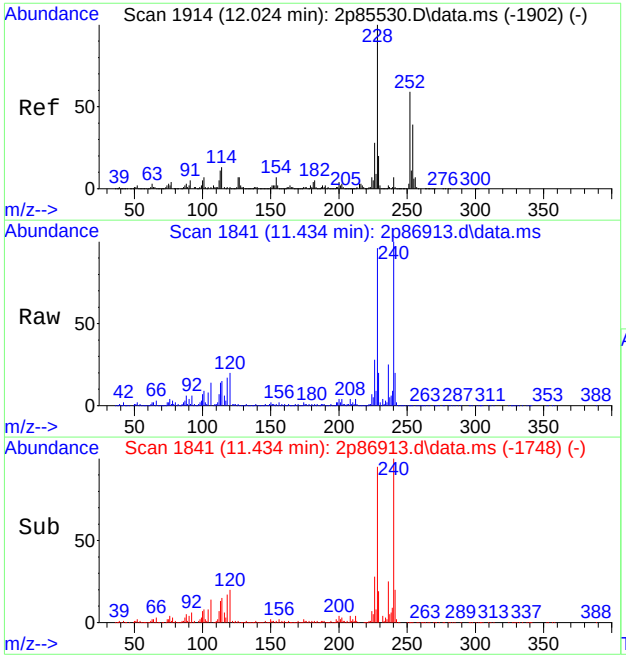


#84
Pyrene
Concen: 19.81 ppm
RT: 9.818 min Scan# 1539
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:202 Resp: 1399189

Ion	Ratio	Lower	Upper
202	100		
200	20.8	0.0	50.3
203	17.8	0.0	48.4

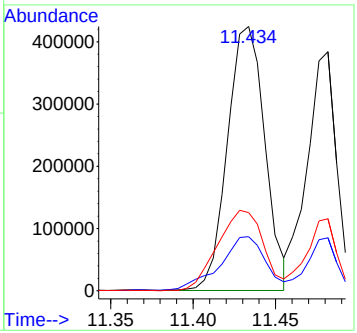


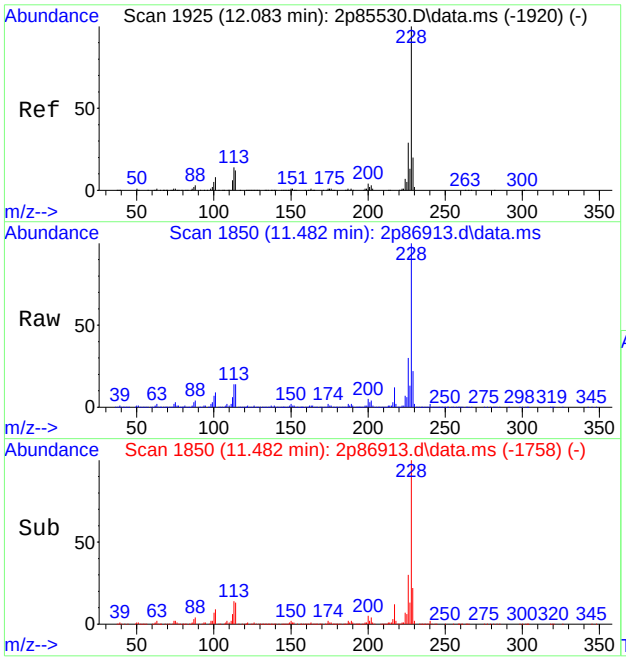


#87
Benzo[a]anthracene
Concen: 9.87 ppm
RT: 11.434 min Scan# 1841
Delta R.T. -0.000 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:228 Resp: 672980

Ion	Ratio	Lower	Upper
228	100		
229	19.9	0.0	50.0
226	29.2	0.0	57.2

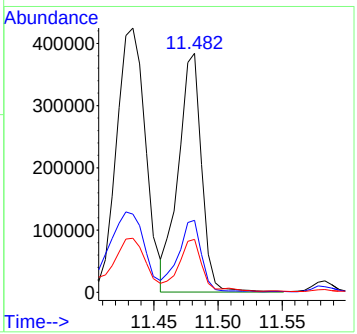


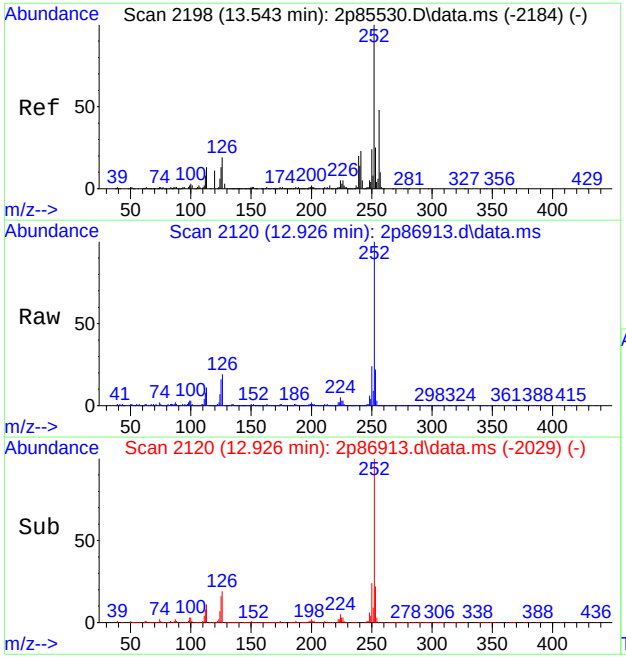


#89
Chrysene
Concen: 10.03 ppm
RT: 11.482 min Scan# 1850
Delta R.T. -0.005 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:228 Resp: 485285

Ion	Ratio	Lower	Upper
228	100		
226	29.7	0.0	59.7
229	21.5	0.0	48.9

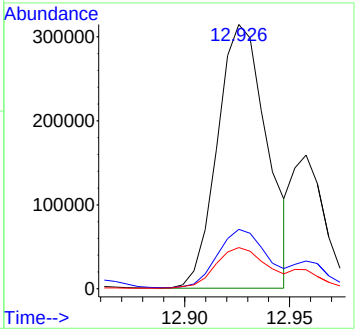


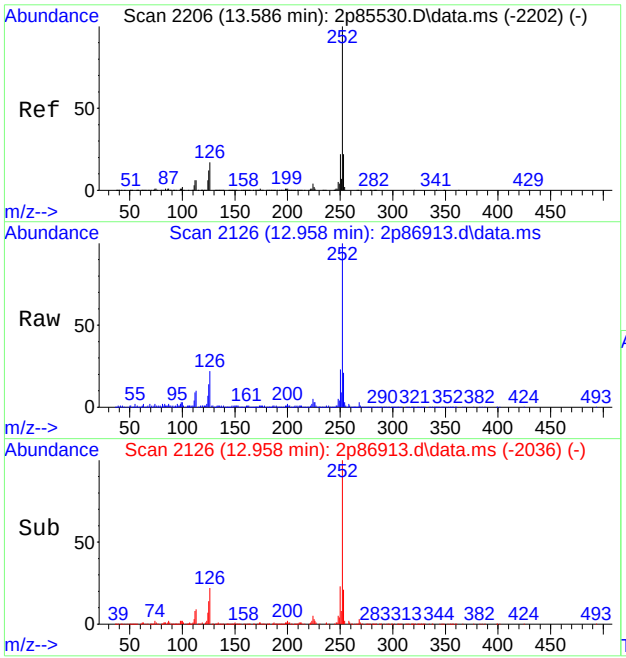


#93
Benzo[b]fluoranthene
Concen: 9.92 ppm
RT: 12.926 min Scan# 2120
Delta R.T. -0.011 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:252 Resp: 514951

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	53.7
125	15.3	0.0	45.2

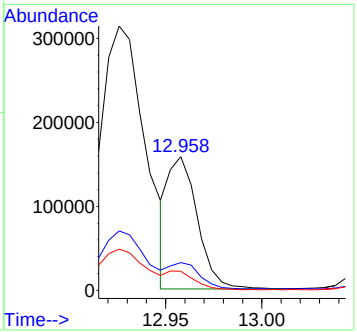


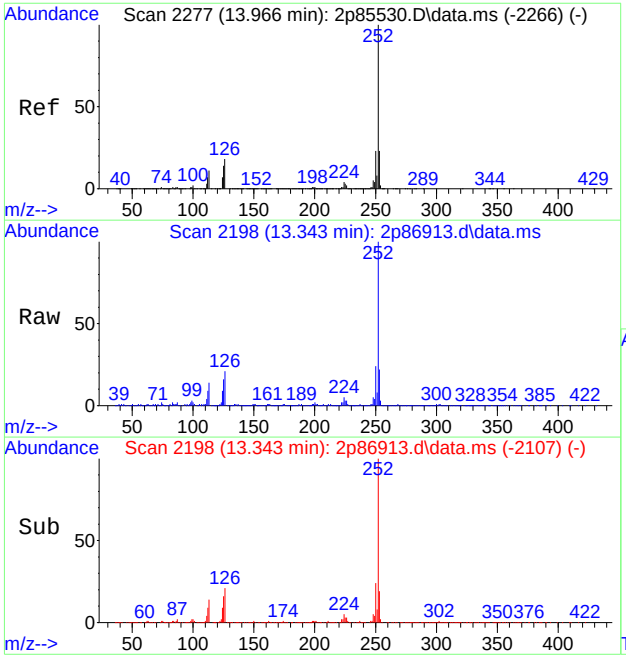


#94
Benzo[k]fluoranthene
Concen: 3.97 ppm
RT: 12.958 min Scan# 2126
Delta R.T. -0.016 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:252 Resp: 168308

Ion	Ratio	Lower	Upper
252	100		
253	19.2	0.0	51.9
125	12.7	0.0	42.8

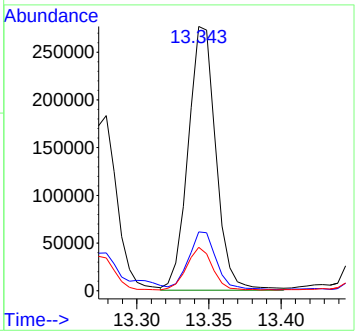


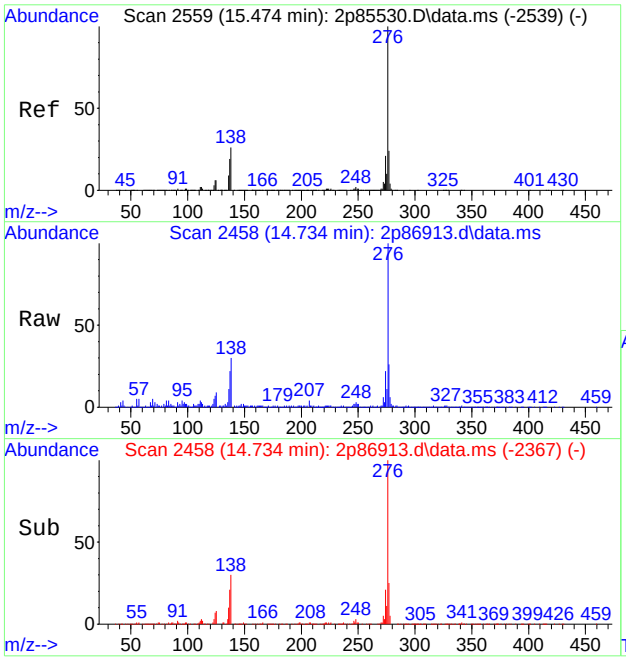


#95
Benzo[a]pyrene
Concen: 8.45 ppm
RT: 13.343 min Scan# 2198
Delta R.T. -0.011 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:252 Resp: 368570

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.8
125	16.2	0.0	44.3

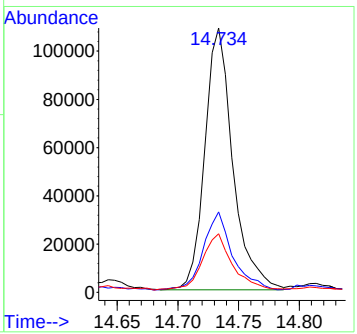


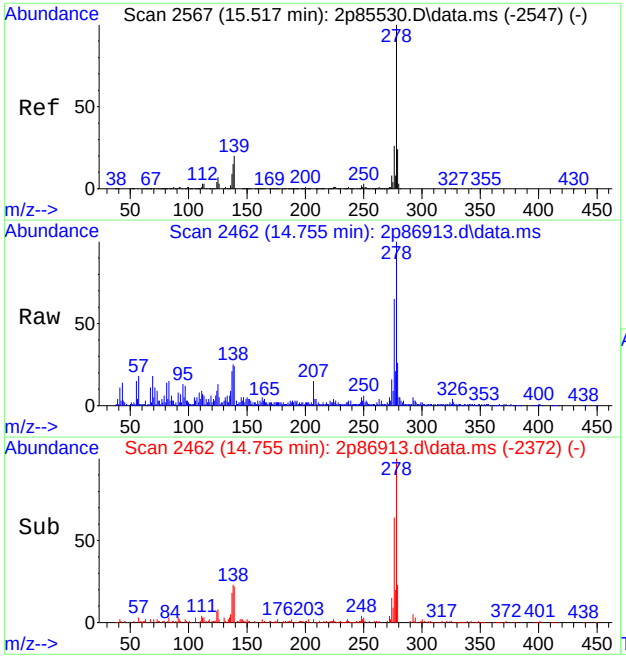


#96
Indeno[1,2,3-cd]pyrene
Concen: 3.51 ppm
RT: 14.734 min Scan# 2458
Delta R.T. -0.011 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:276 Resp: 174333

Ion	Ratio	Lower	Upper
276	100		
138	29.7	0.0	57.6
137	21.2	0.0	49.9

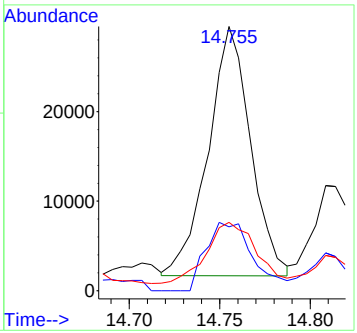


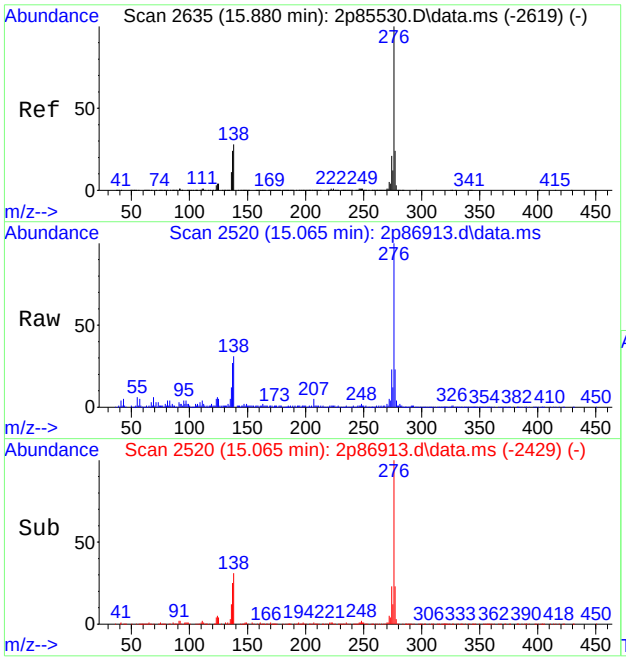


#98
Dibenz[a,h]anthracene
Concen: 1.17 ppm m
RT: 14.755 min Scan# 2462
Delta R.T. -0.016 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:278 Resp: 45247

Ion	Ratio	Lower	Upper
278	100		
139	24.2	0.0	51.9
279	25.9	0.0	53.6

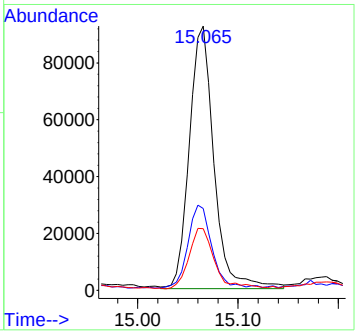




#100
Benzo[g,h,i]perylene
Concen: 4.02 ppm
RT: 15.065 min Scan# 2520
Delta R.T. -0.011 min
Lab File: 2p86913.d
Acq: 27 Apr 2019 6:09 am

Tgt Ion:276 Resp: 158166

Ion	Ratio	Lower	Upper
276	100		
138	30.3	1.1	61.1
277	22.6	0.0	54.3



Manual Integration Approval Summary

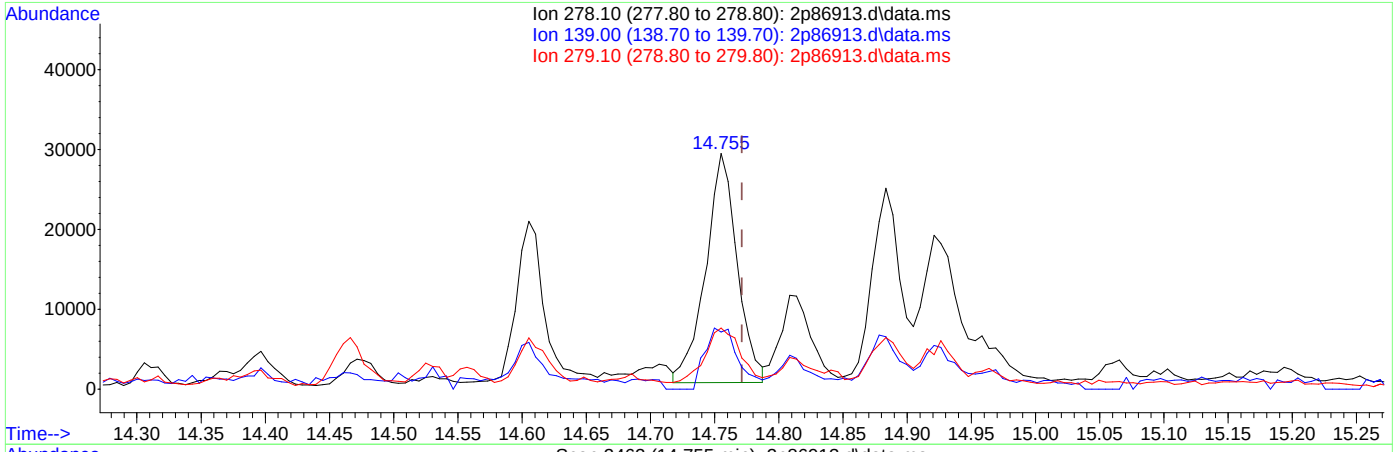
Sample Number:	JC86406-12	**Method:**	SW846 8270D
Lab FileID:	2P86913.D	**Analyst approved:**	04/29/19 05:59 Michelle Co
Injection Time:	04/27/19 06:09	**Supervisor approved:**	04/29/19 12:14 Kristi Schollenberger

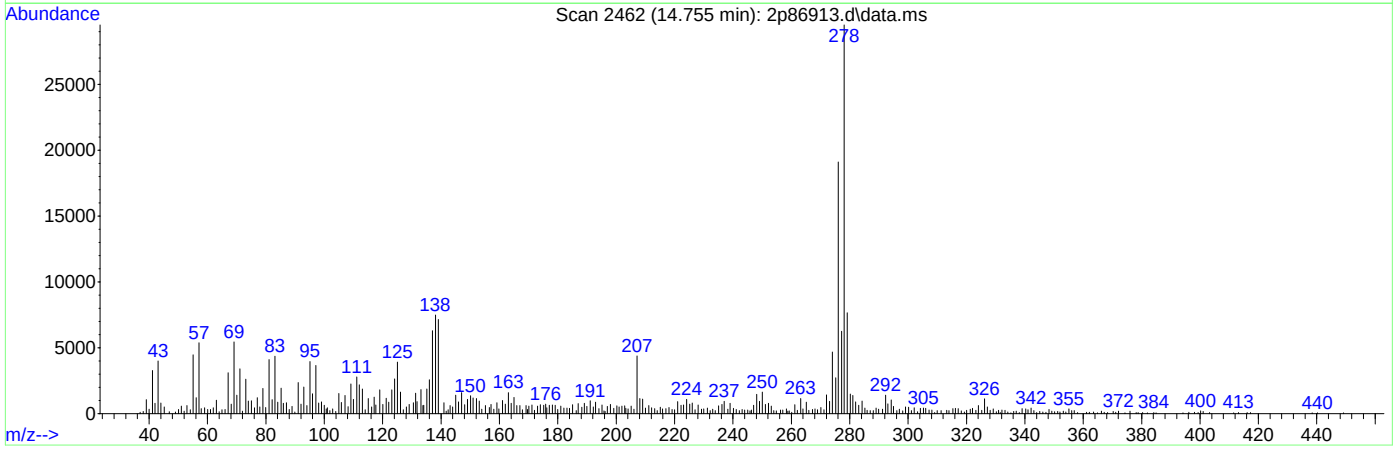
Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		14.76	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86913.d
Acq On : 27 Apr 2019 6:09 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,1000
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:26:20 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration





TIC: 2p86913.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.755min (-0.016) 1.26ppm

response 48958

Ion	Exp%	Act%
278.10	100	100
139.00	21.90	24.26
279.10	23.60	24.05
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 12:14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 04:44:17 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration

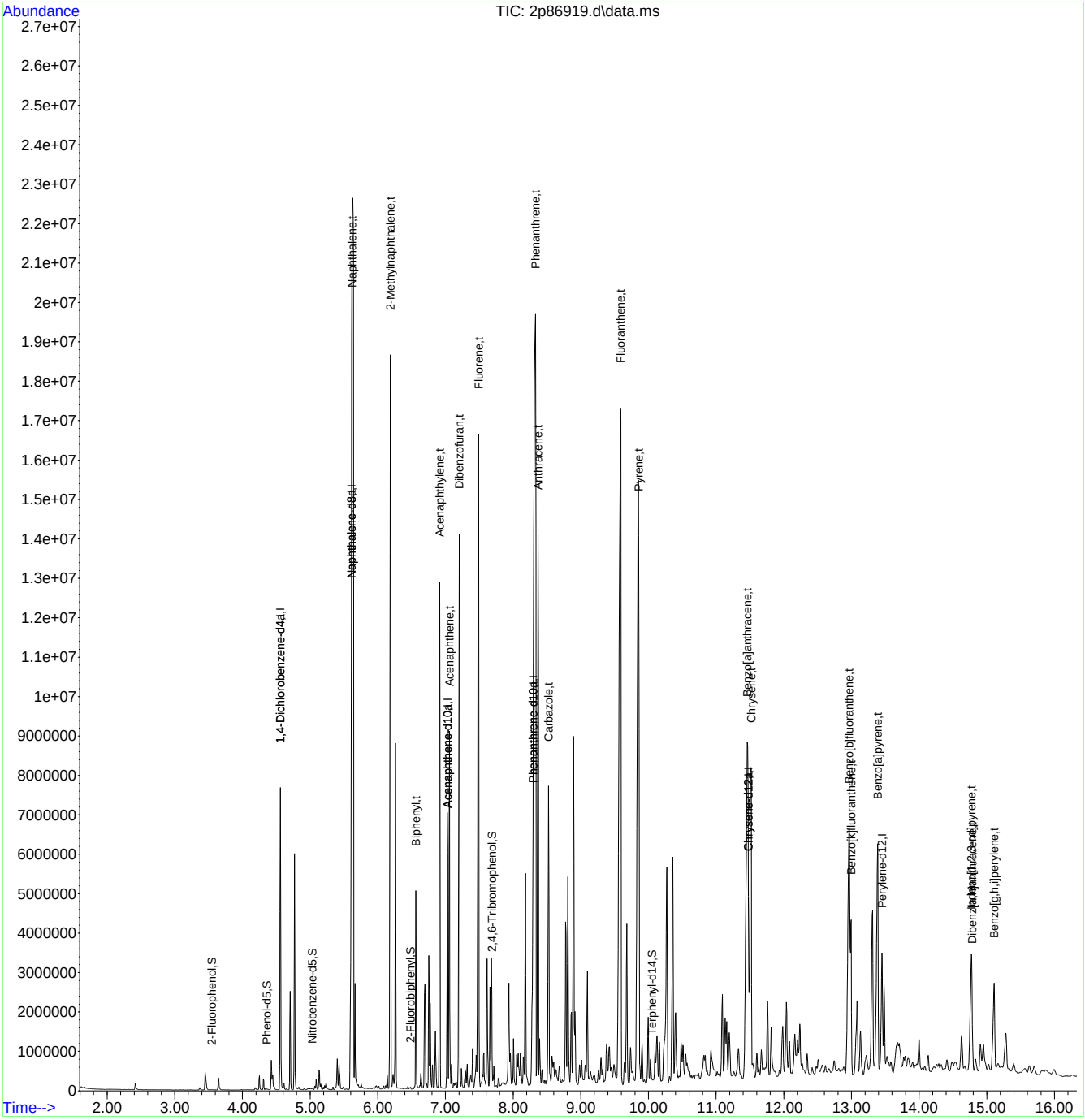
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.561	152	856367	40.00	ppm	0.00
24) Naphthalene-d8	5.609	136	2400864	40.00	ppm	0.02
47) Acenaphthene-d10	7.032	164	934325	40.00	ppm	0.00
69) Phenanthrene-d10	8.294	188	1716979	40.00	ppm	0.02
83) Chrysene-d12	11.476	240	1452100	40.00	ppm	0.03
91) Perylene-d12	13.450	264	1358990	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4a	4.561	152	856367	40.00	ppm	0.00
103) Naphthalene-d8a	5.609	136	2400864	40.00	ppm	0.02
105) Acenaphthene-d10a	7.032	164	934325	40.00	ppm	0.00
108) Chrysene-d12a	11.476	240	1452075	40.00	ppm	0.03
110) Phenanthrene-d10a	8.294	188	1716979	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.544	112	5920	0.14	ppm	0.03
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.28%#		
8) Phenol-d5	4.357	99	8291m	0.18	ppm	0.03
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.36%#		
25) Nitrobenzene-d5	5.031	82	9878	0.31	ppm	0.01
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.62%#		
51) 2-Fluorobiphenyl	6.486	172	11399	0.35	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.70%#		
73) 2,4,6-Tribromophenol	7.684	330	1272	0.21	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.42%#		
85) Terphenyl-d14	10.054	244	10975	0.30	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.60%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
38) Naphthalene	5.620	128	17792570m	309.81	ppm	
44) 2-Methylnaphthalene	6.187	141	3729230	102.10	ppm	95
53) Biphenyl	6.561	154	1139594	30.44	ppm	100
56) Acenaphthylene	6.914	152	4482154	98.07	ppm	98
59) Acenaphthene	7.058	153	1565118	58.35	ppm	94
62) Dibenzofuran	7.203	168	5114476	138.25	ppm	88
66) Fluorene	7.492	166	5707969	179.91	ppm	99
77) Phenanthrene	8.331	178	17323339	405.02	ppm	97
78) Anthracene	8.369	178	5803633	133.44	ppm	99
79) Carbazole	8.524	167	2873993	63.91	ppm	100
81) Fluoranthene	9.588	202	14703170	241.88	ppm	96
84) Pyrene	9.856	202	10558114	186.86	ppm	98
87) Benzo[a]anthracene	11.460	228	5515363	101.12	ppm	98
89) Chrysene	11.519	228	4211804	108.85	ppm	95
93) Benzo[b]fluoranthene	12.963	252	5125401	115.10	ppm	97
94) Benzo[k]fluoranthene	12.995	252	1127413	30.96	ppm	94
95) Benzo[a]pyrene	13.386	252	3421212	91.42	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.771	276	1768087	41.45	ppm	98
98) Dibenz[a,h]anthracene	14.782	278	469981m	14.15	ppm	
100) Benzo[g,h,i]perylene	15.108	276	1465642	43.41	ppm	96

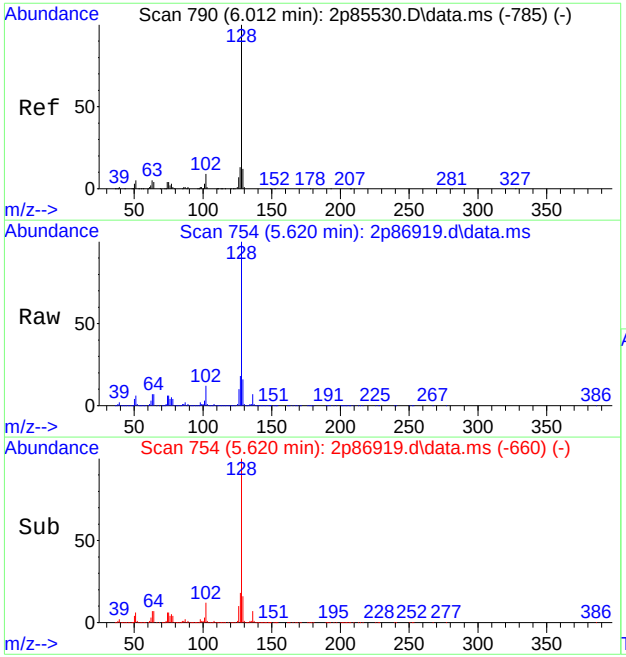
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 04:44:17 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration

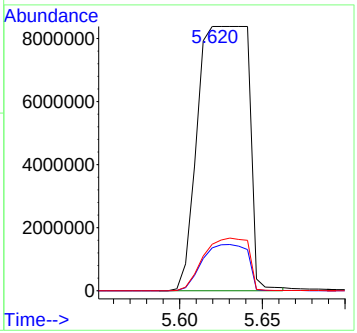


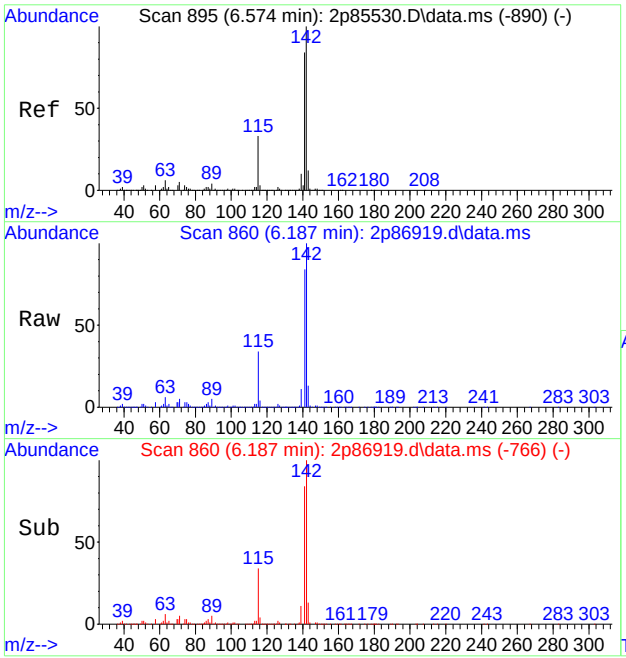


#38
Naphthalene
Concen: 309.81 ppm m
RT: 5.620 min Scan# 754
Delta R.T. 0.005 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:128 Resp:17792570

Ion	Ratio	Lower	Upper
128	100		
129	16.2	0.0	41.0
127	17.6	0.0	43.4

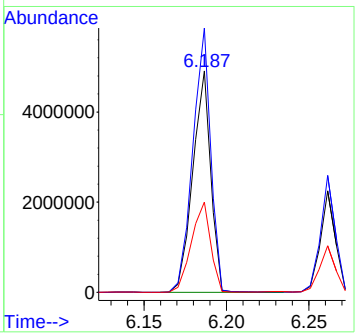


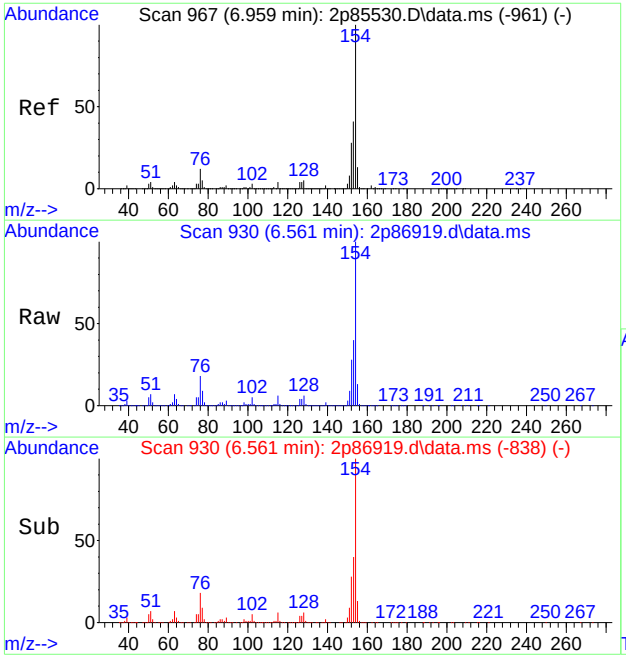


#44
2-Methylnaphthalene
Concen: 102.10 ppm
RT: 6.187 min Scan# 860
Delta R.T. 0.005 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:141 Resp: 3729230

Ion	Ratio	Lower	Upper
141	100		
142	119.4	85.9	145.9
115	40.6	16.5	76.5

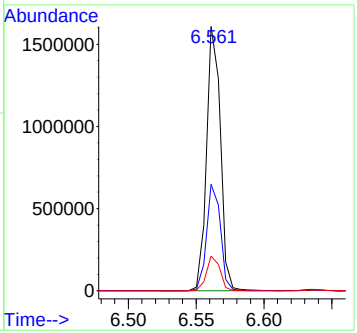


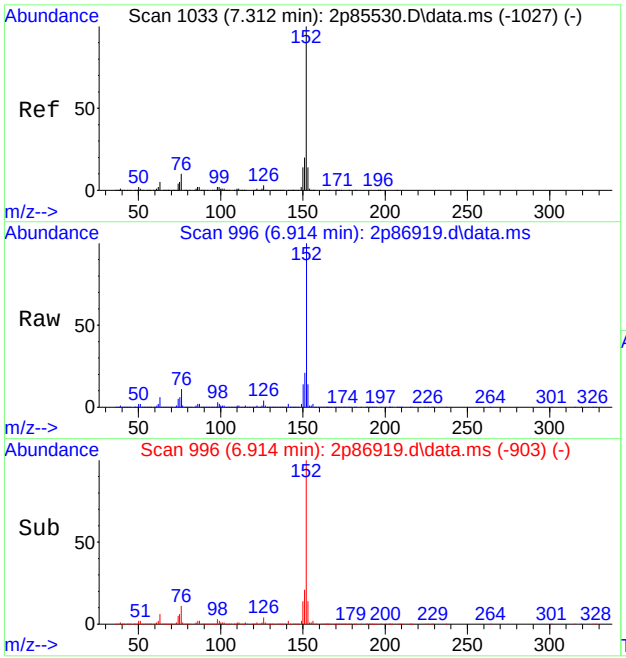


#53
Biphenyl
Concen: 30.44 ppm
RT: 6.561 min Scan# 930
Delta R.T. -0.005 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:154 Resp: 1139594

Ion	Ratio	Lower	Upper
154	100		
153	40.3	10.3	70.3
155	13.1	0.0	42.9

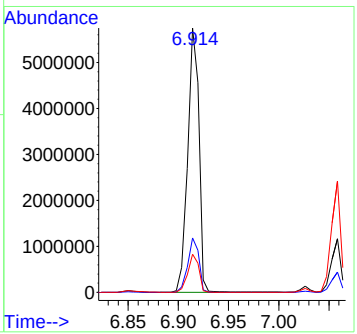


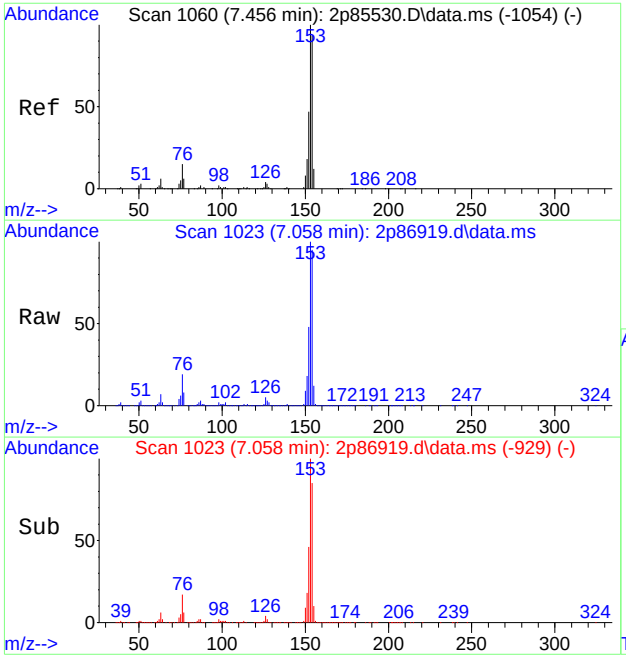


#56
Acenaphthylene
Concen: 98.07 ppm
RT: 6.914 min Scan# 996
Delta R.T. -0.000 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:152 Resp: 4482154

Ion	Ratio	Lower	Upper
152	100		
151	20.6	0.0	50.2
153	14.5	0.0	42.9

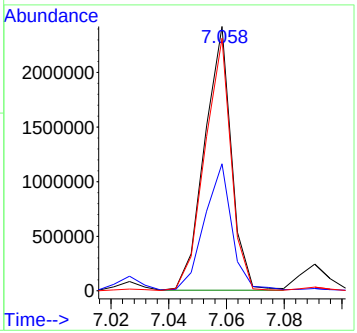


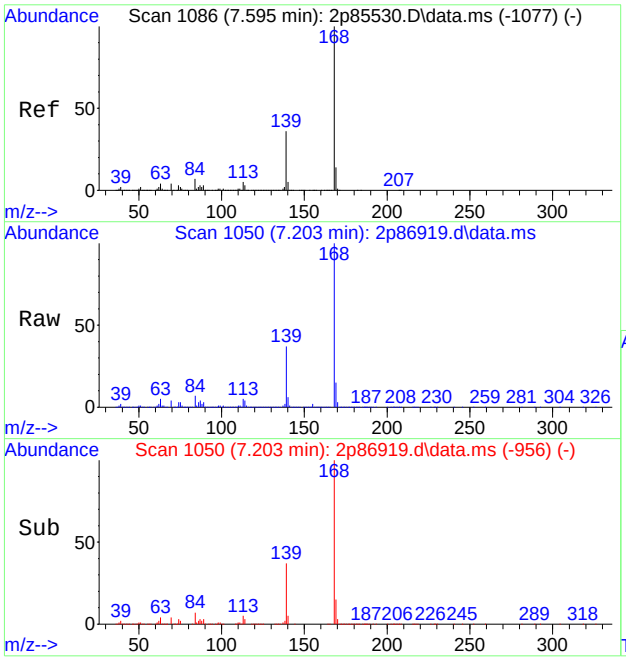


#59
Acenaphthene
Concen: 58.35 ppm
RT: 7.058 min Scan# 1023
Delta R.T. 0.005 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:153 Resp: 1565118

Ion	Ratio	Lower	Upper
153	100		
152	47.8	17.9	77.9
154	95.8	56.6	116.6

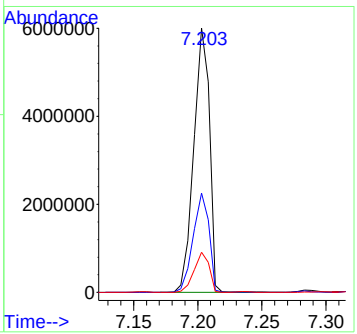


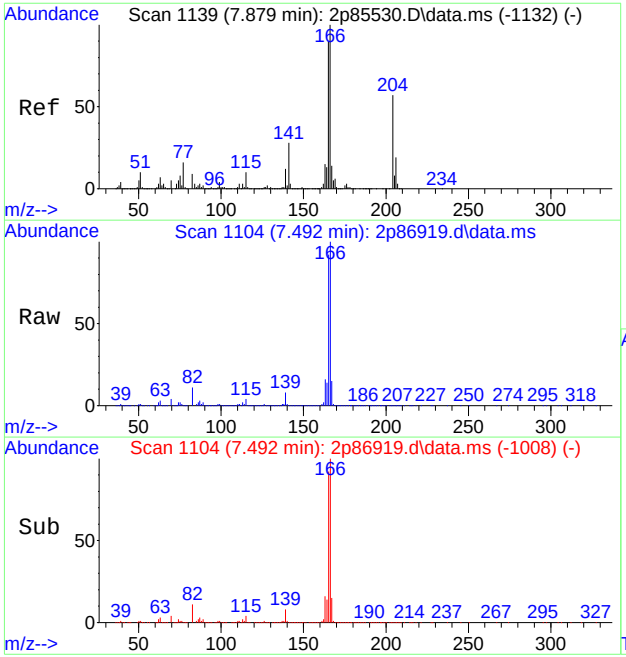


#62
Dibenzofuran
Concen: 138.25 ppm
RT: 7.203 min Scan# 1050
Delta R.T. 0.005 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:168 Resp: 5114476

Ion	Ratio	Lower	Upper
168	100		
139	37.5	17.4	77.4
169	15.1	0.0	43.6

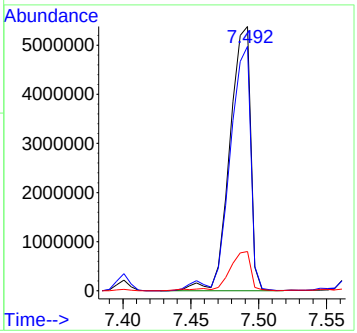


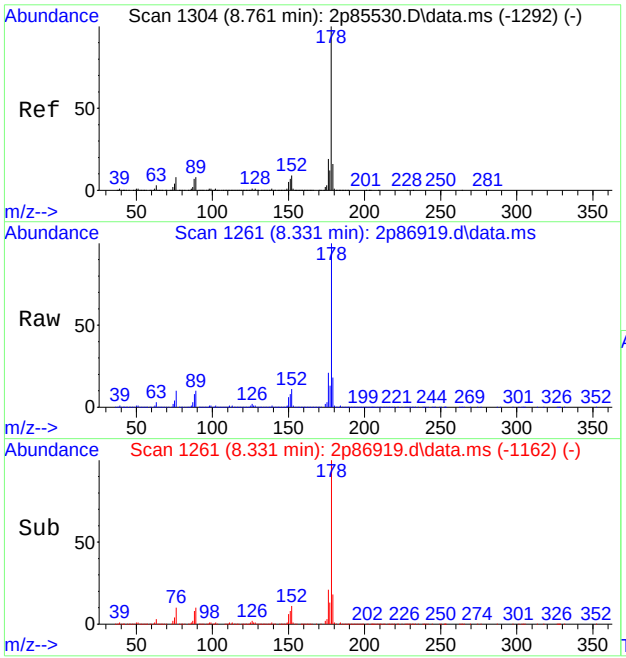


#66
Fluorene
Concen: 179.91 ppm
RT: 7.492 min Scan# 1104
Delta R.T. 0.016 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:166 Resp: 5707969

Ion	Ratio	Lower	Upper
166	100		
165	92.4	63.6	123.6
167	14.8	0.0	43.9

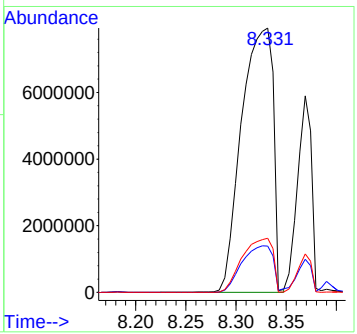


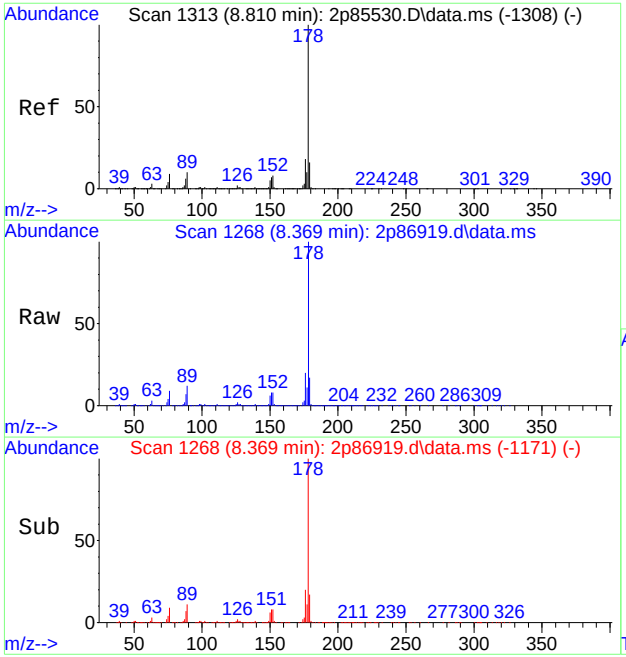


#77
Phenanthrene
Concen: 405.02 ppm
RT: 8.331 min Scan# 1261
Delta R.T. 0.032 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:178 Resp:17323339

Ion	Ratio	Lower	Upper
178	100		
179	16.9	0.0	45.6
176	20.5	0.0	49.5

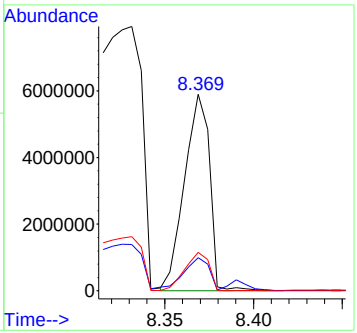


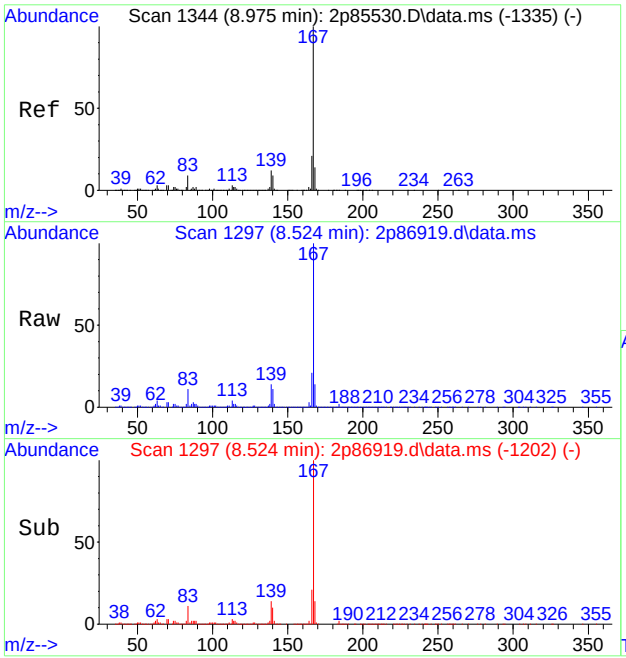


#78
Anthracene
Concen: 133.44 ppm
RT: 8.369 min Scan# 1268
Delta R.T. 0.021 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:178 Resp: 5803633

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	45.8
176	19.6	0.0	49.0

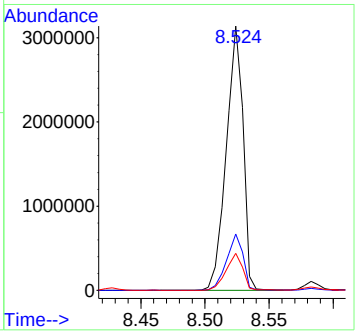


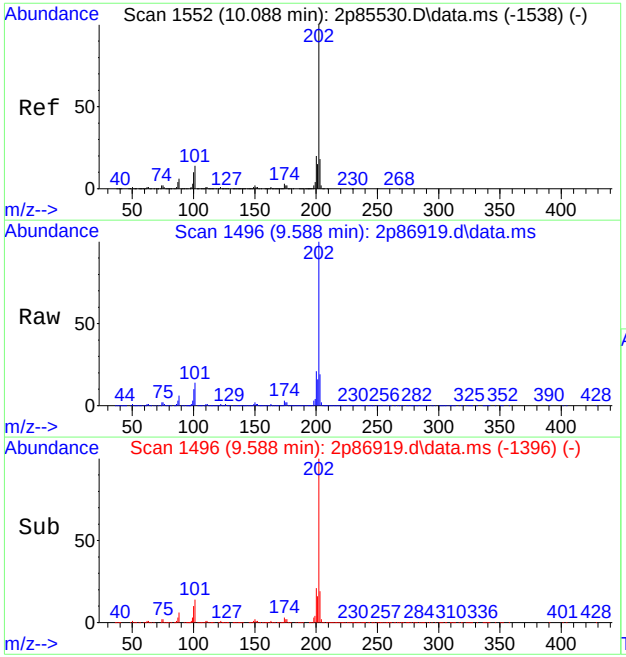


#79
Carbazole
Concen: 63.91 ppm
RT: 8.524 min Scan# 1297
Delta R.T. 0.011 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:167 Resp: 2873993

Ion	Ratio	Lower	Upper
167	100		
166	21.2	0.0	51.3
139	13.9	0.0	44.2

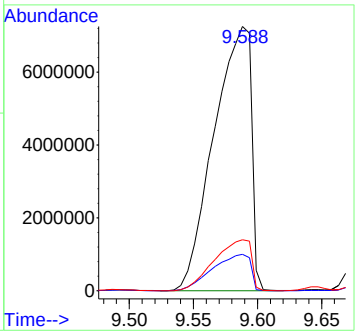


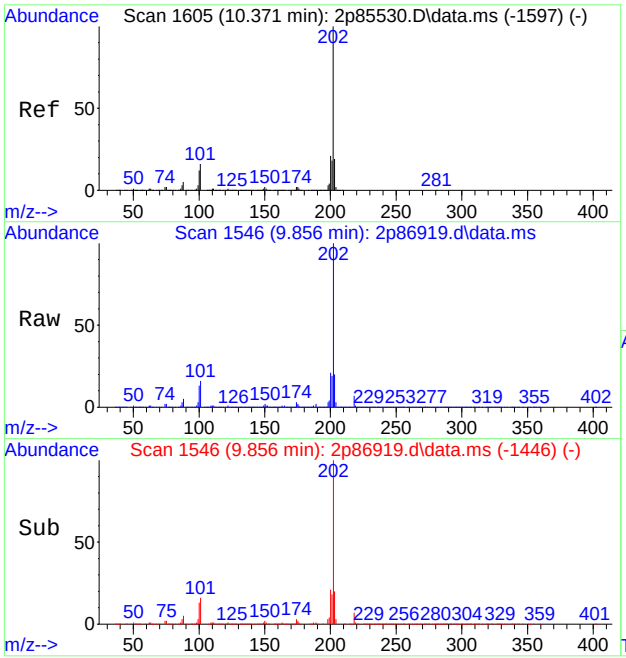


#81
Fluoranthene
Concen: 241.88 ppm
RT: 9.588 min Scan# 1496
Delta R.T. 0.037 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:202 Resp:14703170

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	45.8
203	19.2	0.0	47.7

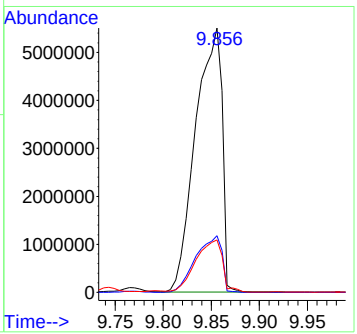


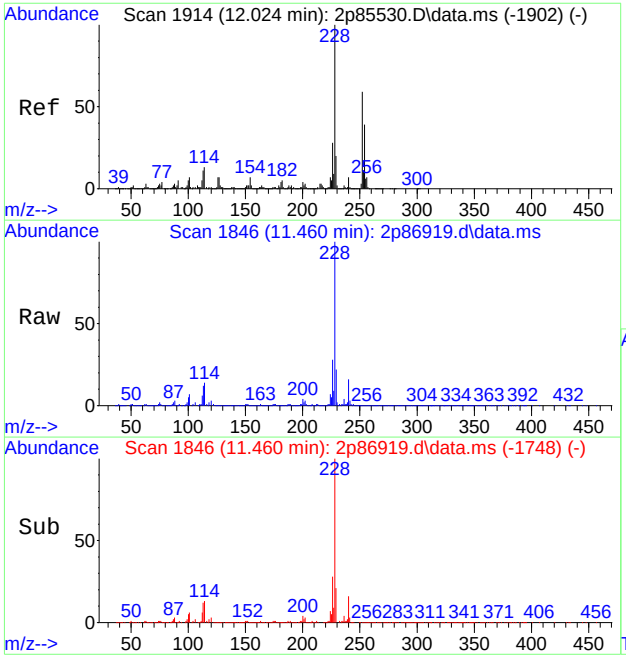


#84
Pyrene
Concen: 186.86 ppm
RT: 9.856 min Scan# 1546
Delta R.T. 0.037 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:202 Resp:10558114

Ion	Ratio	Lower	Upper
202	100		
200	21.4	0.0	50.3
203	19.5	0.0	48.4

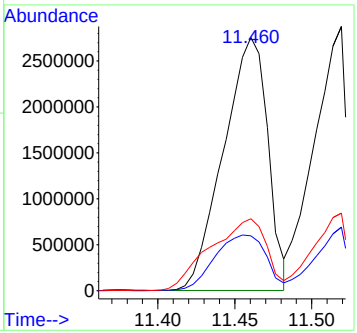


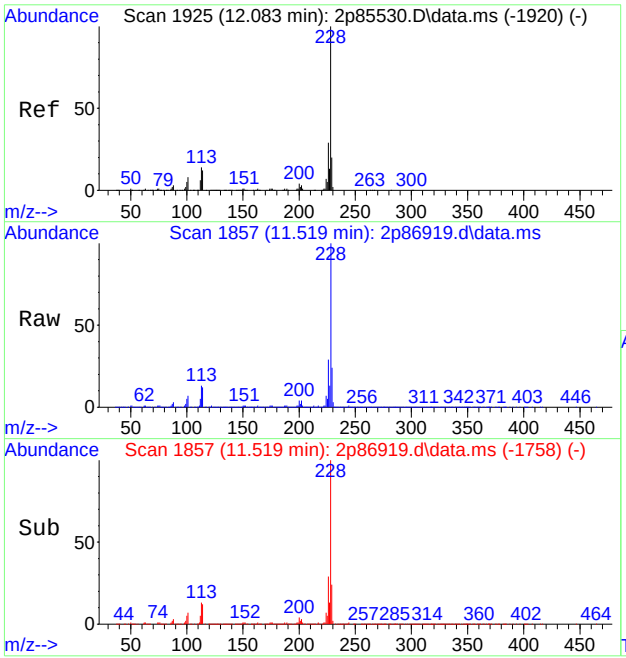


#87
Benzo[a]anthracene
Concen: 101.12 ppm
RT: 11.460 min Scan# 1846
Delta R.T. 0.027 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:228 Resp: 5515363

Ion	Ratio	Lower	Upper
228	100		
229	21.4	0.0	50.0
226	28.1	0.0	57.2

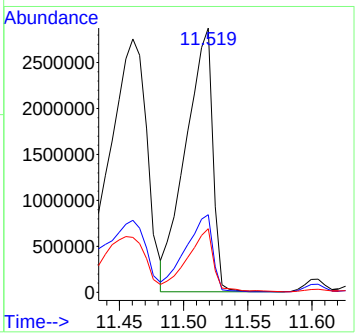


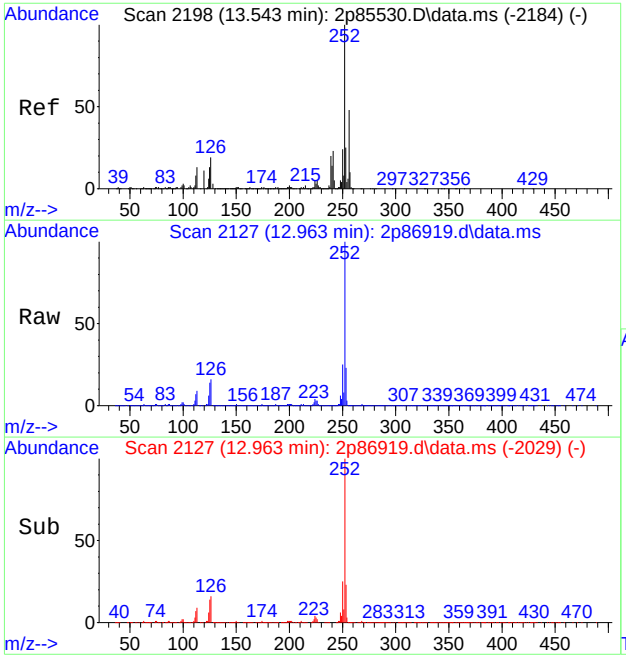


#89
Chrysene
Concen: 108.85 ppm
RT: 11.519 min Scan# 1857
Delta R.T. 0.032 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:228 Resp: 4211804

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.7
229	24.0	0.0	48.9

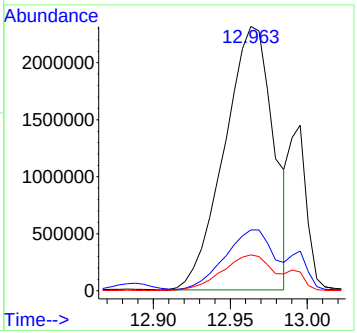


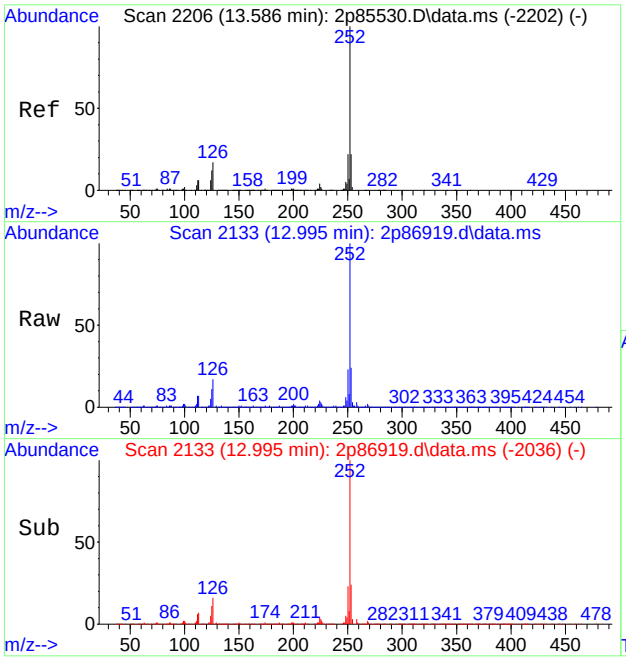


#93
Benzo[b]fluoranthene
Concen: 115.10 ppm
RT: 12.963 min Scan# 2127
Delta R.T. 0.027 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:252 Resp: 5125401

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	53.7
125	13.5	0.0	45.2

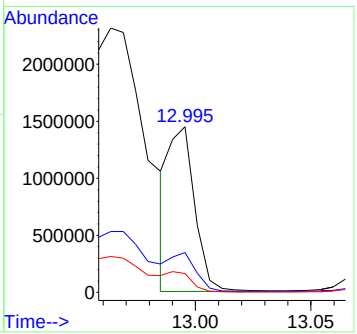


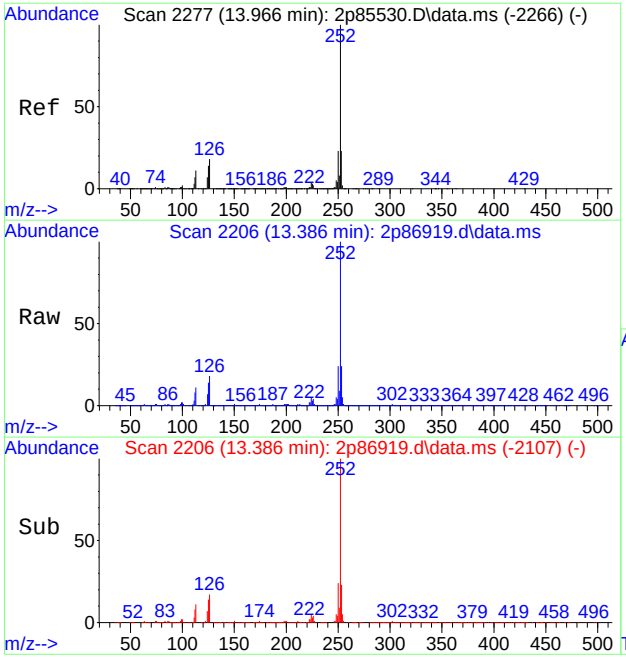


#94
Benzo[k]fluoranthene
Concen: 30.96 ppm
RT: 12.995 min Scan# 2133
Delta R.T. 0.021 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:252 Resp: 1127413

Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	51.9
125	9.8	0.0	42.8

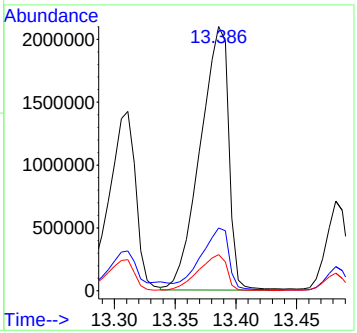


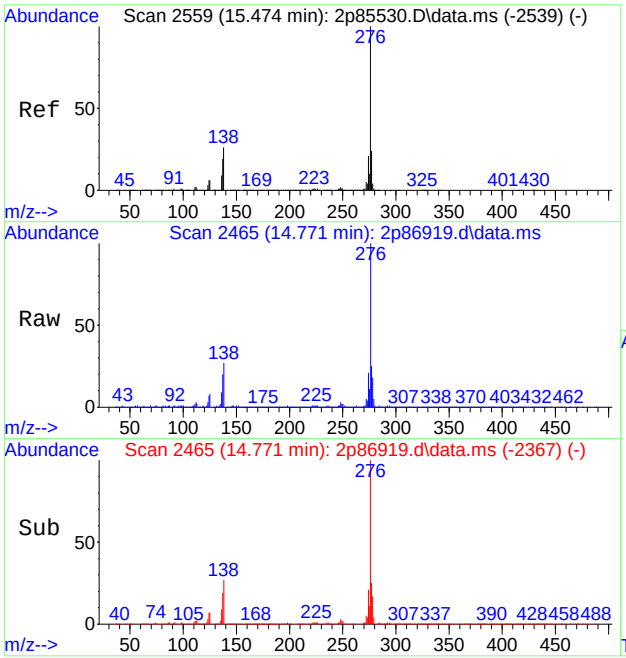


#95
Benzo[a]pyrene
Concen: 91.42 ppm
RT: 13.386 min Scan# 2206
Delta R.T. 0.032 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:252 Resp: 3421212

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.8
125	13.6	0.0	44.3

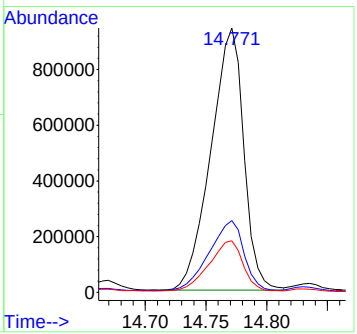


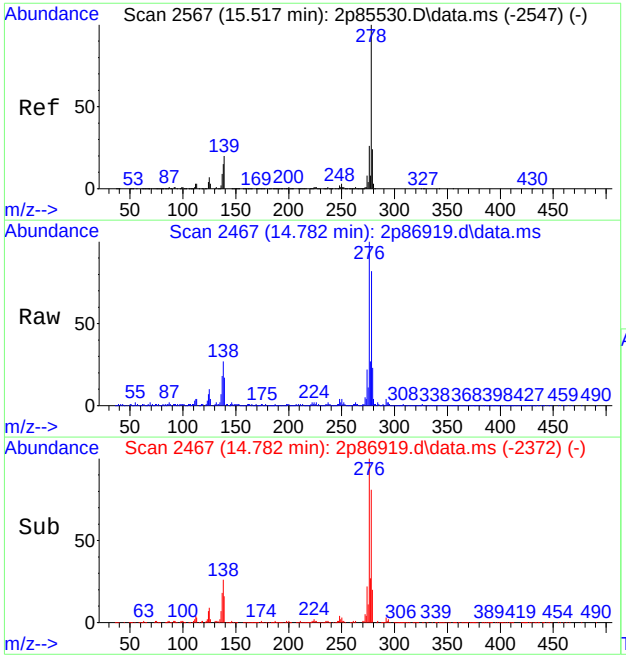


#96
Indeno[1,2,3-cd]pyrene
Concen: 41.45 ppm
RT: 14.771 min Scan# 2465
Delta R.T. 0.027 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:276 Resp: 1768087

Ion	Ratio	Lower	Upper
276	100		
138	26.7	0.0	57.6
137	19.2	0.0	49.9

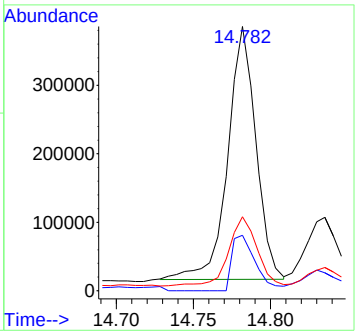


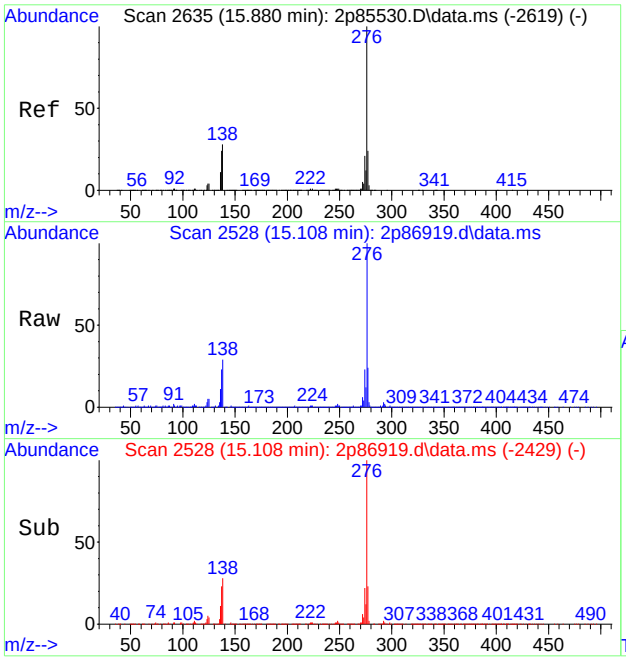


#98
Dibenz[a,h]anthracene
Concen: 14.15 ppm m
RT: 14.782 min Scan# 2467
Delta R.T. 0.011 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:278 Resp: 469981

Ion	Ratio	Lower	Upper
278	100		
139	21.0	0.0	51.9
279	28.0	0.0	53.6

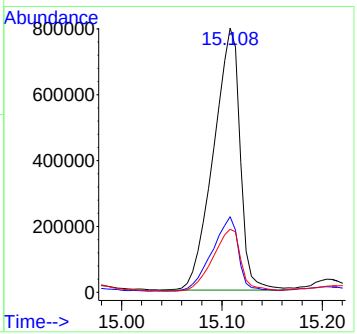




#100
Benzo[g,h,i]perylene
Concen: 43.41 ppm
RT: 15.108 min Scan# 2528
Delta R.T. 0.032 min
Lab File: 2p86919.d
Acq: 27 Apr 2019 8:16 am

Tgt Ion:276 Resp: 1465642

Ion	Ratio	Lower	Upper
276	100		
138	28.2	1.1	61.1
277	23.4	0.0	54.3



Manual Integration Approval Summary

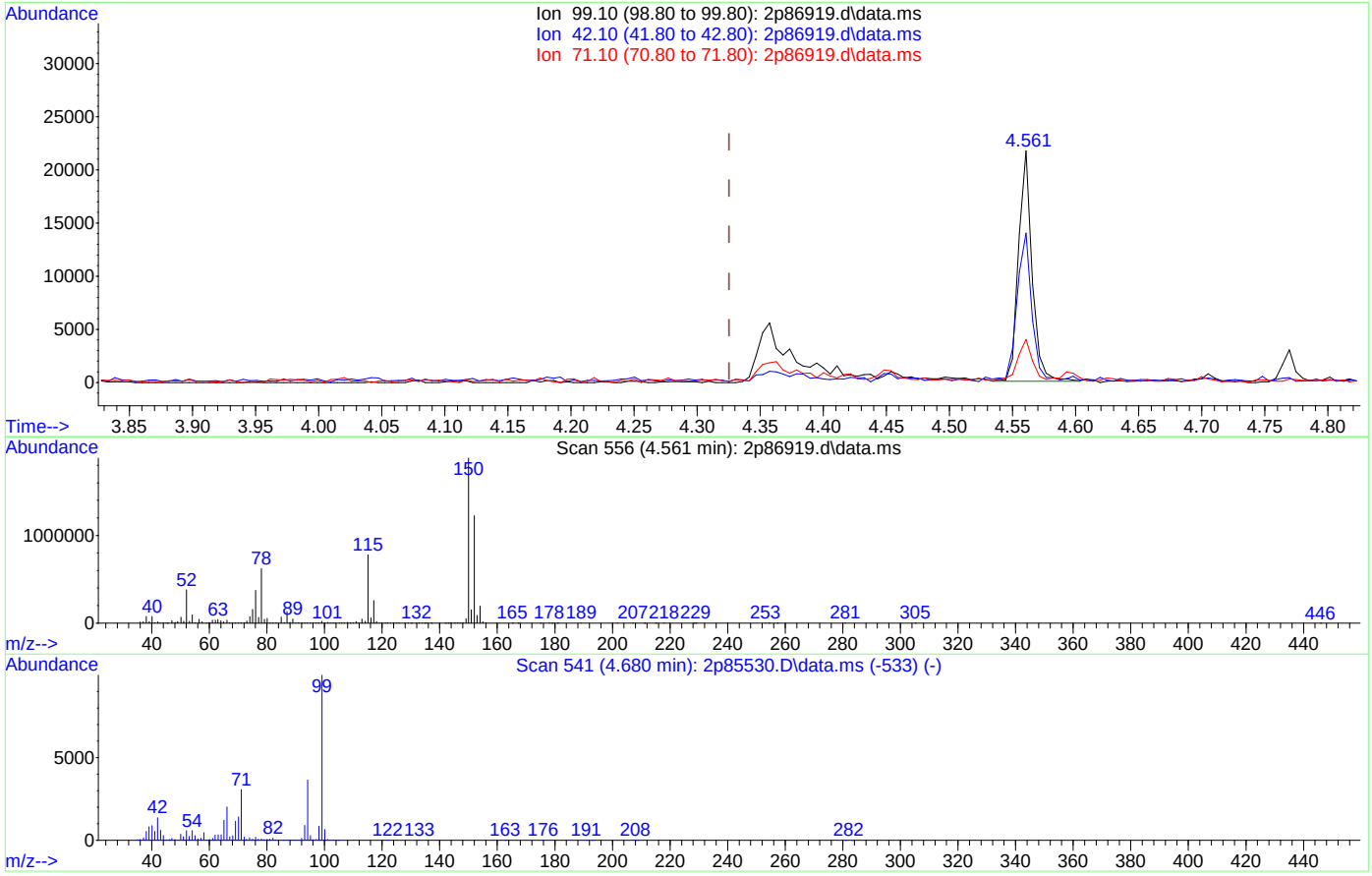
Sample Number: JC86406-12
Lab FileID: 2P86919.D
Injection Time: 04/27/19 08:16
Method: SW846 8270D
Analyst approved: 04/29/19 05:59 Michelle Co
Supervisor approved: 04/29/19 12:14 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Phenol-d5	4165-62-2		4.36	Poor instrument integration
Naphthalene	91-20-3		5.62	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.78	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:27:16 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration



TIC: 2p86919.d\data.ms

(8) Phenol-d5 (S)

4.561min (+0.235) 0.35ppm

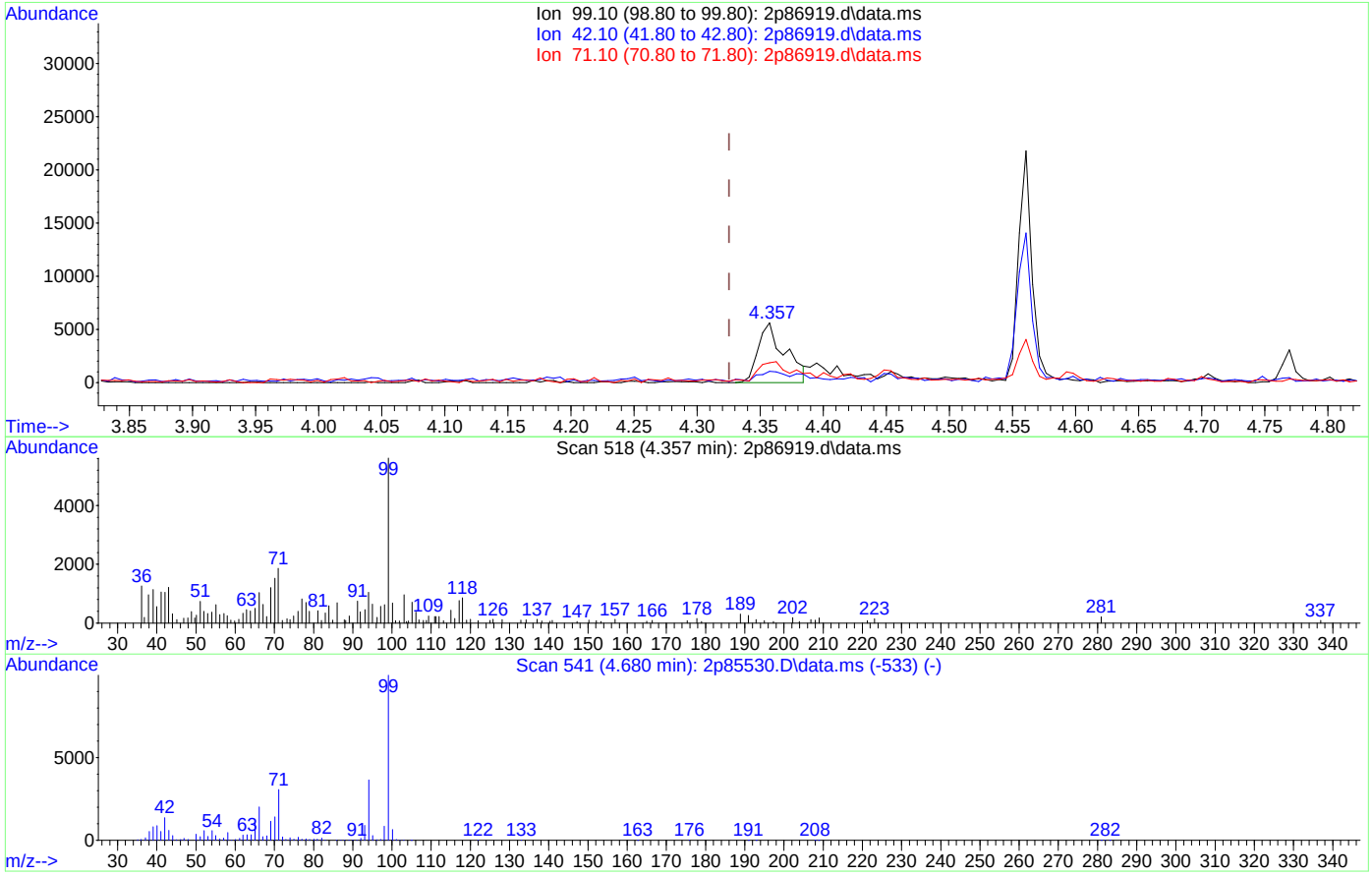
response 16392

Ion	Exp%	Act%
99.10	100	100
42.10	13.90	63.70#
71.10	37.50	16.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:27:16 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration



TIC: 2p86919.d\data.ms

(8) Phenol-d5 (S)

4.357min (+0.032) 0.18ppm m

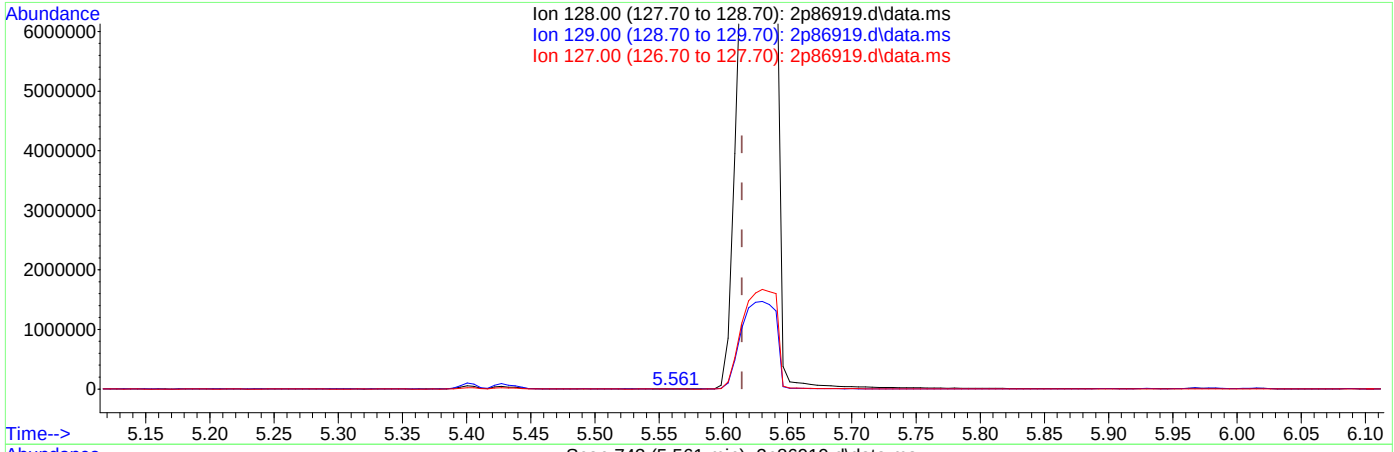
response 8291

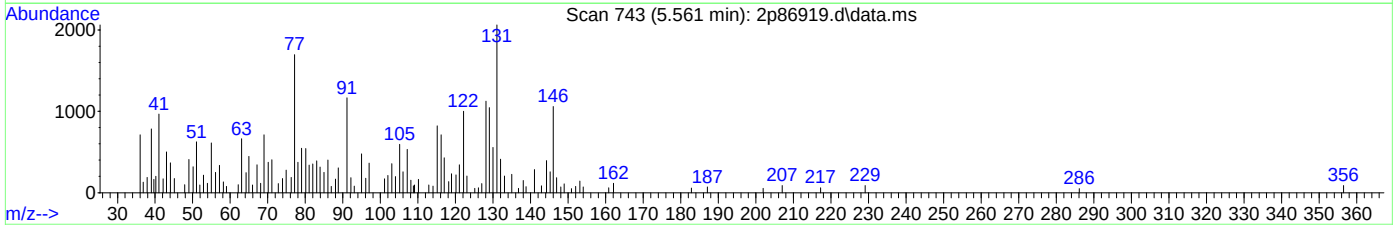
Ion	Exp%	Act%
99.10	100	100
42.10	13.90	18.68
71.10	37.50	33.11
0.00	0.00	0.00

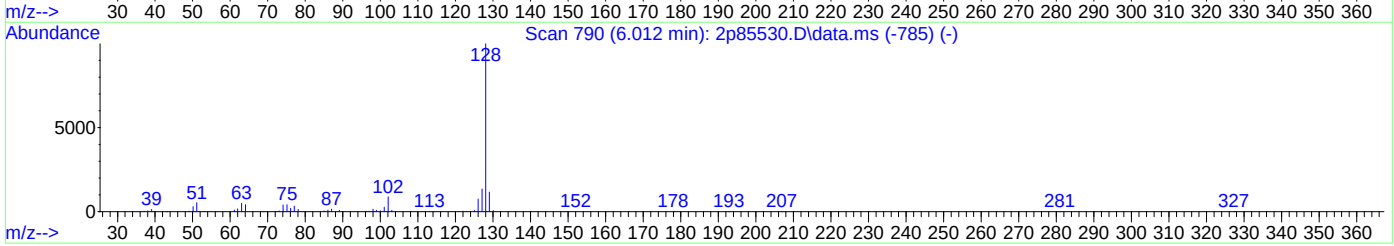
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:27:16 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration







TIC: 2p86919.d\data.ms

(38) Naphthalene (t)

5.561min (-0.054) 0.02ppm

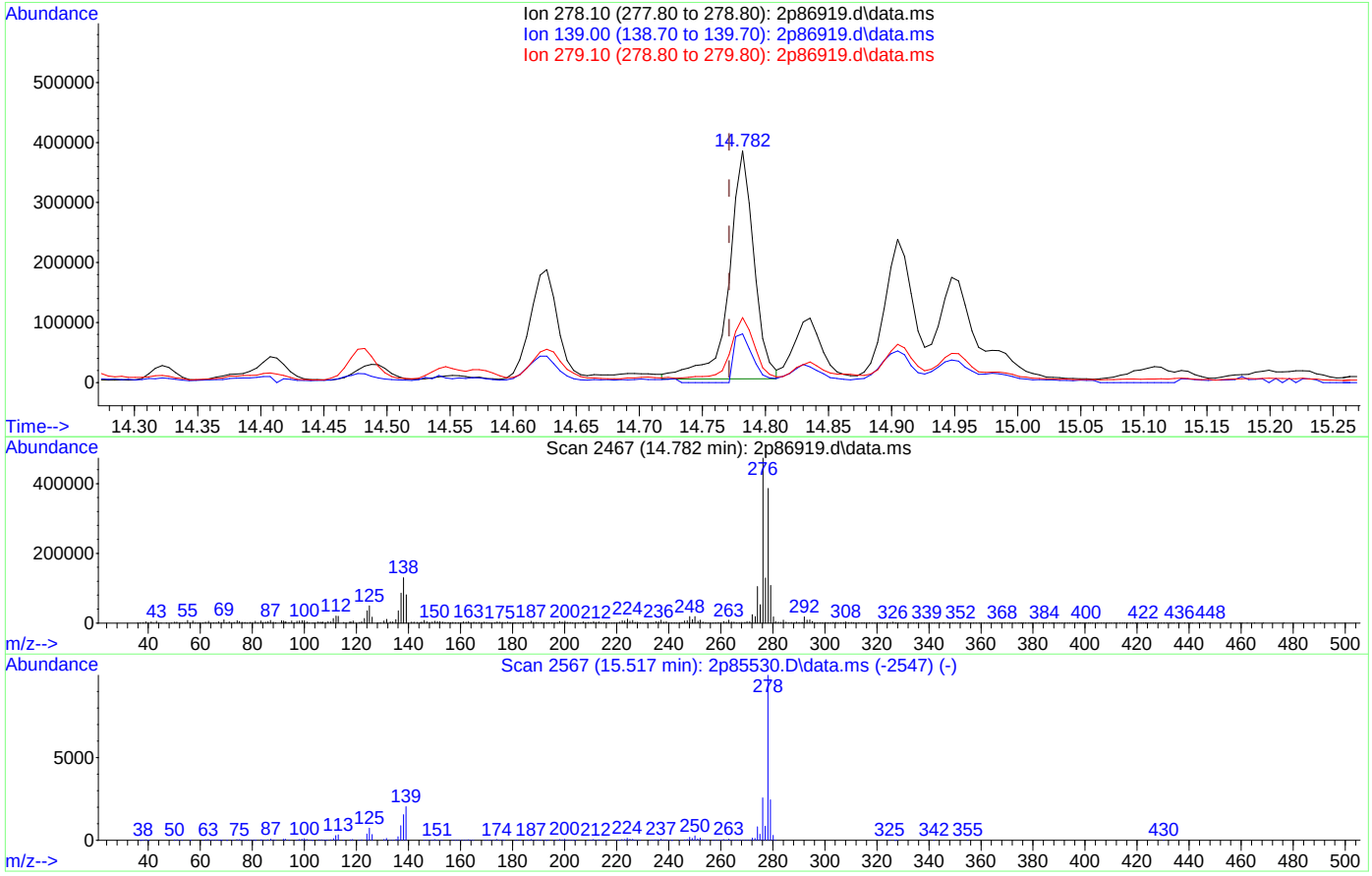
response 886

Ion	Exp%	Act%
128.00	100	100
129.00	11.00	16.66
127.00	13.40	0.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86919.d
Acq On : 27 Apr 2019 8:16 am
Operator : chriss2
Sample : jc86406-12 Inst : MS2P
Misc : op19810,e2p3839,32.0,,,1,100
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:27:16 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Apr 29 03:23:56 2019
Response via : Initial Calibration



TIC: 2p86919.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.782min (+0.011) 15.90ppm

response 528291

Ion	Exp%	Act%
278.10	100	100
139.00	21.90	20.37
279.10	23.60	26.94
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86735.D
Acq On : 19 Apr 2019 1:10 am
Operator : carolb
Sample : jc86406-13
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 19 10:45:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

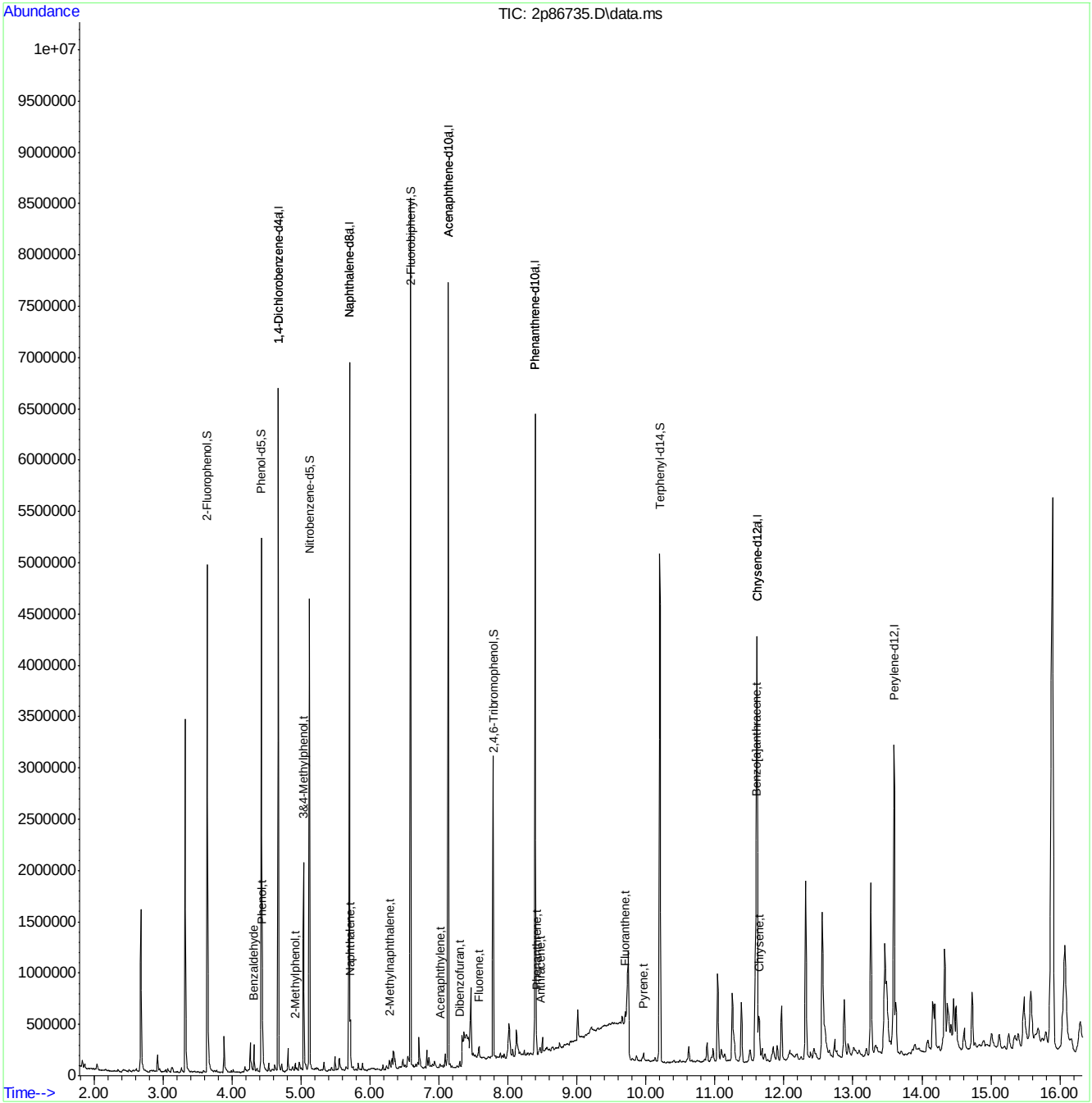
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	657637	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2183072	40.00	ppm	-0.17
47) Acenaphthene-d10	7.135	164	1059976	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	1742249	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	1431312	40.00	ppm	-0.28
91) Perylene-d12	13.597	264	1266707	40.00	ppm	-0.30
101) 1,4-Dichlorobenzene-d4a	4.670	152	657637	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2183072	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.135	164	1059976	40.00	ppm	-0.18
108) Chrysene-d12a	11.612	240	1431312	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	1742249	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1083450	32.74	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 65.48%#			
8) Phenol-d5	4.429	99	1378156	38.00	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 76.00%#			
25) Nitrobenzene-d5	5.124	82	1323072	45.09	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 90.18%#			
51) 2-Fluorobiphenyl	6.590	172	1707134	46.53	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 93.06%#			
73) 2,4,6-Tribromophenol	7.788	330	190710	31.21	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 62.42%			
85) Terphenyl-d14	10.200	244	1583172	44.45	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.90%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.440	94	156568	4.14	ppm	99
19) 2-Methylphenol	4.916	108	9309	0.48	ppm	98
21) 3&4-Methylphenol	5.039	108	330761	16.90	ppm	100
38) Naphthalene	5.718	128	132074	2.53	ppm	99
44) 2-Methylnaphthalene	6.285	141	14438	0.43	ppm	98
56) Acenaphthylene	7.018	152	8485	0.16	ppm	92
62) Dibenzofuran	7.301	168	13525	0.32	ppm	92
66) Fluorene	7.579	166	21767	0.60	ppm	85
77) Phenanthrene	8.414	178	53077	1.22	ppm	98
78) Anthracene	8.467	178	15100	0.34	ppm	97
81) Fluoranthene	9.697	202	31220	0.51	ppm	91
84) Pyrene	9.965	202	23597	0.42	ppm	99
87) Benzo[a]anthracene	11.596	228	15939	0.30	ppm	94
89) Chrysene	11.639	228	7255	0.19	ppm	96
102) Benzaldehyde	4.322	105	45571	1.92	ppm	91

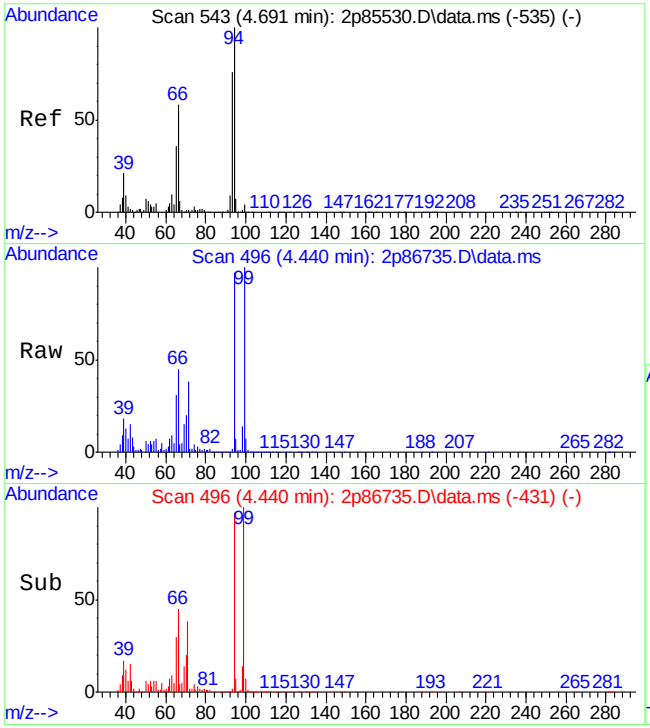
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86735.D
Acq On : 19 Apr 2019 1:10 am
Operator : carolb
Sample : jc86406-13
Misc : op19810,e2p3831,31.4,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 19 10:45:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

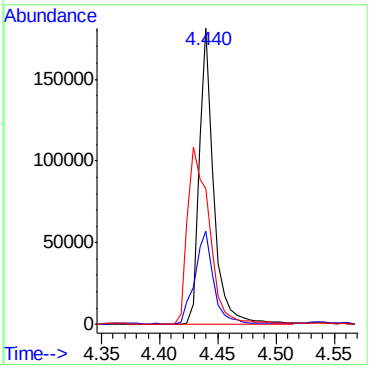


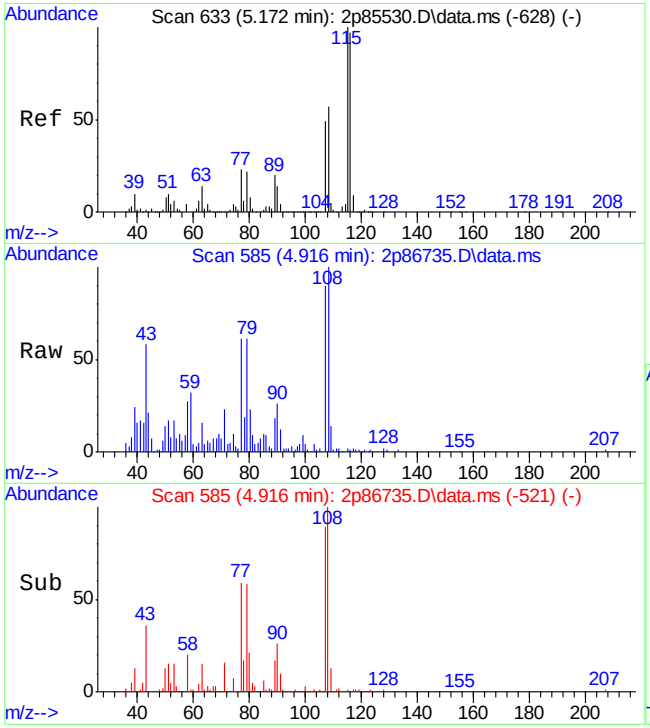


#9
Phenol
Concen: 4.14 ppm
RT: 4.440 min Scan# 496
Delta R.T. -0.150 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion: 94 Resp: 156568

Ion	Ratio	Lower	Upper
94	100		
65	31.1	1.5	61.5
66	45.8	15.3	75.3

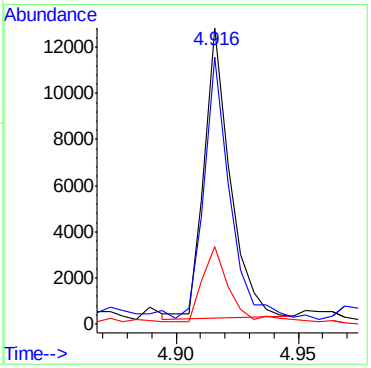


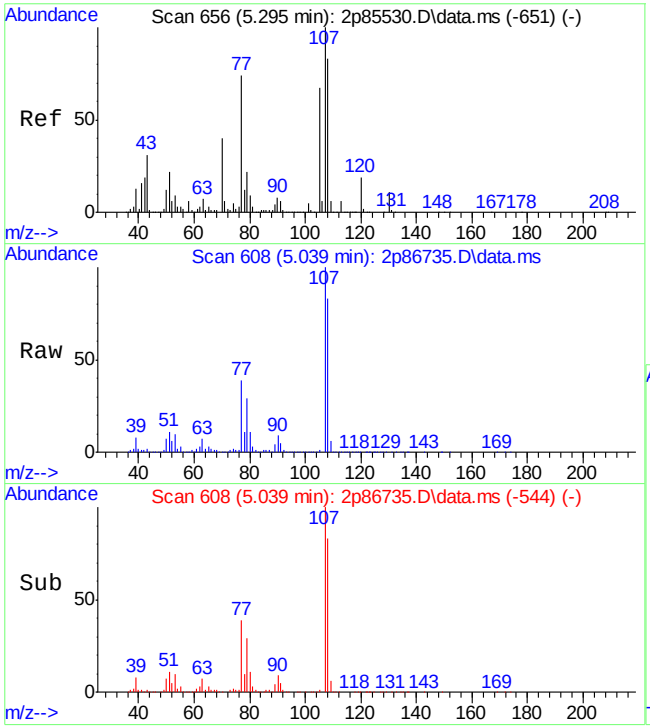


#19
2-Methylphenol
Concen: 0.48 ppm
RT: 4.916 min Scan# 585
Delta R.T. -0.155 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:108 Resp: 9309

Ion	Ratio	Lower	Upper
108	100		
107	89.5	58.4	118.4
90	25.9	0.0	53.9

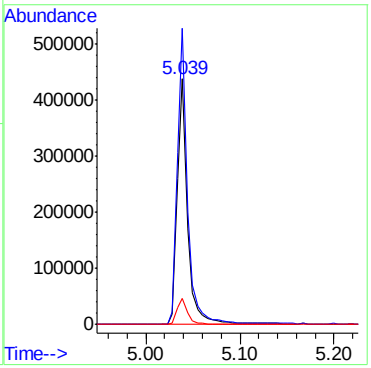


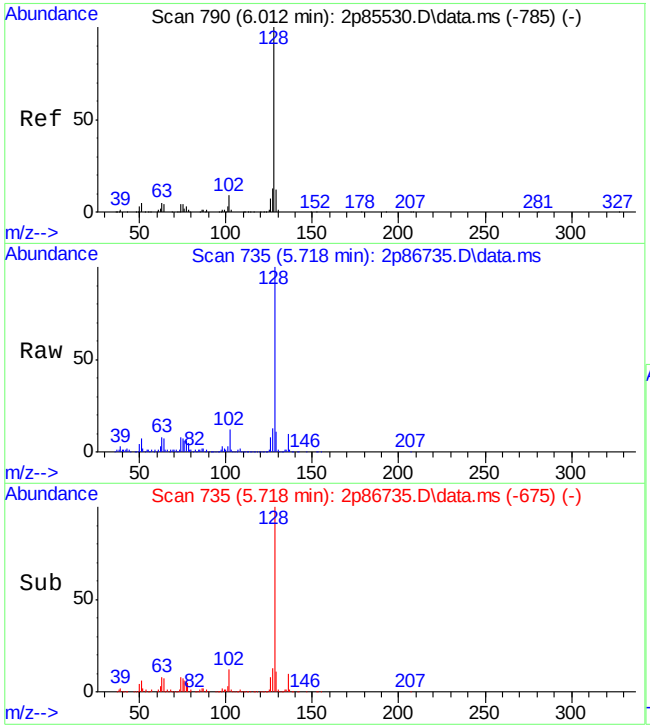


#21
3&4-Methylphenol
Concen: 16.90 ppm
RT: 5.039 min Scan# 608
Delta R.T. -0.160 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:108 Resp: 330761

Ion	Ratio	Lower	Upper
108	100		
107	120.8	90.6	150.6
90	10.6	0.0	39.9

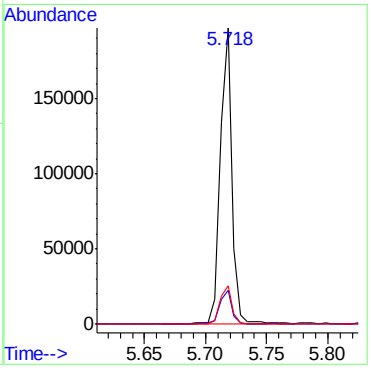


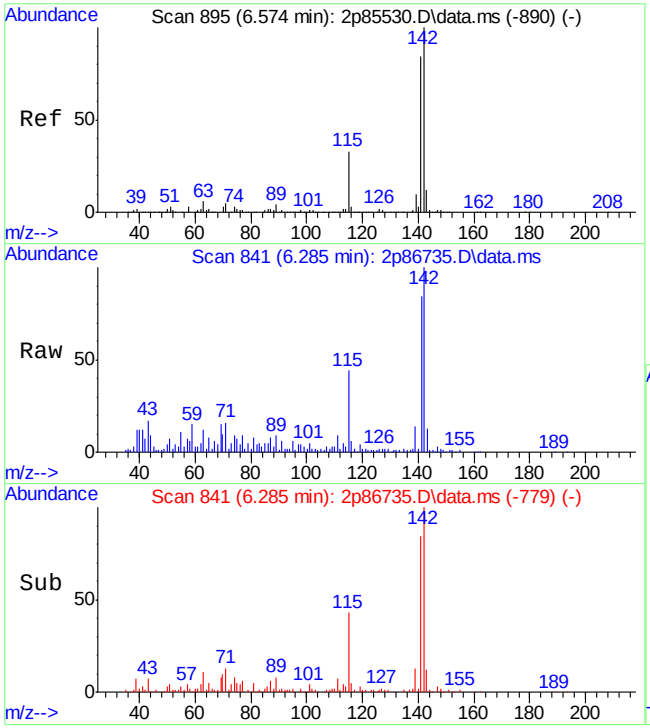


#38
Naphthalene
Concen: 2.53 ppm
RT: 5.718 min Scan# 735
Delta R.T. -0.177 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:128 Resp: 132074

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	41.2
127	12.7	0.0	43.7

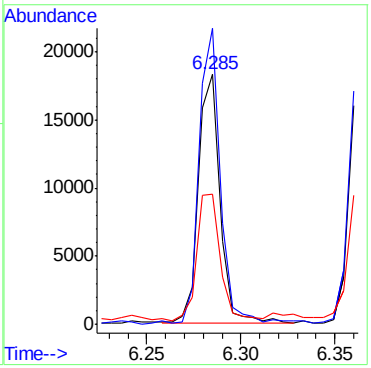


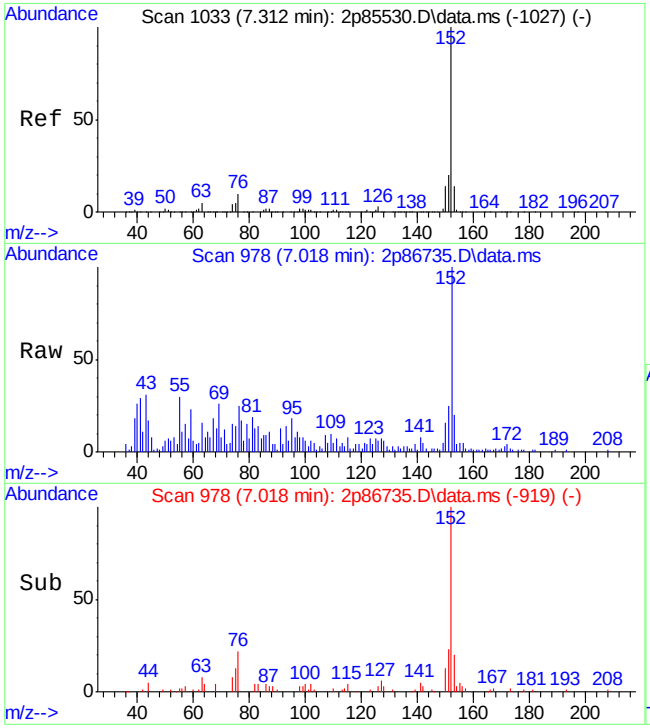


#44
2-Methylnaphthalene
Concen: 0.43 ppm
RT: 6.285 min Scan# 841
Delta R.T. -0.171 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:141 Resp: 14438

Ion	Ratio	Lower	Upper
141	100		
142	117.9	90.7	150.7
115	48.9	18.7	78.7

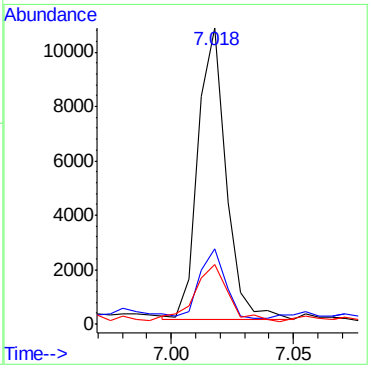


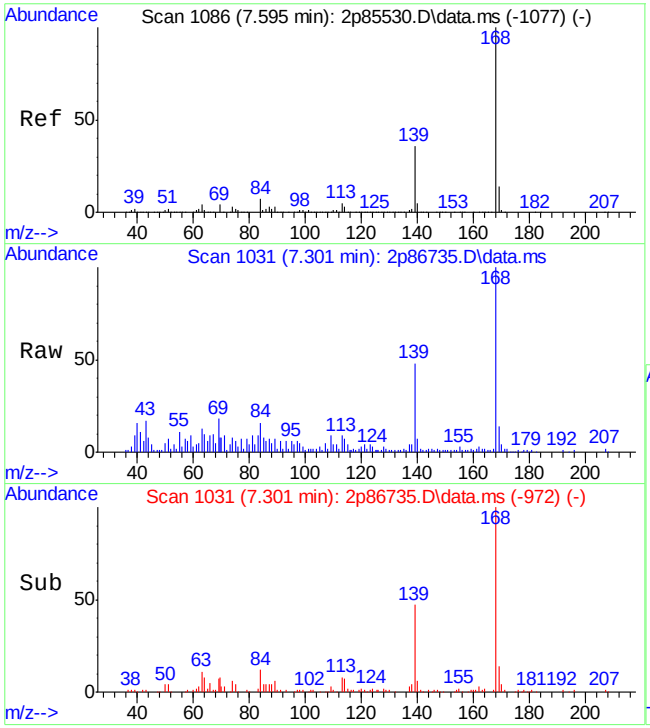


#56
Acenaphthylene
Concen: 0.16 ppm
RT: 7.018 min Scan# 978
Delta R.T. -0.182 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:152 Resp: 8485

Ion	Ratio	Lower	Upper
152	100		
151	22.6	0.0	50.3
153	18.4	0.0	43.6

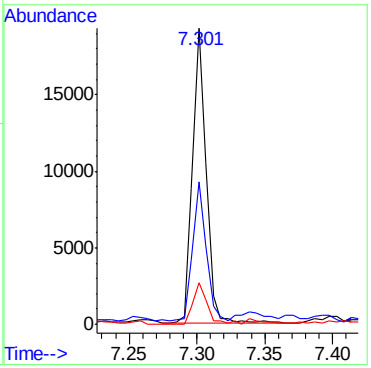


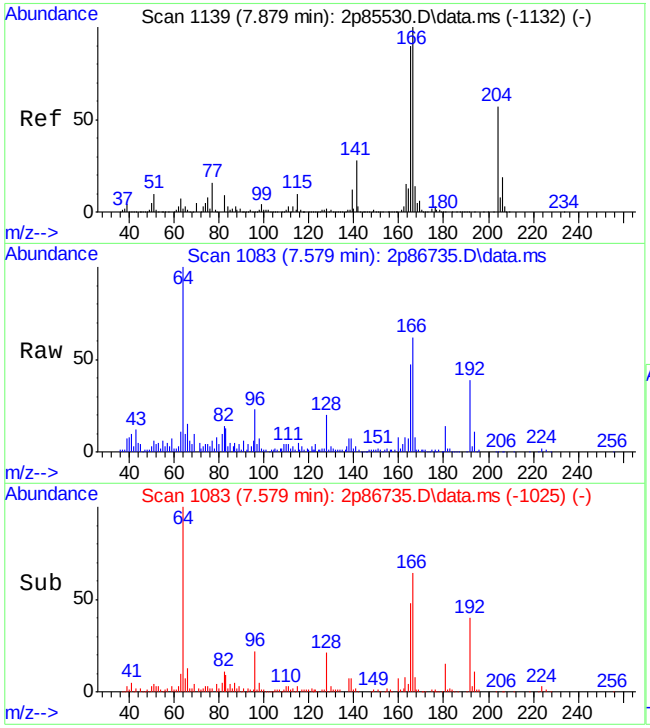


#62
Dibenzofuran
Concen: 0.32 ppm
RT: 7.301 min Scan# 1031
Delta R.T. -0.182 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:168 Resp: 13525

Ion	Ratio	Lower	Upper
168	100		
139	46.2	9.2	69.2
169	13.9	0.0	44.1

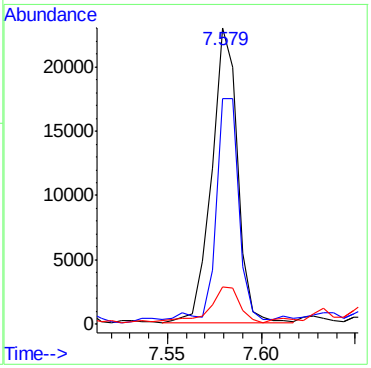


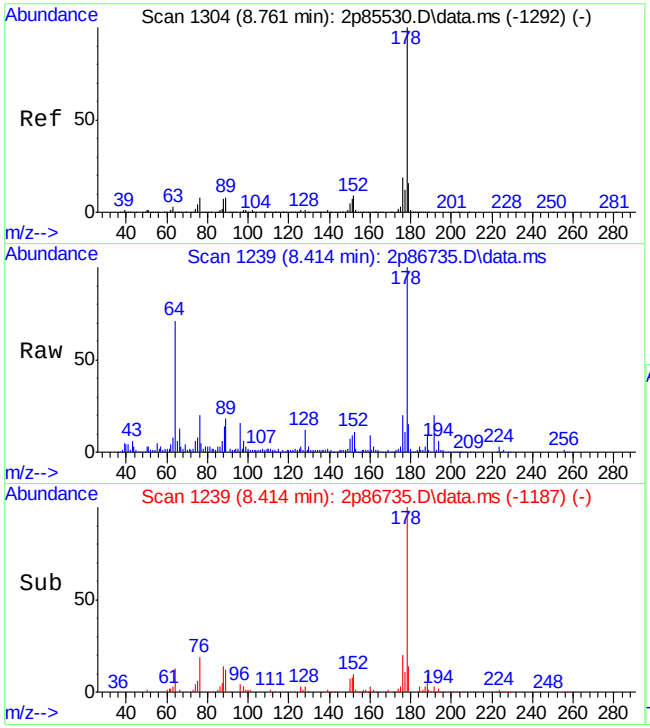


#66
Fluorene
Concen: 0.60 ppm
RT: 7.579 min Scan# 1083
Delta R.T. -0.188 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:166 Resp: 21767

Ion	Ratio	Lower	Upper
166	100		
165	74.9	60.6	120.6
167	11.3	0.0	44.1

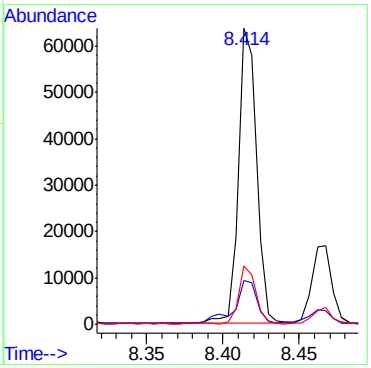


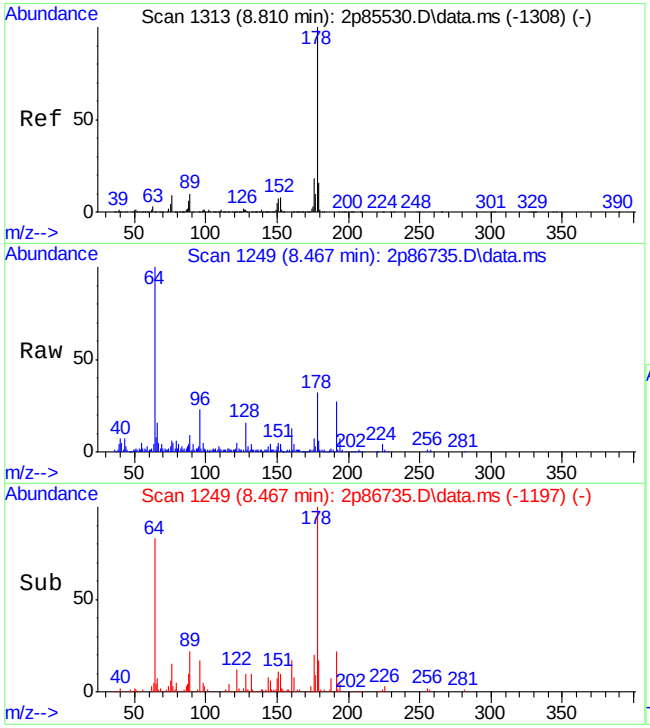


#77
Phenanthrene
Concen: 1.22 ppm
RT: 8.414 min Scan# 1239
Delta R.T. -0.219 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:178 Resp: 53077

Ion	Ratio	Lower	Upper
178	100		
179	14.1	0.0	46.0
176	19.4	0.0	49.2

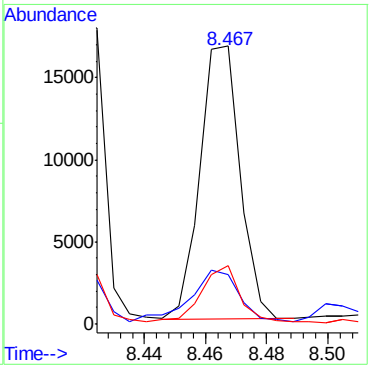


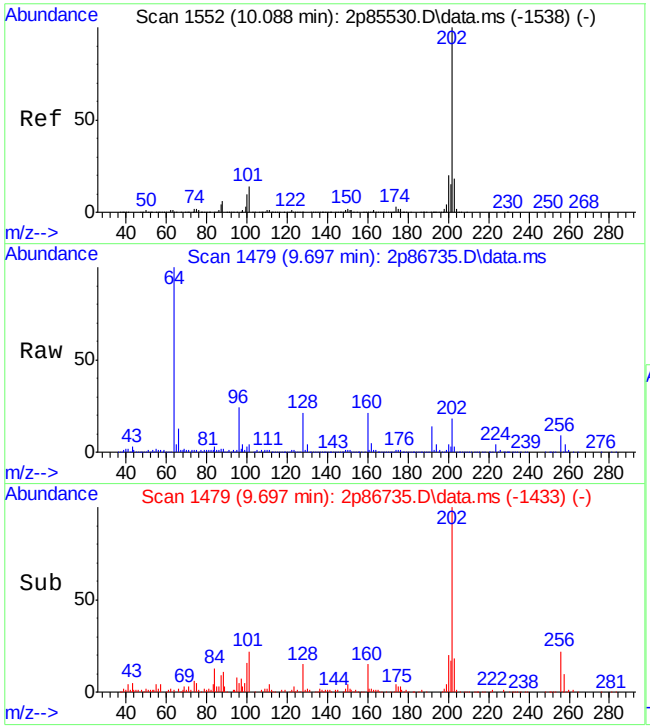


#78
Anthracene
Concen: 0.34 ppm
RT: 8.467 min Scan# 1249
Delta R.T. -0.220 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:178 Resp: 15100

Ion	Ratio	Lower	Upper
178	100		
179	16.1	0.0	45.7
176	20.5	0.0	48.6

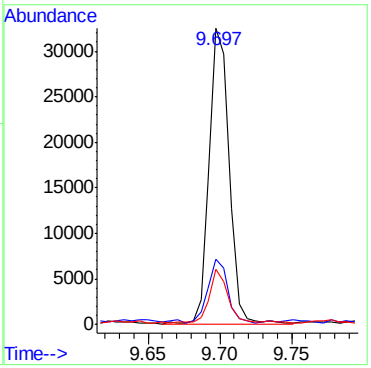


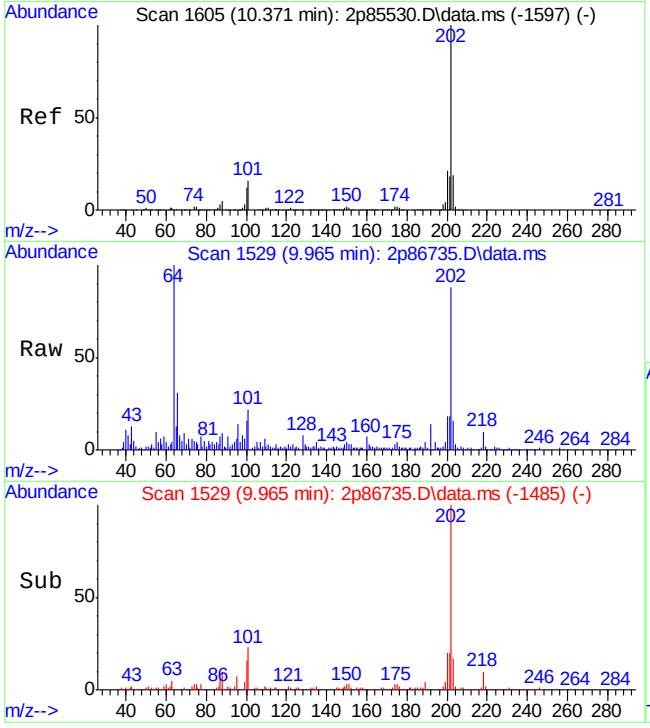


#81
Fluoranthene
Concen: 0.51 ppm
RT: 9.697 min Scan# 1479
Delta R.T. -0.252 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:202 Resp: 31220

Ion	Ratio	Lower	Upper
202	100		
101	21.1	0.0	43.7
203	18.0	0.0	48.6

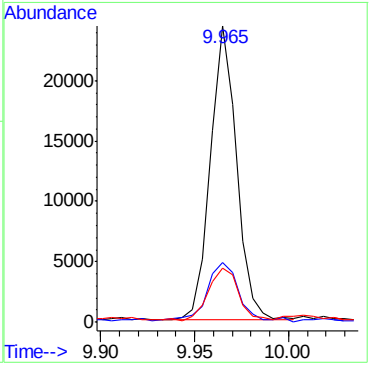


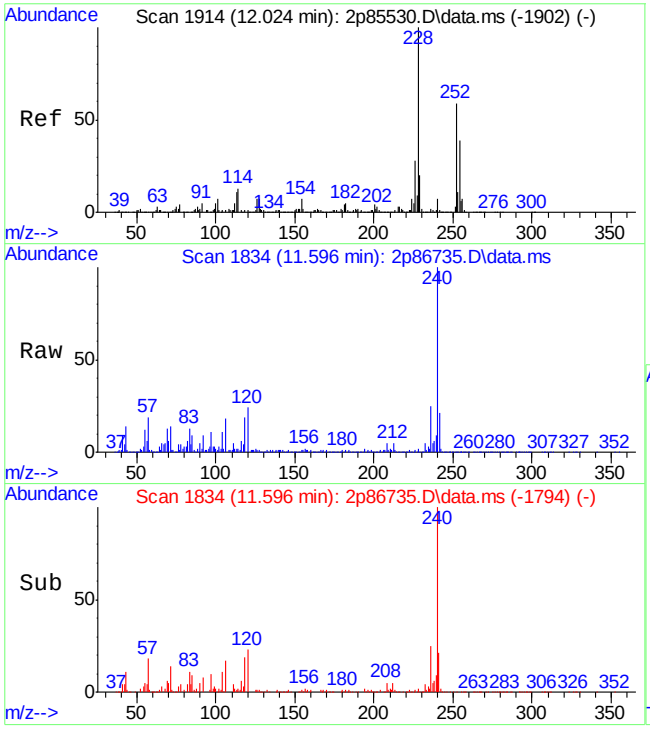


#84
Pyrene
Concen: 0.42 ppm
RT: 9.965 min Scan# 1529
Delta R.T. -0.267 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:202 Resp: 23597

Ion	Ratio	Lower	Upper
202	100		
200	19.8	0.0	50.1
203	17.1	0.0	47.4

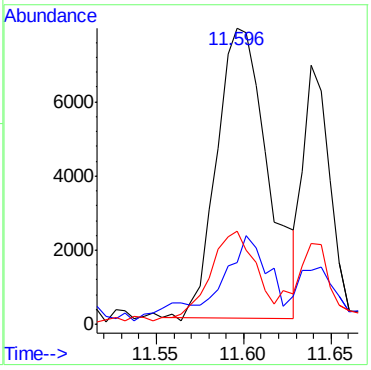


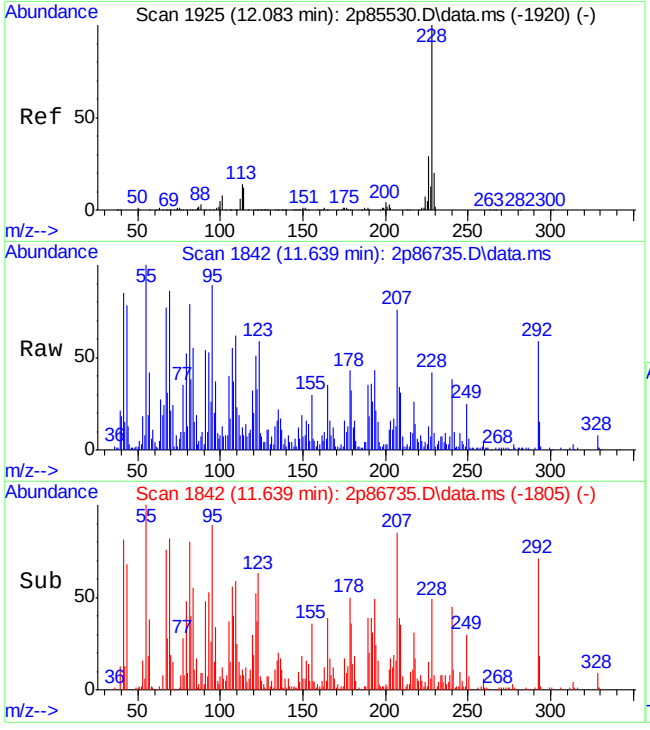


#87
Benzo[a]anthracene
Concen: 0.30 ppm
RT: 11.596 min Scan# 1834
Delta R.T. -0.284 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:228 Resp: 15939

Ion	Ratio	Lower	Upper
228	100		
229	16.2	0.0	50.3
226	30.4	0.0	57.9

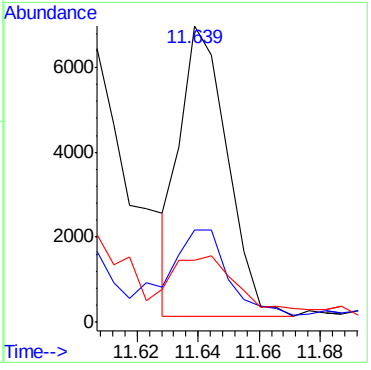


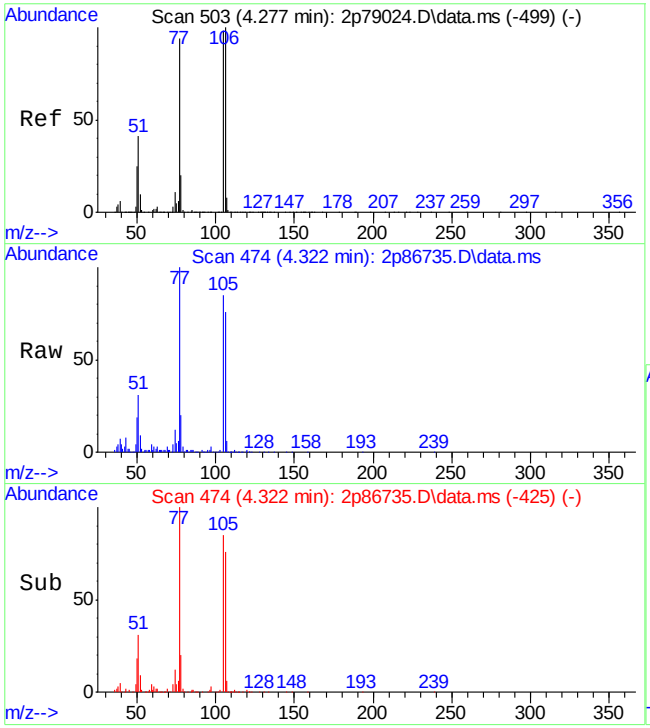


#89
Chrysene
Concen: 0.19 ppm
RT: 11.639 min Scan# 1842
Delta R.T. -0.300 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:228 Resp: 7255

Ion	Ratio	Lower	Upper
228	100		
226	30.1	0.0	59.2
229	16.4	0.0	50.2

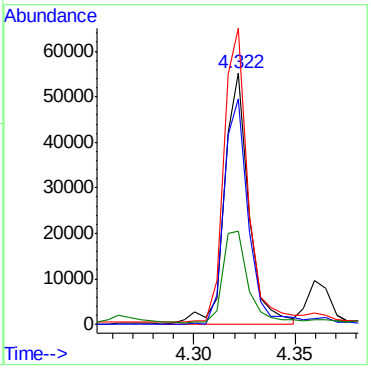




#102
Benzaldehyde
Concen: 1.92 ppm
RT: 4.322 min Scan# 474
Delta R.T. -0.237 min
Lab File: 2p86735.D
Acq: 19 Apr 2019 1:10 am

Tgt Ion:105 Resp: 45571

Ion	Ratio	Lower	Upper
105	100		
106	89.4	70.0	130.0
77	117.1	76.7	136.7
51	35.9	5.1	65.1



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 11:52

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 12:06:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	765641	40.00	ppm	-0.16
24) Naphthalene-d8	5.708	136	2329961	40.00	ppm	-0.17
47) Acenaphthene-d10	7.146	164	898820	40.00	ppm	-0.17
69) Phenanthrene-d10	8.441	188	1398714	40.00	ppm	-0.17
83) Chrysene-d12	11.816	240	1191505m	40.00	ppm	-0.08
91) Perylene-d12	13.789	264	861439	40.00	ppm	-0.11
101) 1,4-Dichlorobenzene-d4a	4.675	152	765641	40.00	ppm	-0.16
103) Naphthalene-d8a	5.708	136	2329961	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.146	164	898820	40.00	ppm	-0.17
108) Chrysene-d12a	11.816	240	1187716m	40.00	ppm	0.20
110) Phenanthrene-d10a	8.441	188	1398714	40.00	ppm	-0.17
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	917103	23.80	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 47.60%			
8) Phenol-d5	4.440	99	1204895	28.53	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 57.06%			
25) Nitrobenzene-d5	5.130	82	961541	30.70	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 61.40%#			
51) 2-Fluorobiphenyl	6.595	172	1246680	40.07	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 80.14%#			
73) 2,4,6-Tribromophenol	7.804	330	178609	36.41	ppm	-0.17
Spiked Amount 50.000	Range 12 - 68		Recovery = 72.82%#			
85) Terphenyl-d14	10.270	244	1061318	35.79	ppm	-0.19
Spiked Amount 50.000	Range 16 - 65		Recovery = 71.58%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.451	94	747051	16.95	ppm	96
19) 2-Methylphenol	4.921	108	80087	3.56	ppm	98
21) 3&4-Methylphenol	5.050	108	327236	14.36	ppm	83
30) 2,4-Dimethylphenol	5.467	107	45714	2.06	ppm	94
38) Naphthalene	5.724	128	2843674	51.02	ppm	99
44) 2-Methylnaphthalene	6.291	141	1133913	31.99	ppm	99
53) Biphenyl	6.676	154	421317	11.70	ppm	99
56) Acenaphthylene	7.039	152	9088167	206.71	ppm	97
59) Acenaphthene	7.168	153	294000	11.39	ppm	97
62) Dibenzofuran	7.317	168	3812866	107.14	ppm	95
66) Fluorene	7.606	166	4034693	132.19	ppm	99
77) Phenanthrene	8.494	178	22815229	654.80	ppm	97
78) Anthracene	8.532	178	10102331	285.14	ppm	97
79) Carbazole	8.671	167	3092663	84.42	ppm	98
81) Fluoranthene	9.815	202	42480250m	857.86	ppm	
84) Pyrene	10.142	202	35279748m	760.97	ppm	
87) Benzo[a]anthracene	11.773	228	38709385m	864.93	ppm	
89) Chrysene	11.837	228	14294591	450.25	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 12:06:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	13.345	252	35213649m	1247.52	ppm	
94)	Benzo[k]fluoranthene	13.372	252	2080385m	90.13	ppm	
95)	Benzo[a]pyrene	13.741	252	14284790	602.18	ppm	99
96)	Indeno[1,2,3-cd]pyrene	15.159	276	10292156	380.67	ppm	98
98)	Dibenz[a,h]anthracene	15.169	278	4150094m	197.06	ppm	
100)	Benzo[g,h,i]perylene	15.538	276	8670637	405.14	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

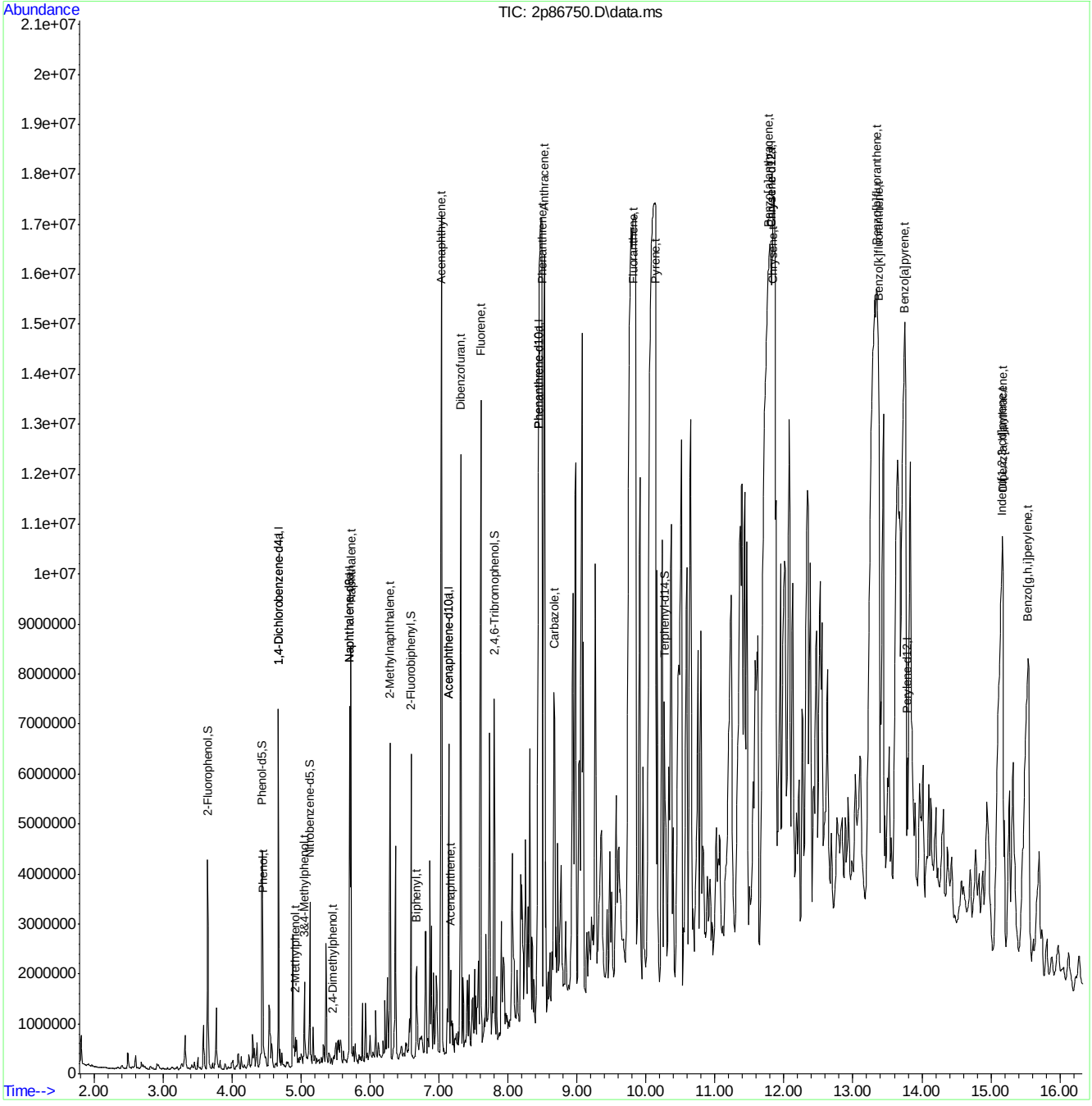
9.1.22

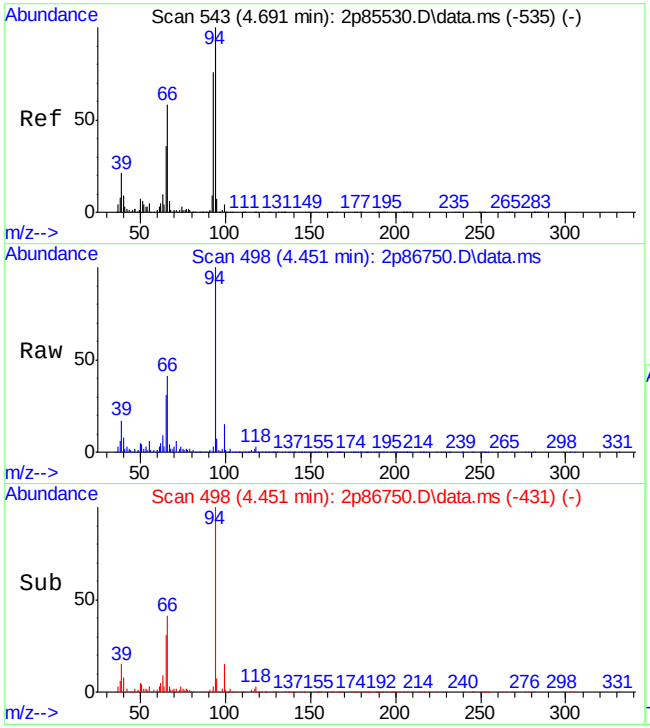
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 12:06:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

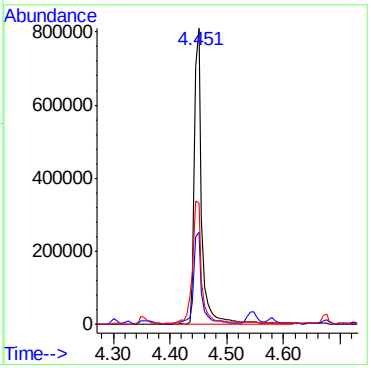


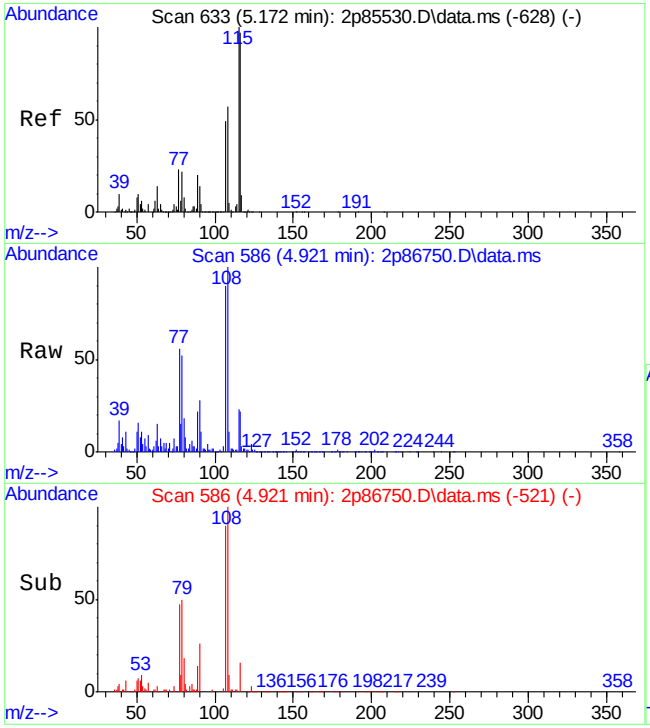


#9
Phenol
Concen: 16.95 ppm
RT: 4.451 min Scan# 498
Delta R.T. -0.139 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion: 94 Resp: 747051

Ion	Ratio	Lower	Upper
94	100		
65	31.0	1.5	61.5
66	40.9	15.3	75.3

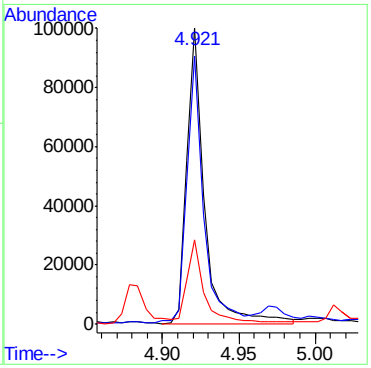


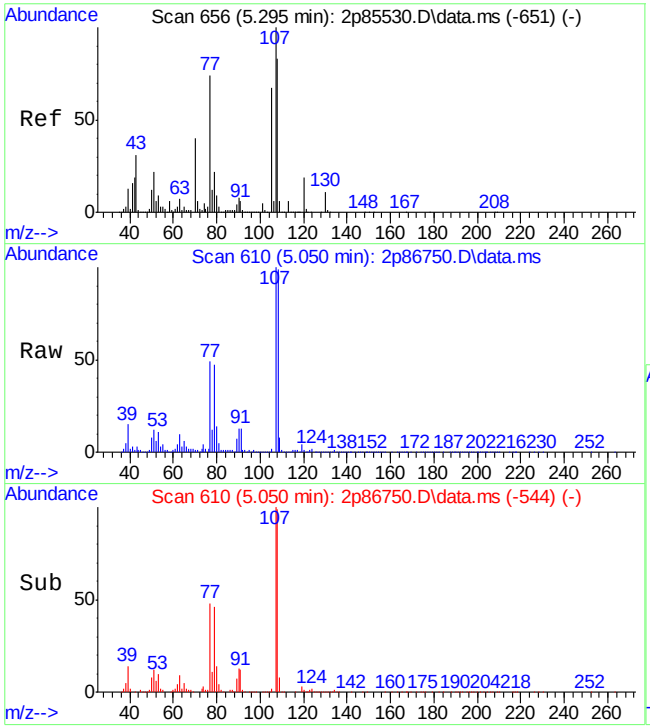


#19
2-Methylphenol
Concen: 3.56 ppm
RT: 4.921 min Scan# 586
Delta R.T. -0.150 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:108 Resp: 80087

Ion	Ratio	Lower	Upper
108	100		
107	89.4	58.4	118.4
90	27.0	0.0	53.9

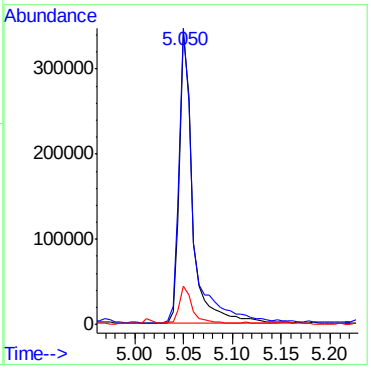


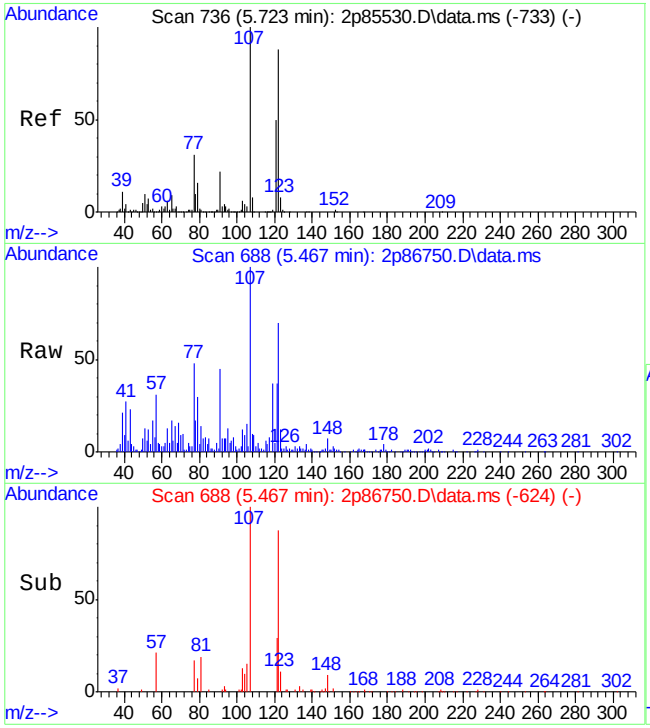


#21
3&4-Methylphenol
Concen: 14.36 ppm
RT: 5.050 min Scan# 610
Delta R.T. -0.149 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:108 Resp: 327236

Ion	Ratio	Lower	Upper
108	100		
107	101.2	90.6	150.6
90	12.5	0.0	39.9

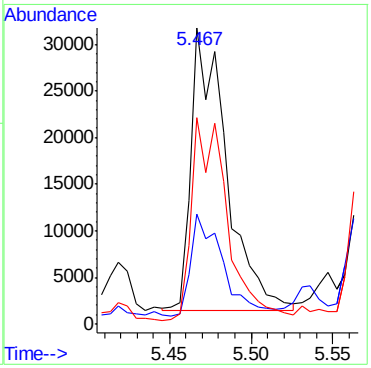


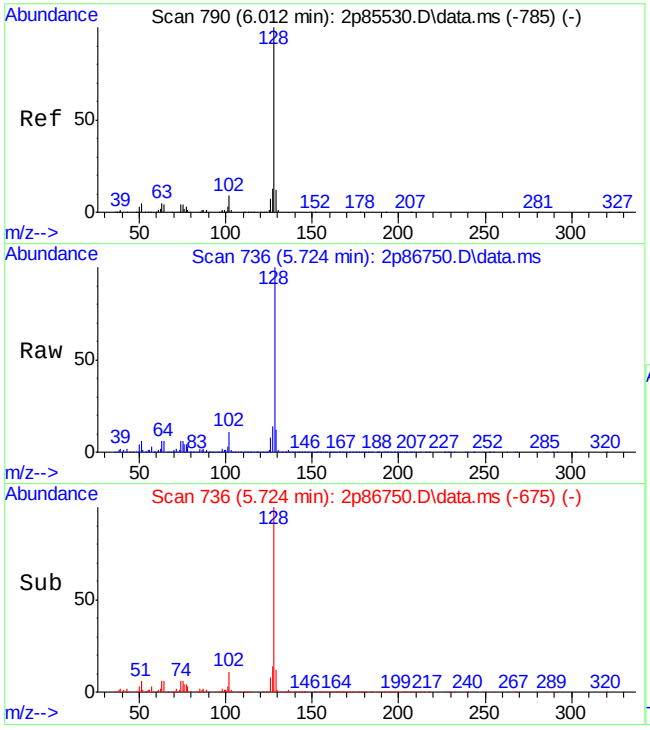


#30
2,4-Dimethylphenol
Concen: 2.06 ppm
RT: 5.467 min Scan# 688
Delta R.T. -0.155 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:107 Resp: 45714

Ion	Ratio	Lower	Upper
107	100		
121	33.9	13.3	73.3
122	71.9	41.5	101.5

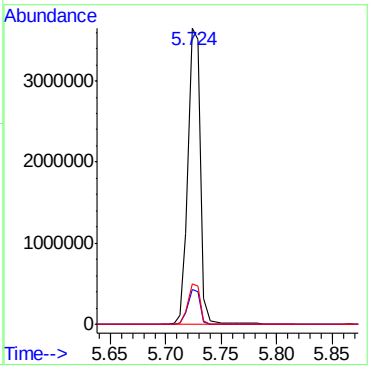


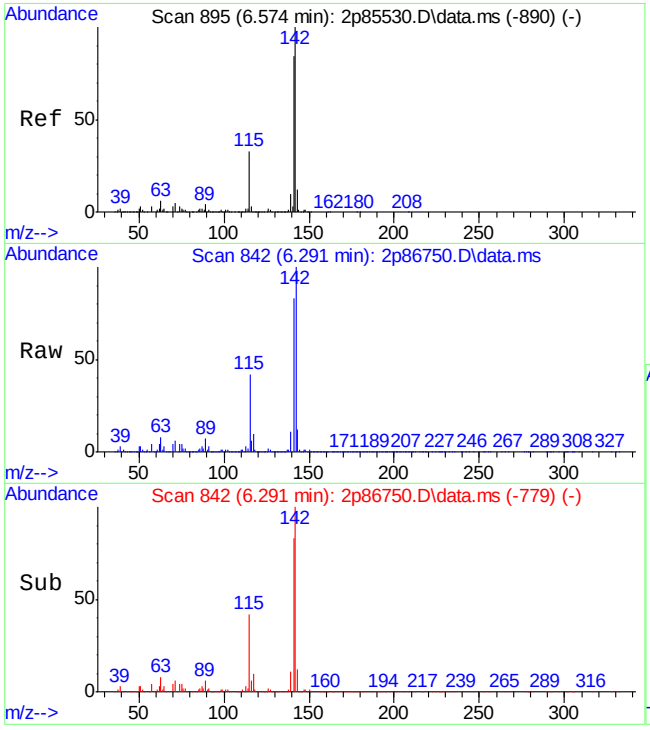


#38
Naphthalene
Concen: 51.02 ppm
RT: 5.724 min Scan# 736
Delta R.T. -0.171 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:128 Resp: 2843674

Ion	Ratio	Lower	Upper
128	100		
129	11.9	0.0	41.2
127	13.7	0.0	43.7

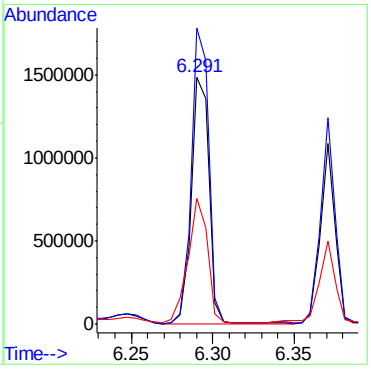


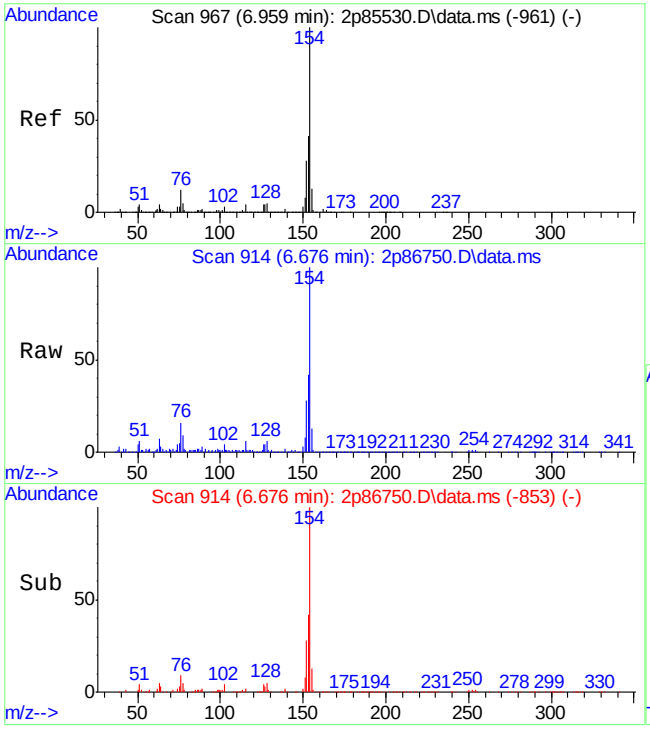


#44
2-Methylnaphthalene
Concen: 31.99 ppm
RT: 6.291 min Scan# 842
Delta R.T. -0.165 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:141 Resp: 1133913

Ion	Ratio	Lower	Upper
141	100		
142	119.9	90.7	150.7
115	50.0	18.7	78.7

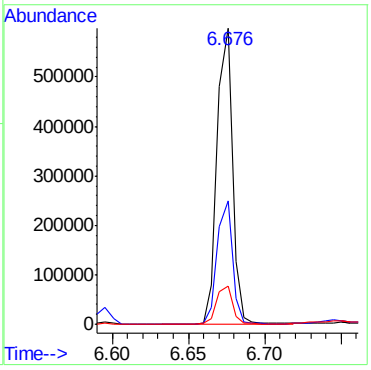


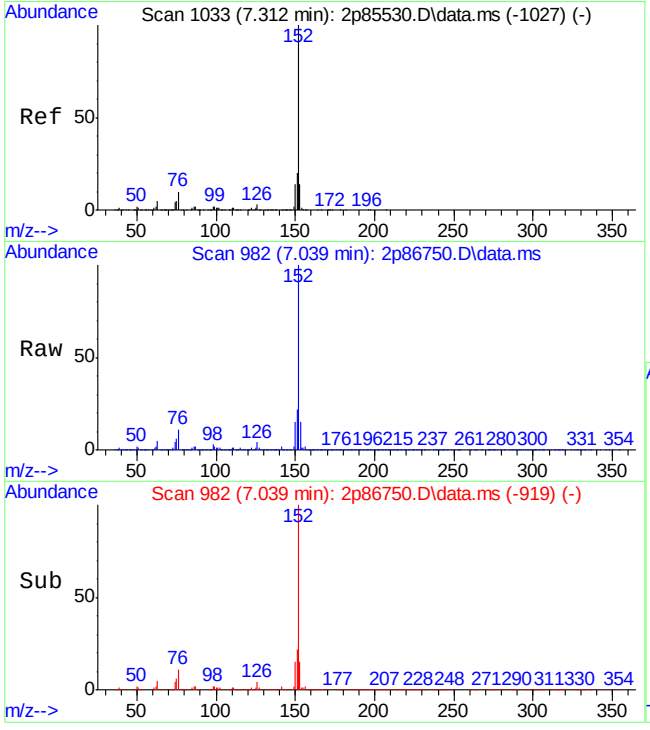


#53
Biphenyl
Concen: 11.70 ppm
RT: 6.676 min Scan# 914
Delta R.T. -0.171 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:154 Resp: 421317

Ion	Ratio	Lower	Upper
154	100		
153	41.7	11.1	71.1
155	12.6	0.0	43.4

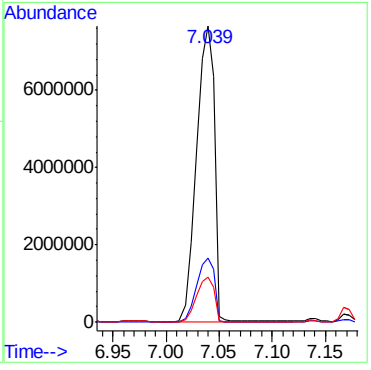


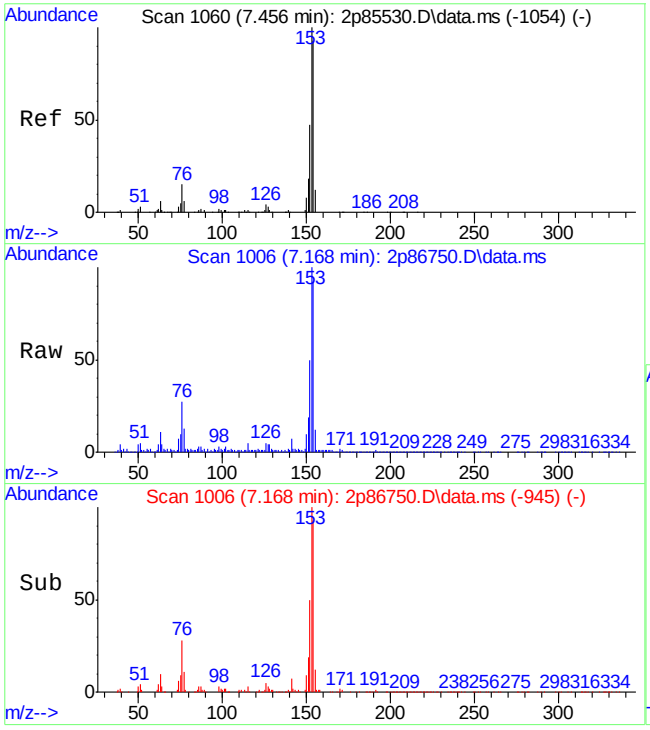


#56
Acenaphthylene
Concen: 206.71 ppm
RT: 7.039 min Scan# 982
Delta R.T. -0.161 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:152 Resp: 9088167

Ion	Ratio	Lower	Upper
152	100		
151	21.7	0.0	50.3
153	15.2	0.0	43.6

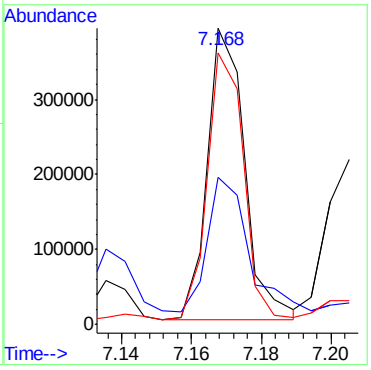


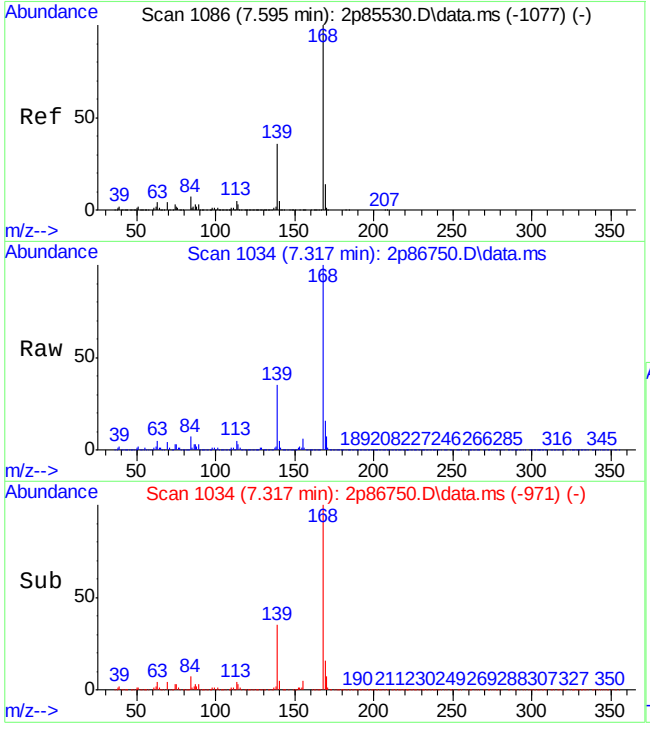


#59
Acenaphthene
Concen: 11.39 ppm
RT: 7.168 min Scan# 1006
Delta R.T. -0.176 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:153 Resp: 294000

Ion	Ratio	Lower	Upper
153	100		
152	45.0	17.8	77.8
154	92.7	59.8	119.8

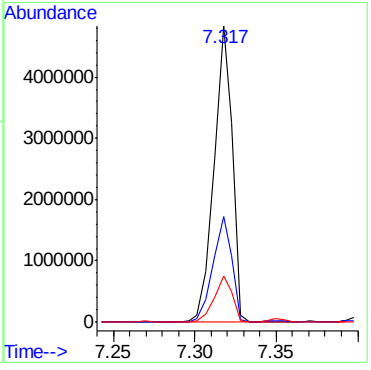


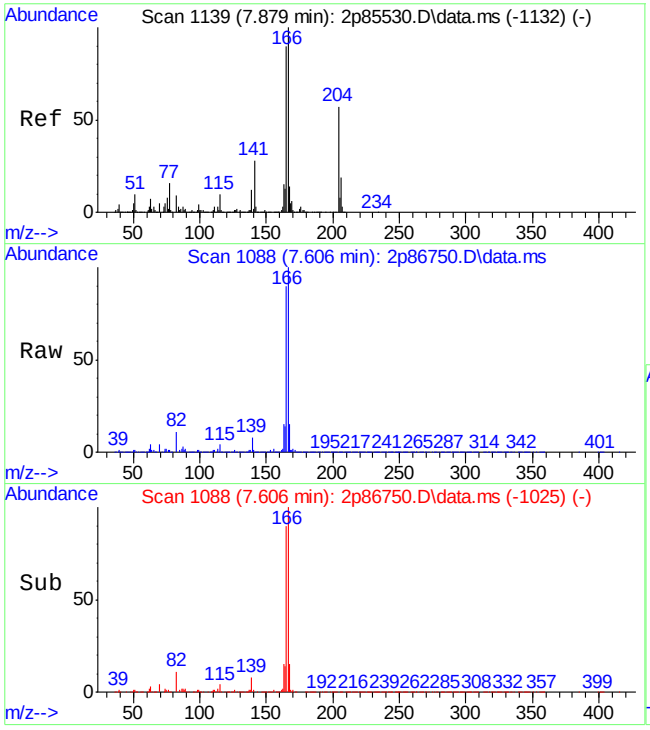


#62
Dibenzofuran
Concen: 107.14 ppm
RT: 7.317 min Scan# 1034
Delta R.T. -0.166 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:168 Resp: 3812866

Ion	Ratio	Lower	Upper
168	100		
139	35.4	9.2	69.2
169	15.5	0.0	44.1

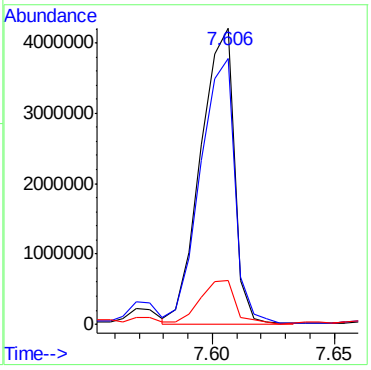


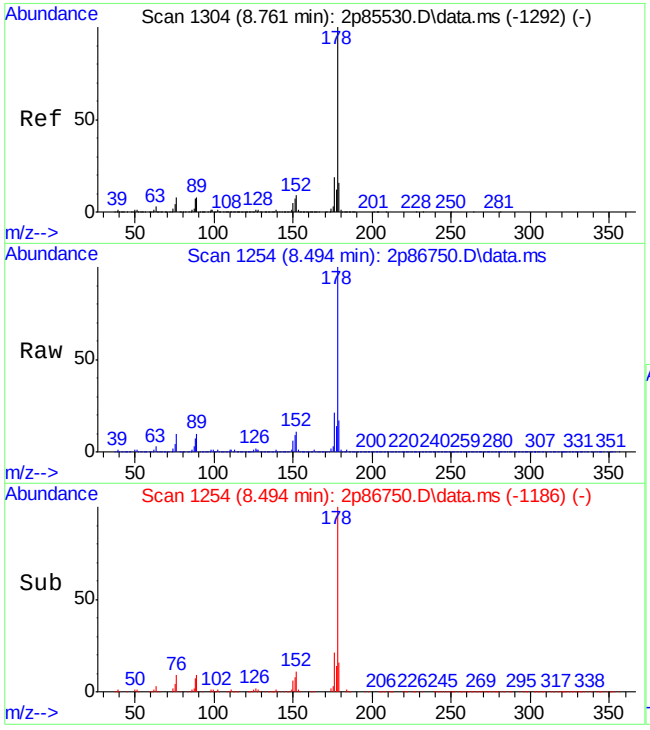


#66
Fluorene
Concen: 132.19 ppm
RT: 7.606 min Scan# 1088
Delta R.T. -0.161 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:166 Resp: 4034693

Ion	Ratio	Lower	Upper
166	100		
165	89.4	60.6	120.6
167	14.6	0.0	44.1

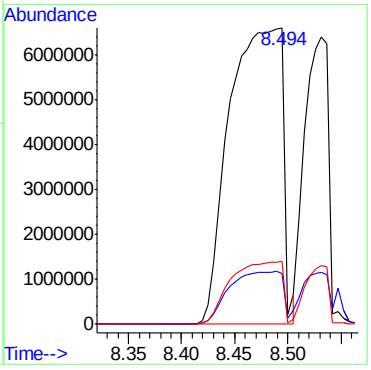


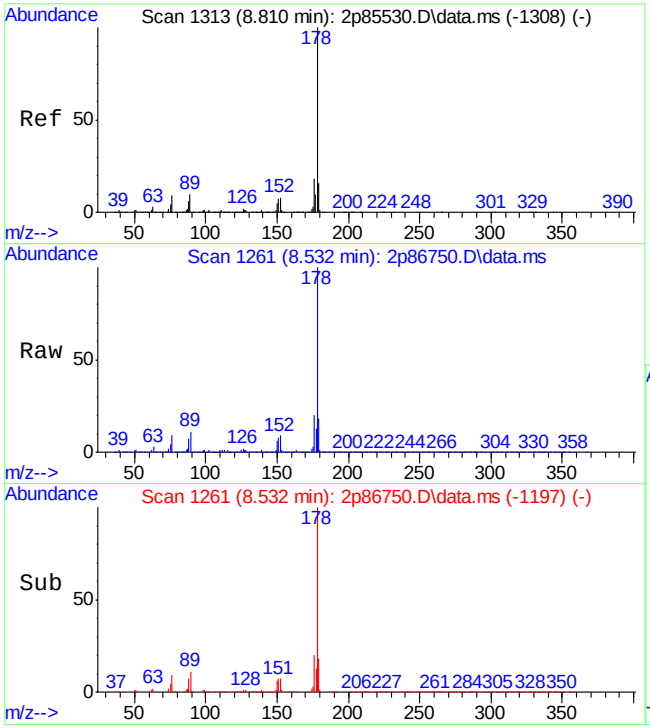


#77
Phenanthrene
Concen: 654.80 ppm
RT: 8.494 min Scan# 1254
Delta R.T. -0.139 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:178 Resp:22815229

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	46.0
176	21.3	0.0	49.2

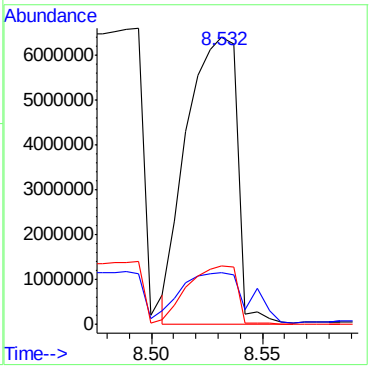


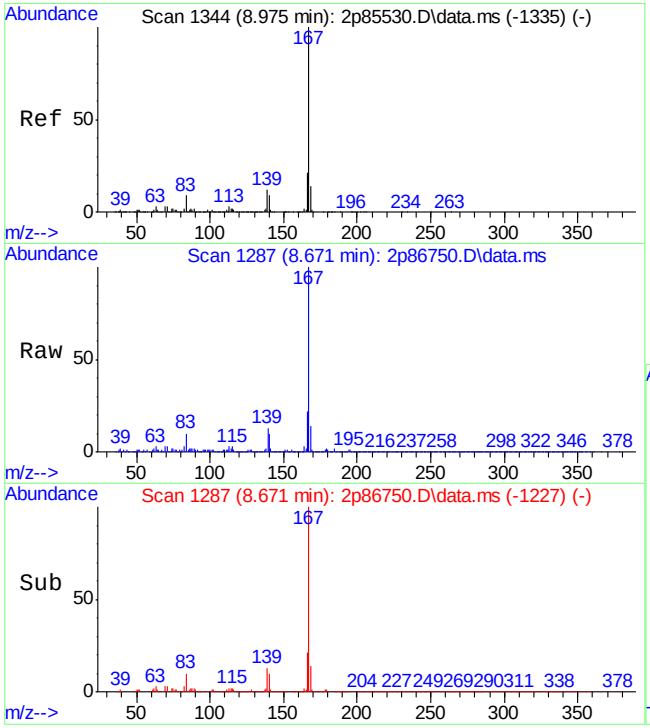


#78
Anthracene
Concen: 285.14 ppm
RT: 8.532 min Scan# 1261
Delta R.T. -0.155 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:178 Resp:10102331

Ion	Ratio	Lower	Upper
178	100		
179	16.2	0.0	45.7
176	20.3	0.0	48.6

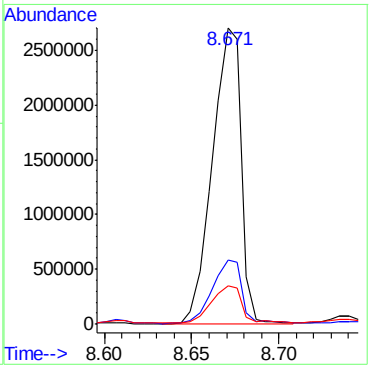


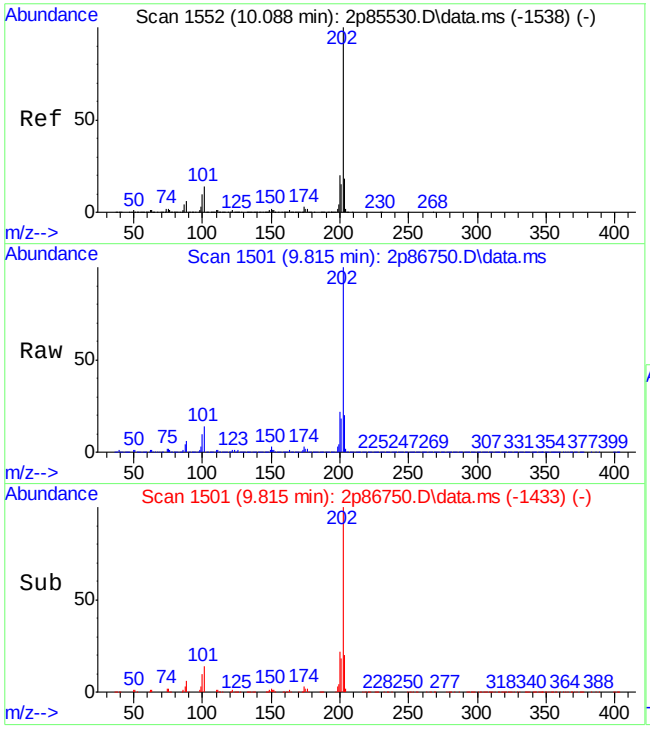


#79
Carbazole
Concen: 84.42 ppm
RT: 8.671 min Scan# 1287
Delta R.T. -0.181 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:167 Resp: 3092663

Ion	Ratio	Lower	Upper
167	100		
166	21.3	0.0	50.8
139	12.6	0.0	44.2

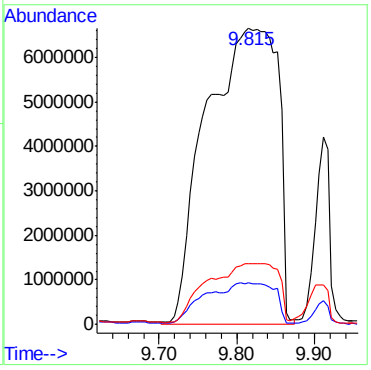


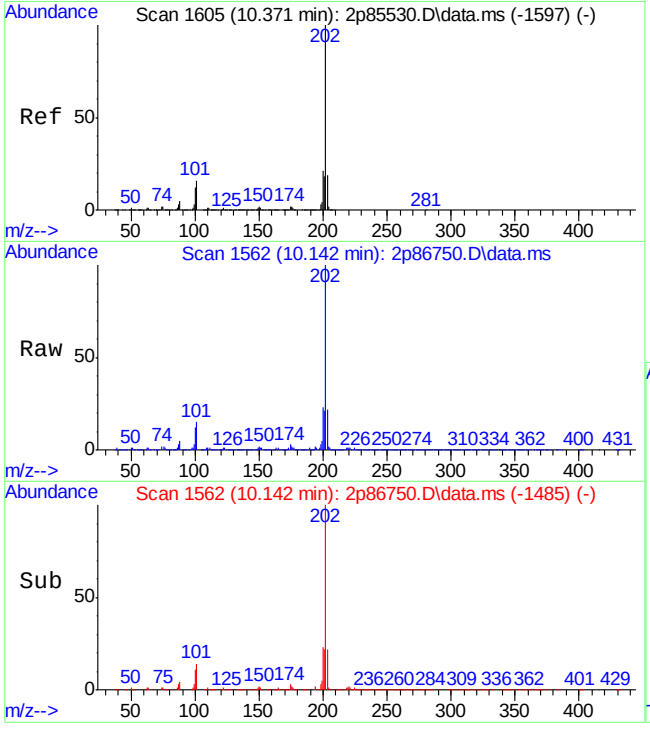


#81
Fluoranthene
Concen: 857.86 ppm m
RT: 9.815 min Scan# 1501
Delta R.T. -0.134 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:202 Resp:42480250

Ion	Ratio	Lower	Upper
202	100		
101	13.9	0.0	43.7
203	20.4	0.0	48.6

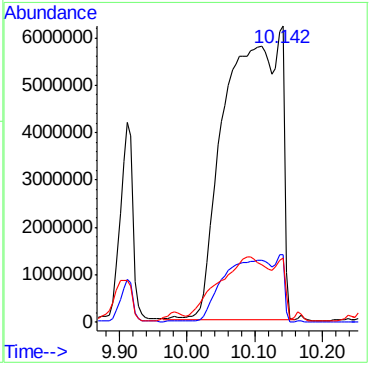


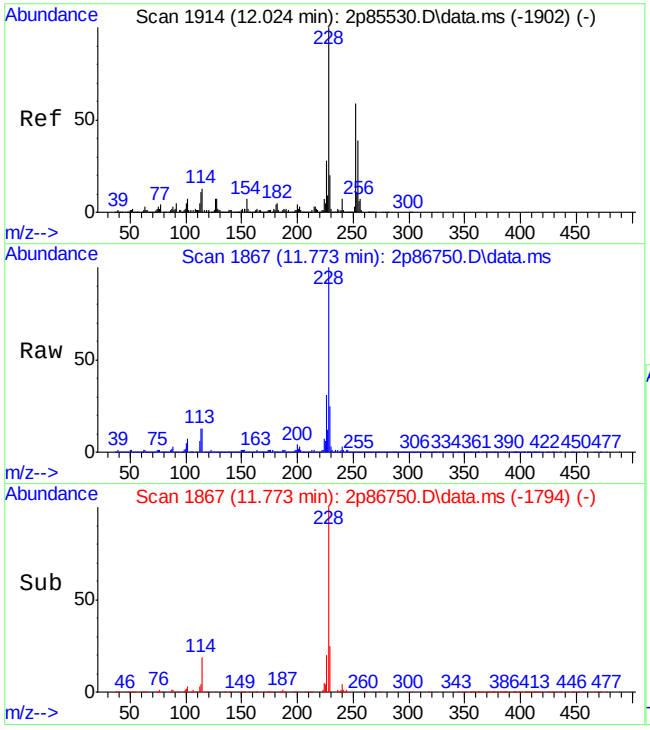


#84
Pyrene
Concen: 760.97 ppm m
RT: 10.142 min Scan# 1562
Delta R.T. -0.090 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:202 Resp:35279748

Ion	Ratio	Lower	Upper
202	100		
200	22.8	0.0	50.1
203	21.8	0.0	47.4

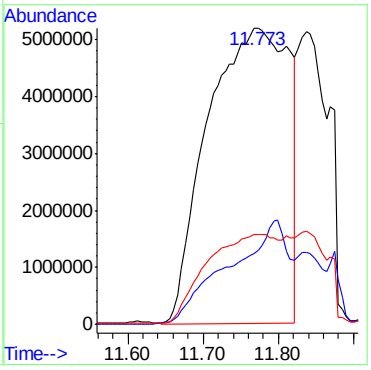


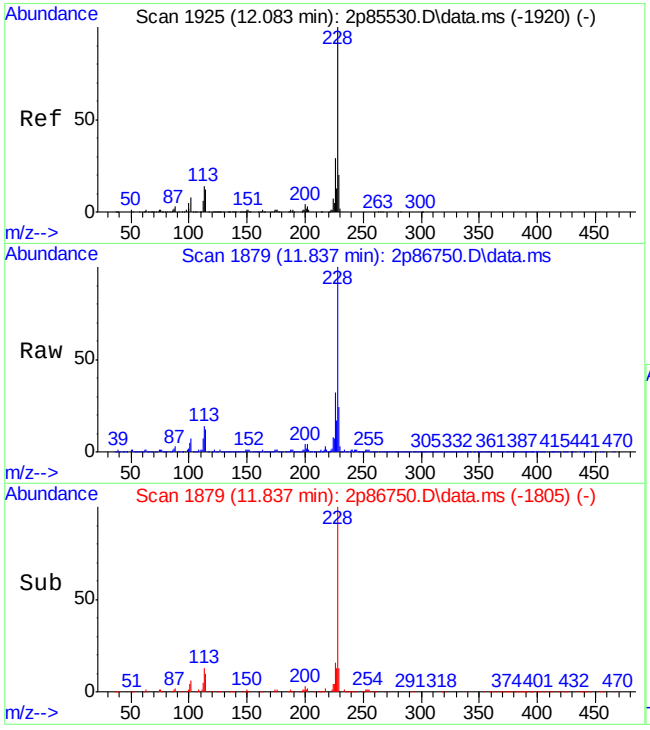


#87
Benzo[a]anthracene
Concen: 864.93 ppm m
RT: 11.773 min Scan# 1867
Delta R.T. -0.107 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:228 Resp:38709385

Ion	Ratio	Lower	Upper
228	100		
229	25.2	0.0	50.3
226	30.5	0.0	57.9

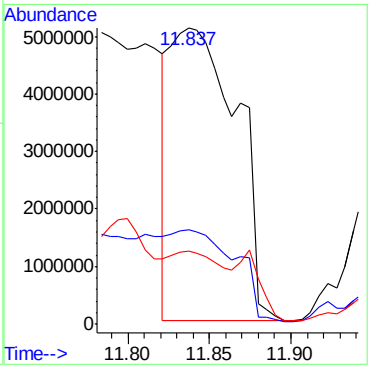


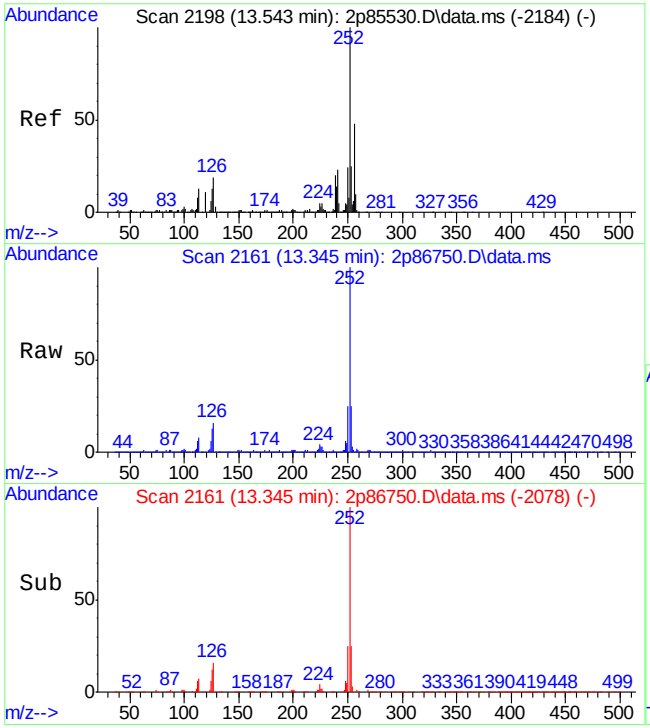


#89
Chrysene
Concen: 450.25 ppm
RT: 11.837 min Scan# 1879
Delta R.T. -0.102 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:228 Resp:14294591

Ion	Ratio	Lower	Upper
228	100		
226	30.9	0.0	59.2
229	24.1	0.0	50.2

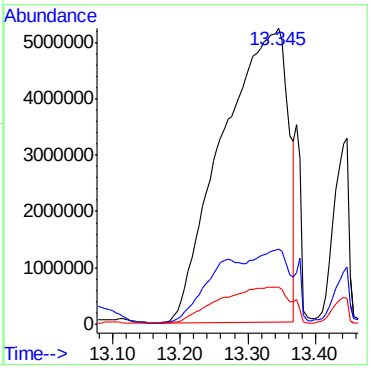


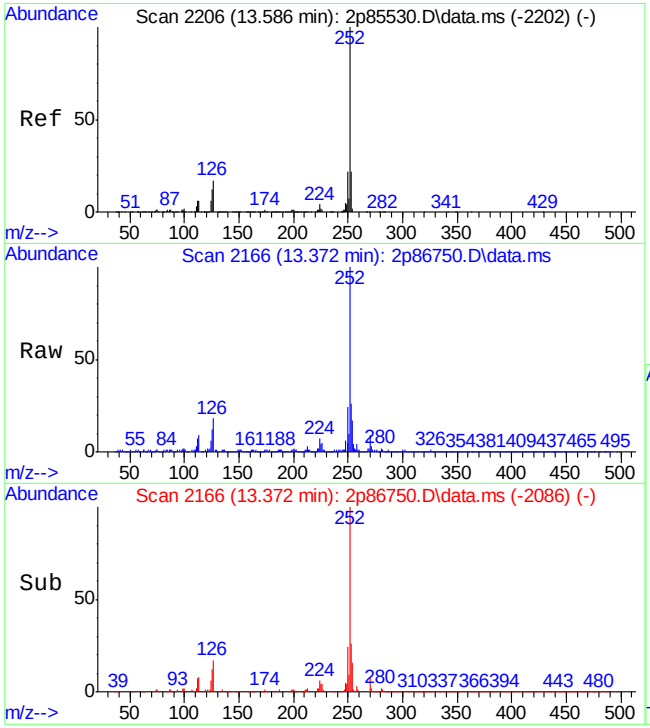


#93
Benzo[b]fluoranthene
Concen: 1247.52 ppm m
RT: 13.345 min Scan# 2161
Delta R.T. -0.059 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:252 Resp:35213649

Ion	Ratio	Lower	Upper
252	100		
253	25.3	0.0	54.9
125	12.7	0.0	42.5

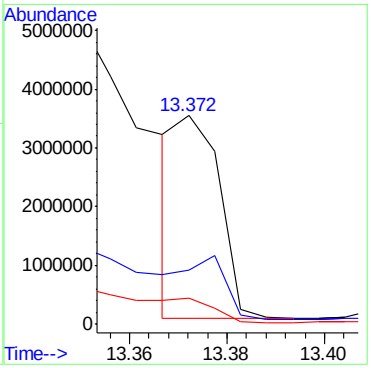


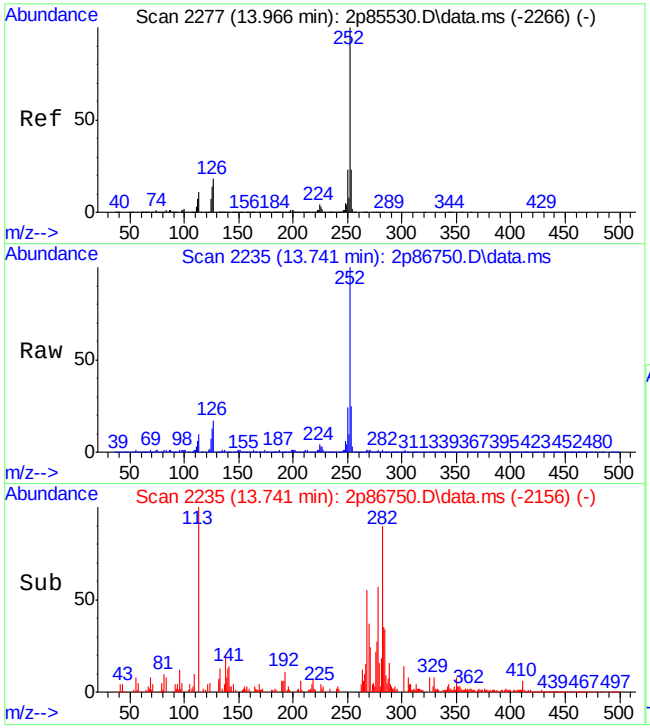


#94
Benzo[k]fluoranthene
Concen: 90.13 ppm m
RT: 13.372 min Scan# 2166
Delta R.T. -0.070 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:252 Resp: 2080385

Ion	Ratio	Lower	Upper
252	100		
253	26.1	0.0	52.4
125	12.2	0.0	40.8

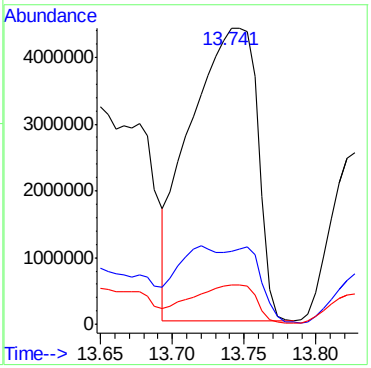


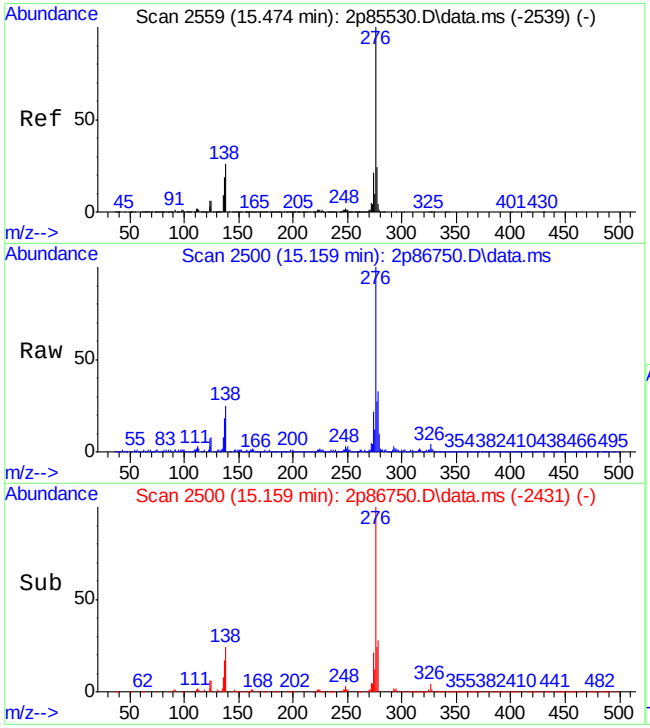


#95
Benzo[a]pyrene
Concen: 602.18 ppm
RT: 13.741 min Scan# 2235
Delta R.T. -0.080 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:252 Resp:14284790

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	52.1
125	12.9	0.0	42.5

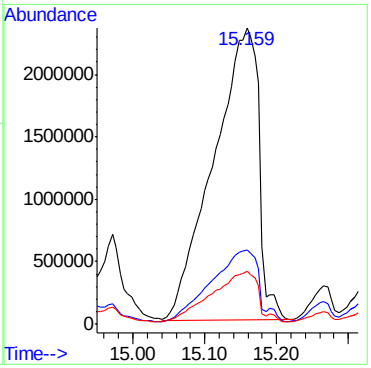


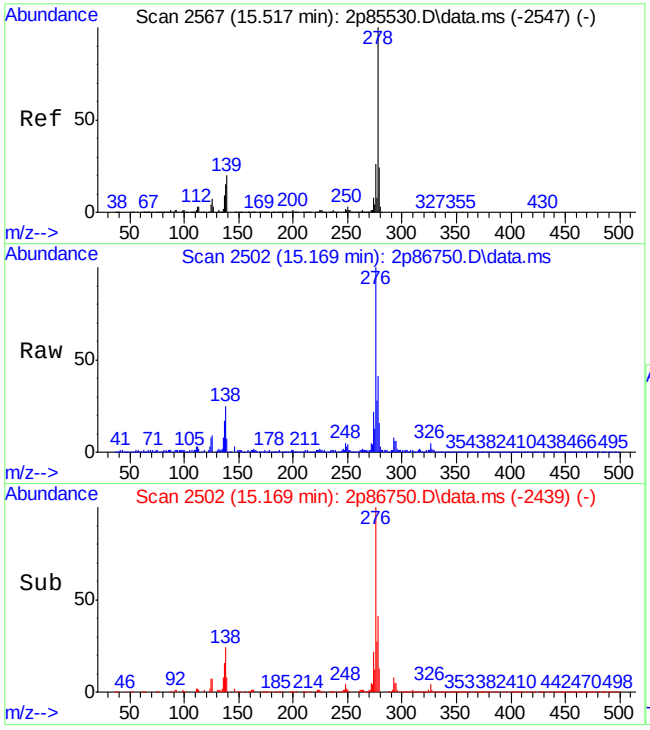


#96
Indeno[1,2,3-cd]pyrene
Concen: 380.67 ppm
RT: 15.159 min Scan# 2500
Delta R.T. -0.133 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:276 Resp:10292156

Ion	Ratio	Lower	Upper
276	100		
138	24.7	0.0	55.3
137	17.1	0.0	48.5

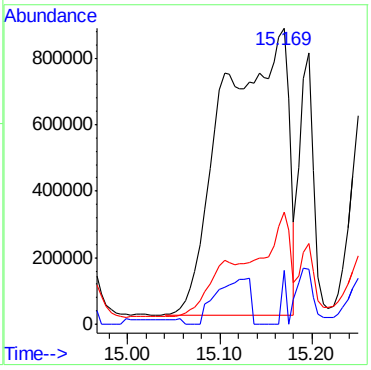


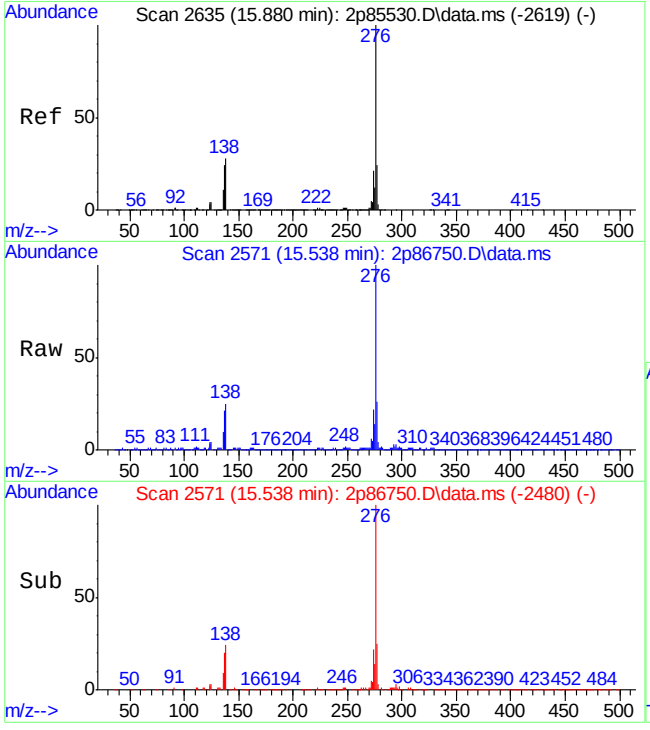


#98
Dibenz[a,h]anthracene
Concen: 197.06 ppm m
RT: 15.169 min Scan# 2502
Delta R.T. -0.161 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:278 Resp: 4150094

Ion	Ratio	Lower	Upper
278	100		
139	18.1	0.0	50.3
279	38.1	0.0	54.3

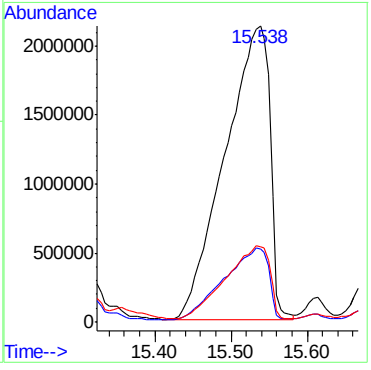




#100
Benzo[g,h,i]perylene
Concen: 405.14 ppm
RT: 15.538 min Scan# 2571
Delta R.T. -0.012 min
Lab File: 2p86750.D
Acq: 19 Apr 2019 6:37 am

Tgt Ion:276 Resp: 8670637

Ion	Ratio	Lower	Upper
276	100		
138	24.3	0.0	57.9
277	24.7	0.0	54.0



Manual Integration Approval Summary

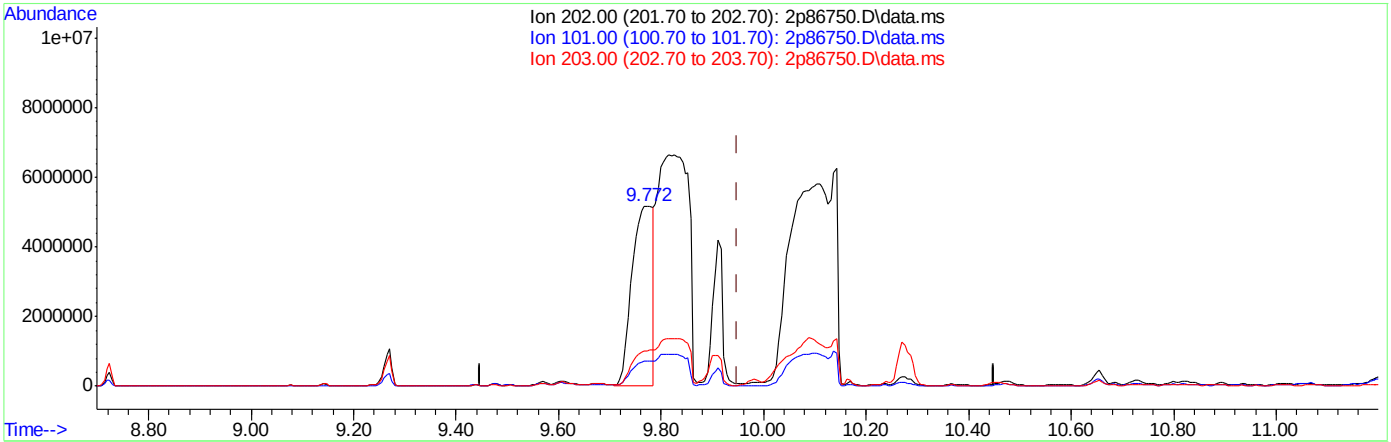
Sample Number: JC86406-14
Lab FileID: 2P86750.D
Injection Time: 04/19/19 06:37
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/29/19 11:52 Kristi Schollenberger

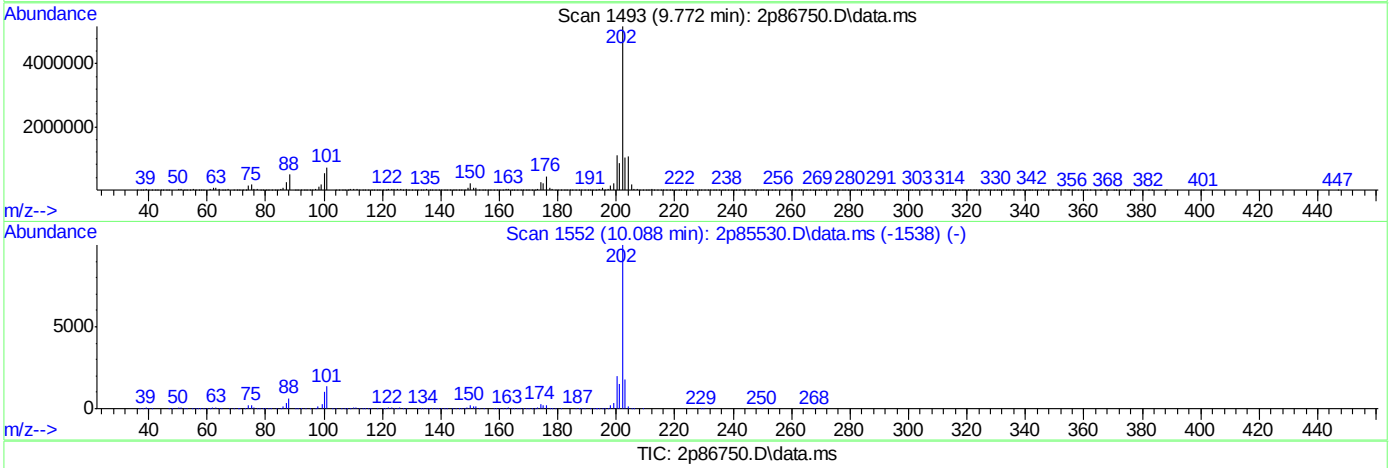
Parameter	CAS	Sig#	R.T. (min.)	Reason
Fluoranthene	206-44-0		9.82	Poor instrument integration
Pyrene	129-00-0		10.14	Poor instrument integration
Benzo(a)anthracene	56-55-3		11.77	Poor instrument integration
Chrysene-d12	1719-03-5		11.82	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.35	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.37	Overlapping peak
Dibenzo(a,h)anthracene	53-70-3		15.17	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration





TIC: 2p86750.D\data.ms

(81) Fluoranthene (t)

9.772min (-0.177) 291.11ppm

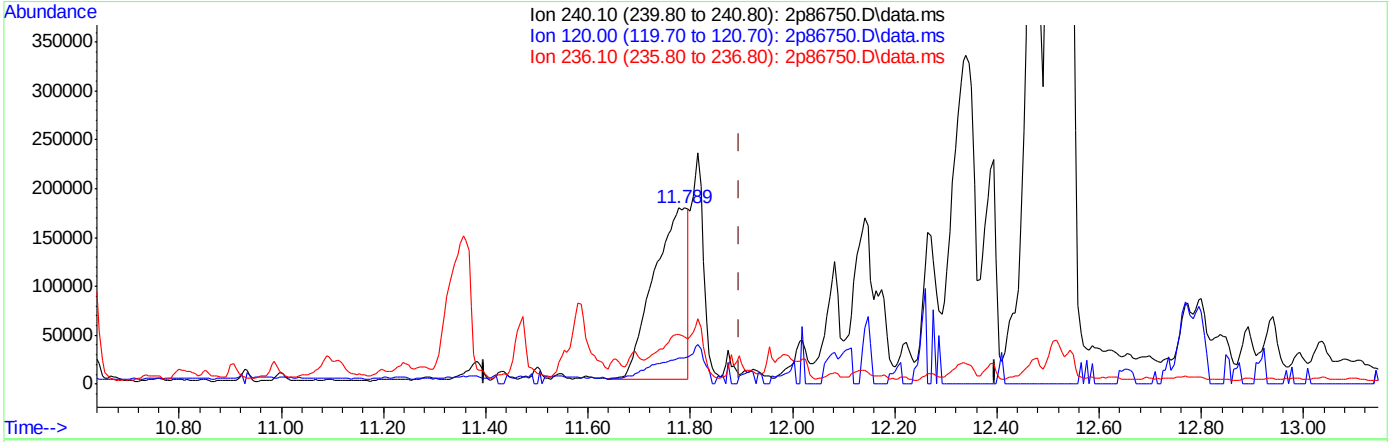
response 14415430

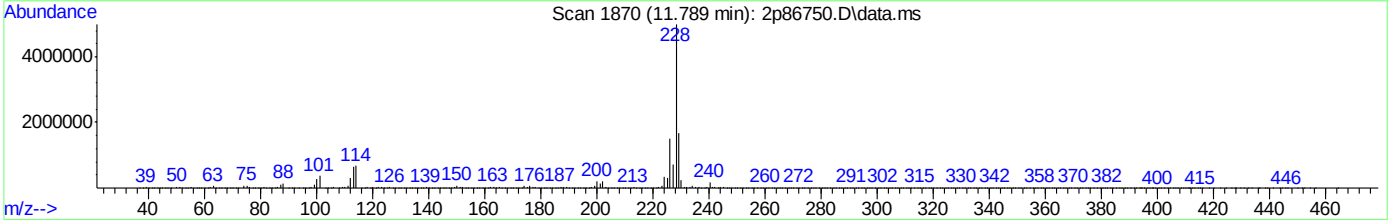
Ion	Exp%	Act%
202.00	100	100
101.00	13.70	13.87
203.00	18.60	18.45
0.00	0.00	0.00

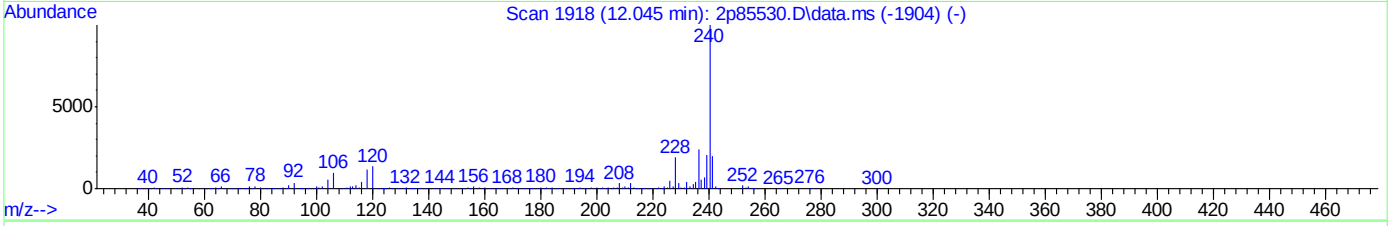
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(83) Chrysene-d12 (I)

11.789min (-0.107) 40.00ppm

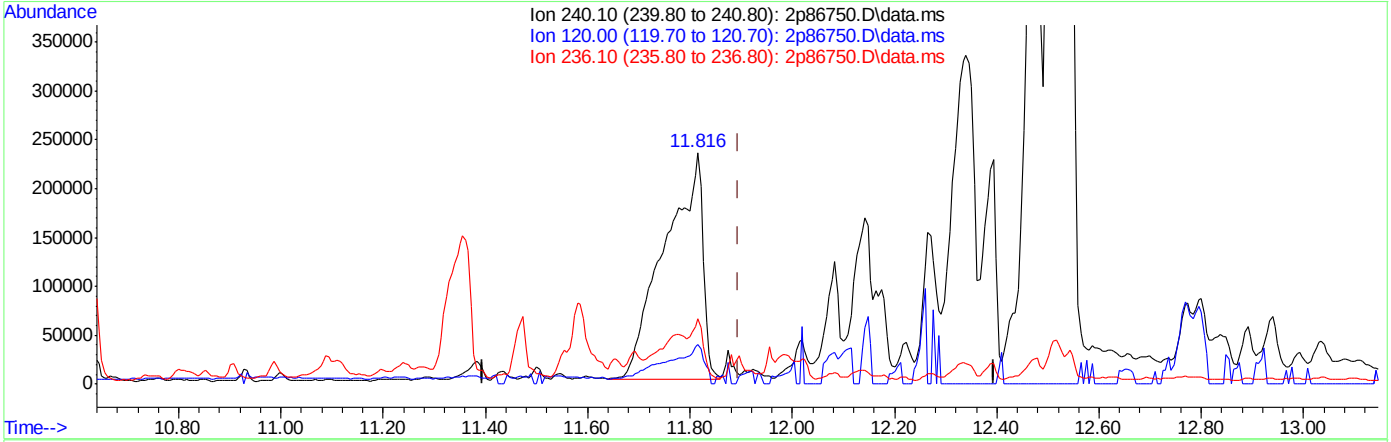
response 794926

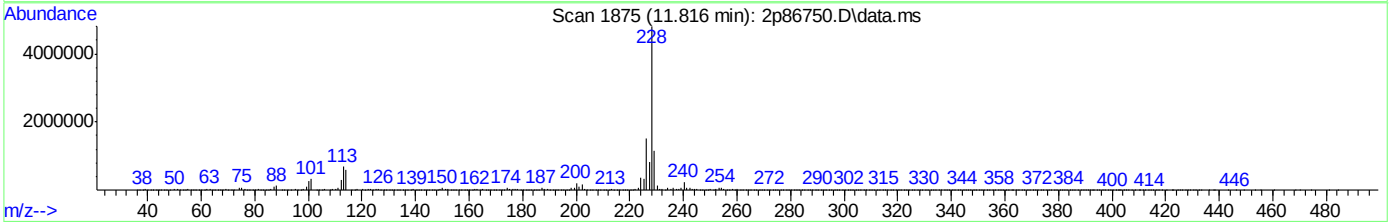
Ion	Exp%	Act%
240.10	100	100
120.00	15.00	11.50
236.10	24.30	20.02
0.00	0.00	0.00

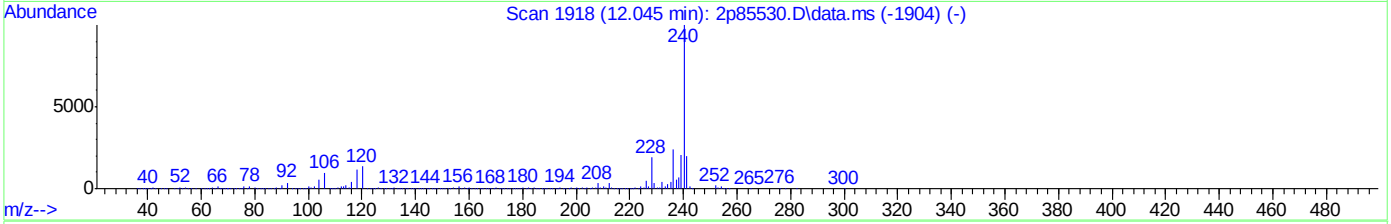
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(83) Chrysene-d12 (I)

11.816min (-0.080) 40.00ppm m

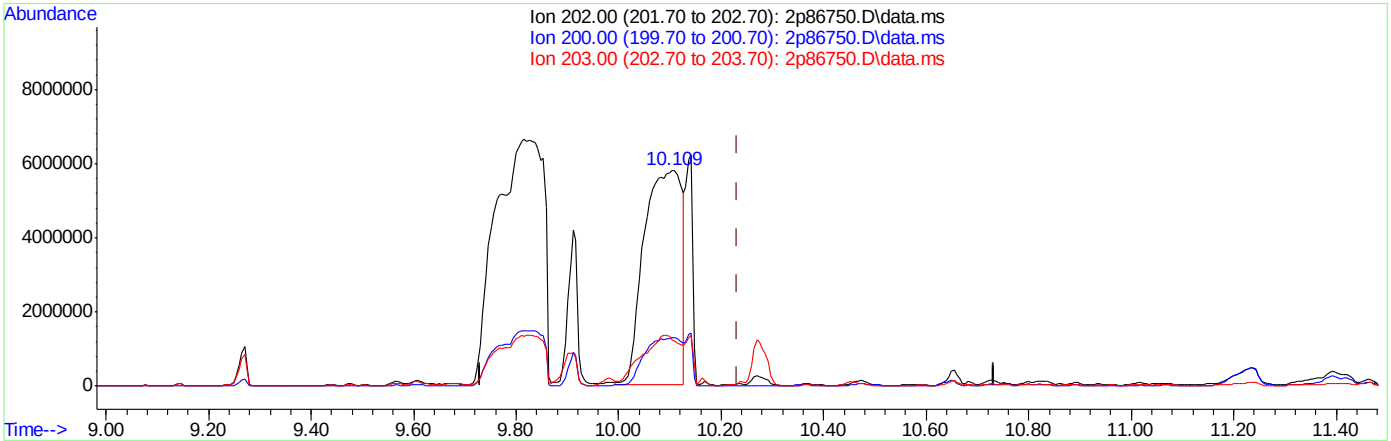
response 1191505

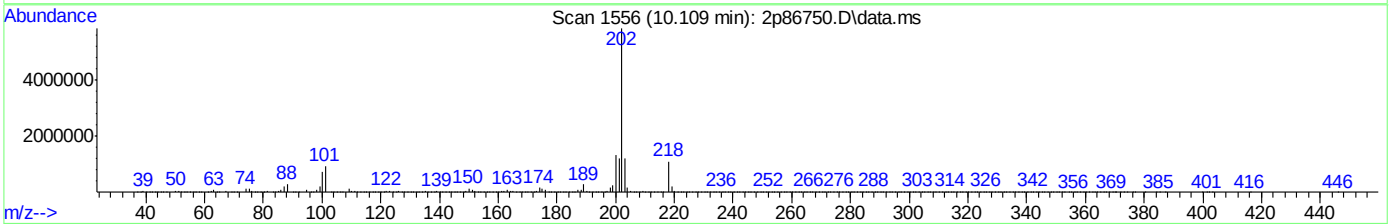
Ion	Exp%	Act%
240.10	100	100
120.00	15.00	17.12
236.10	24.30	28.32
0.00	0.00	0.00

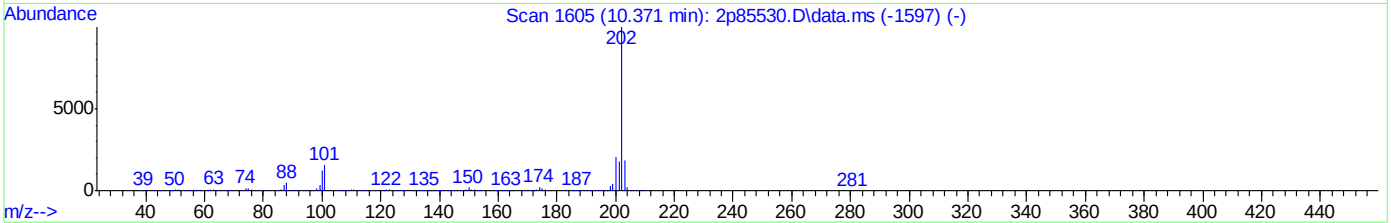
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(84) Pyrene (t)

10.109min (-0.123) 632.91ppm

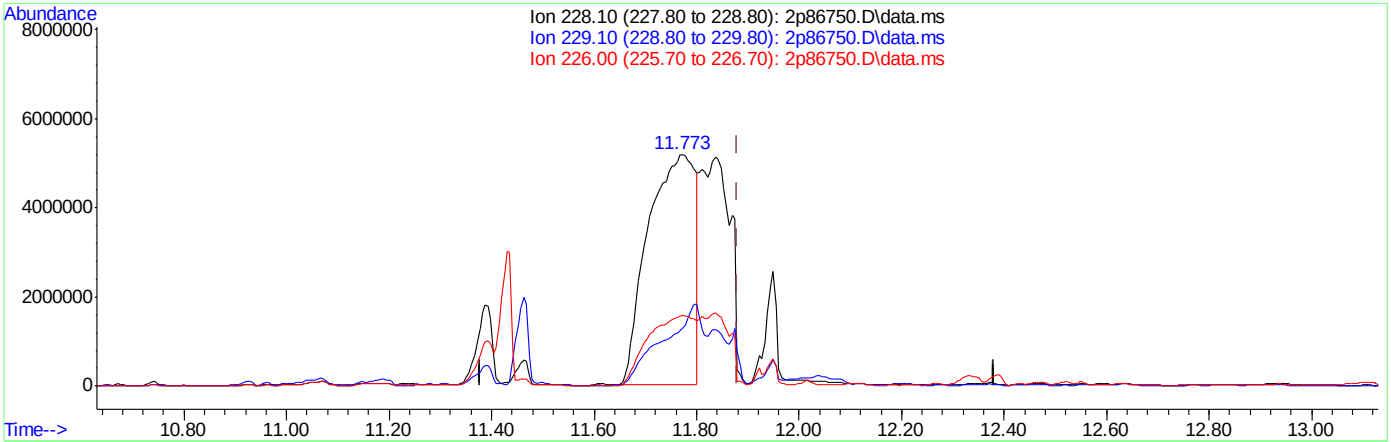
response 29342747

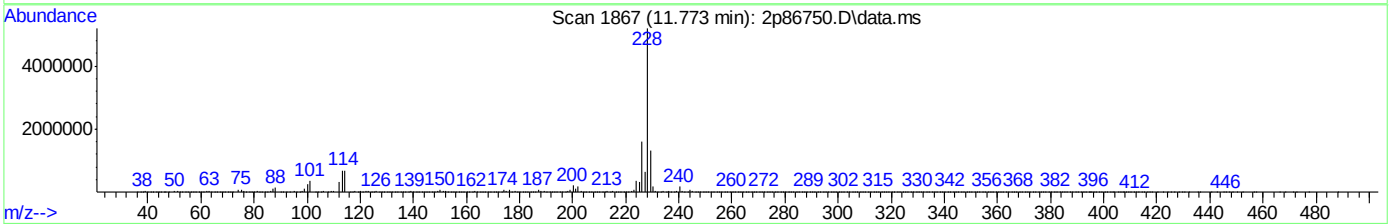
Ion	Exp%	Act%
202.00	100	100
200.00	20.10	22.19
203.00	17.40	19.00
0.00	0.00	0.00

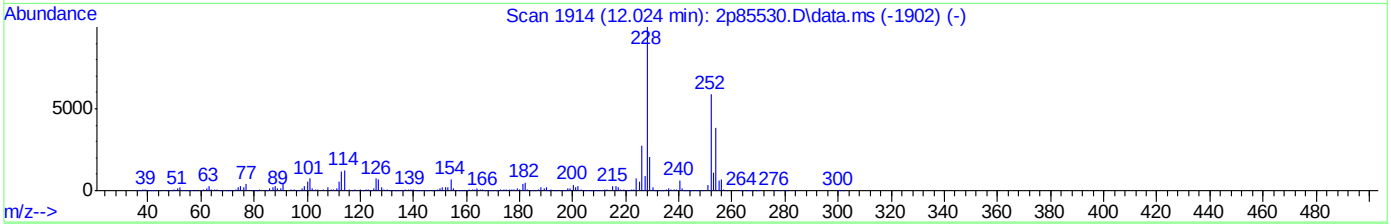
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(87) Benzo[a]anthracene (t)

11.773min (-0.107) 726.67ppm

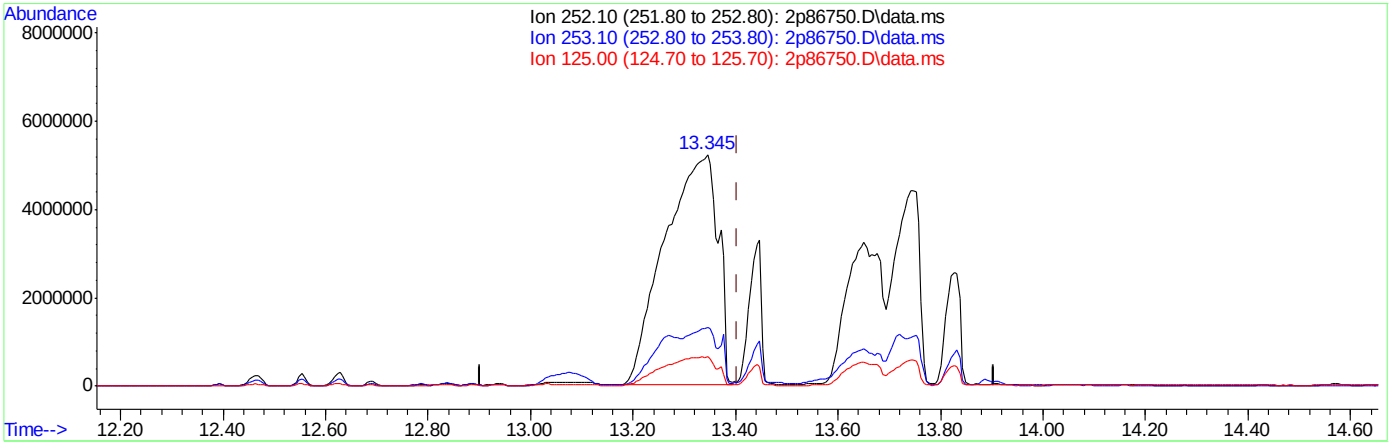
response 32521515

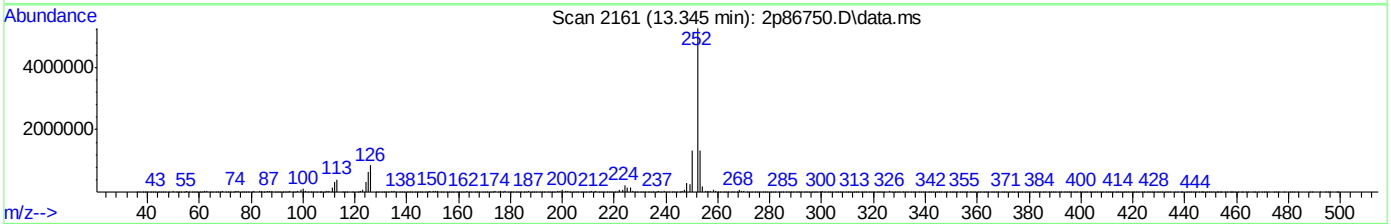
Ion	Exp%	Act%
228.10	100	100
229.10	20.30	13.36
226.00	27.90	30.14
0.00	0.00	0.00

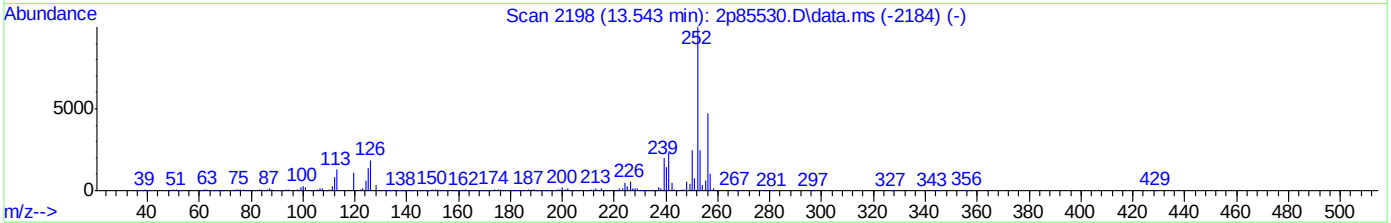
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.345min (-0.059) 1328.36ppm

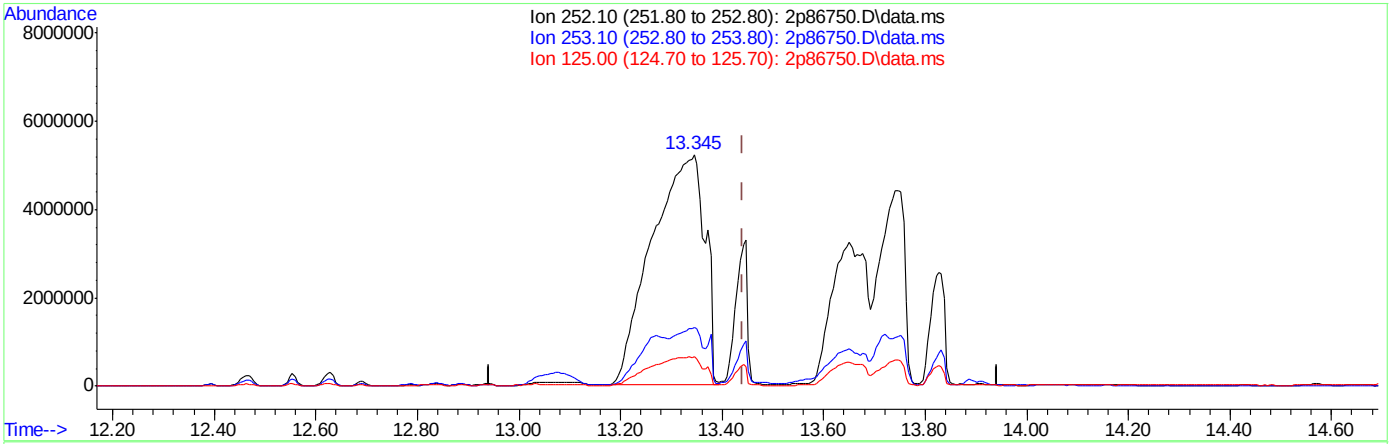
response 37495490

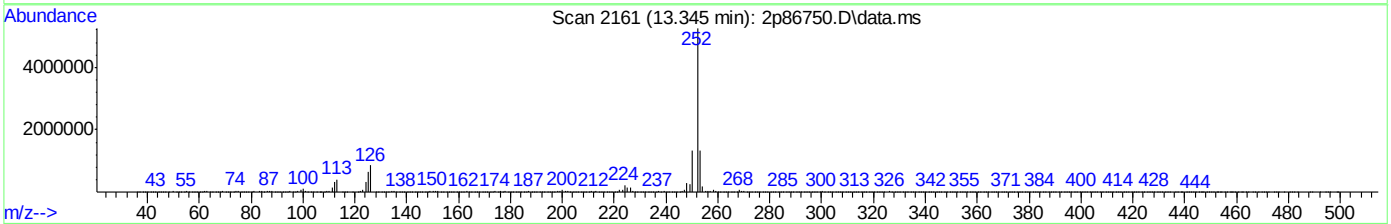
Ion	Exp%	Act%
252.10	100	100
253.10	24.90	24.62
125.00	12.50	12.40
0.00	0.00	0.00

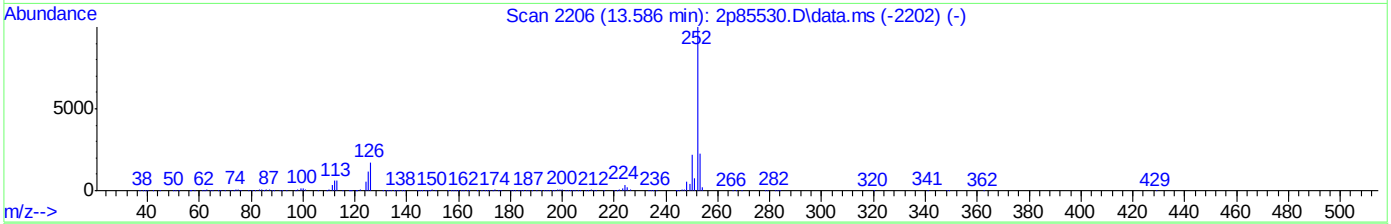
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(94) Benzo[k]fluoranthene (t)

13.345min (-0.097) 1624.53ppm

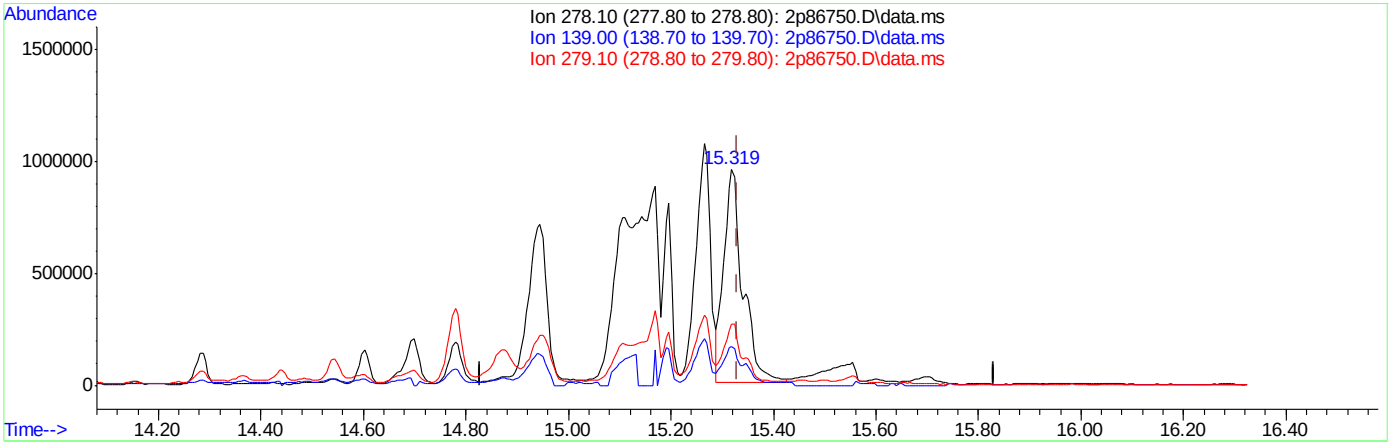
response 37495490

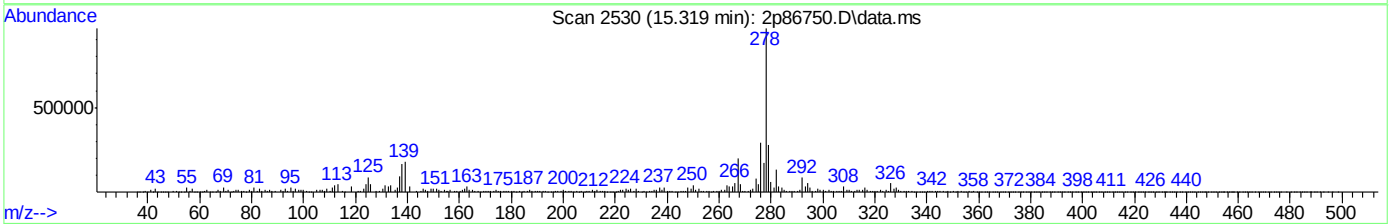
Ion	Exp%	Act%
252.10	100	100
253.10	22.40	24.62
125.00	10.80	12.40
0.00	0.00	0.00

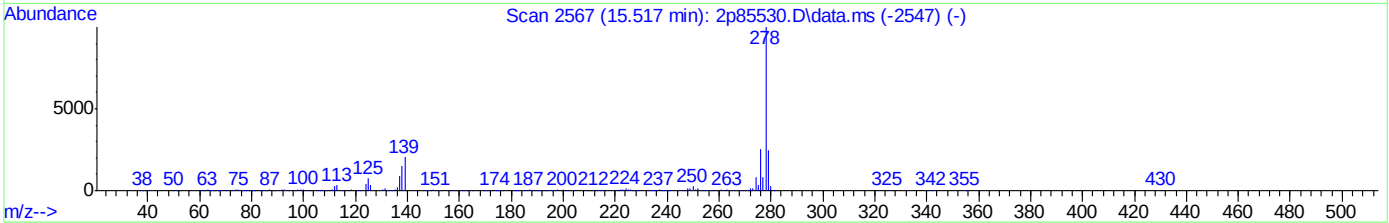
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(98) Dibenz[a,h]anthracene (t)

15.319min (-0.011) 118.19ppm

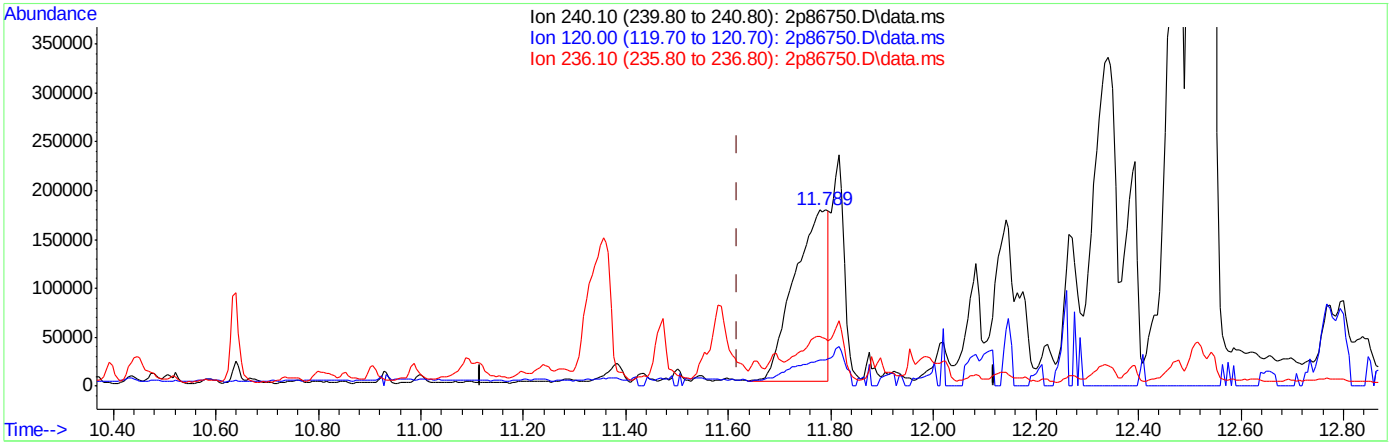
response 2489092

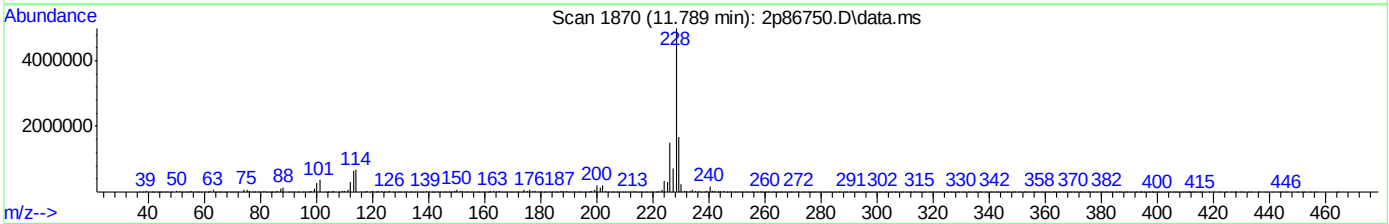
Ion	Exp%	Act%
278.10	100	100
139.00	20.30	17.09
279.10	24.30	26.68
0.00	0.00	0.00

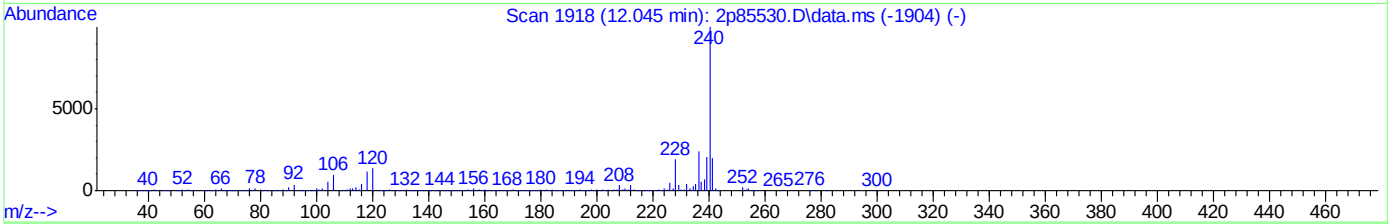
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(108) Chrysene-d12a (I)

11.789min (+0.171) 40.00ppm

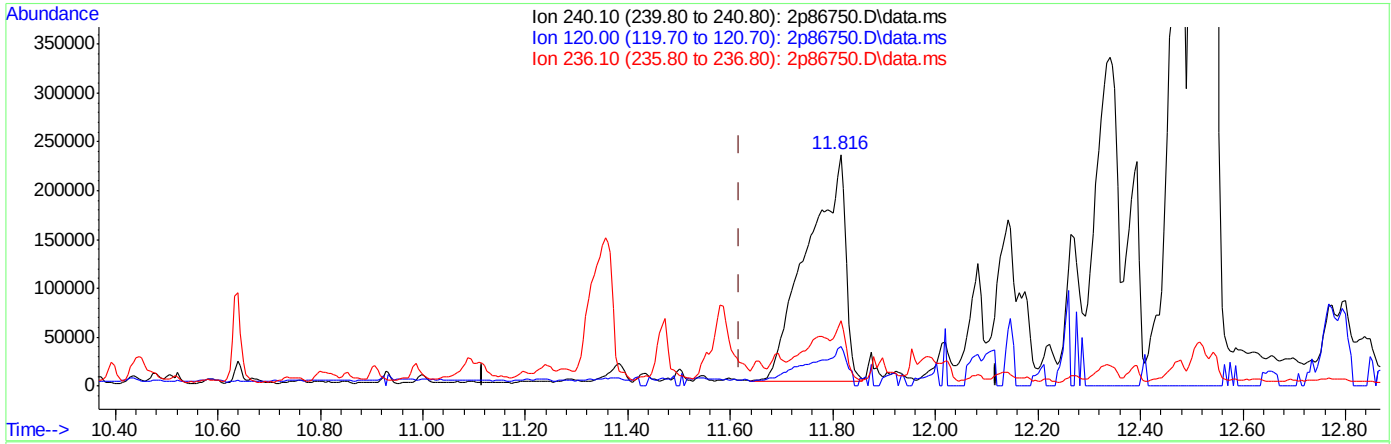
response 794926

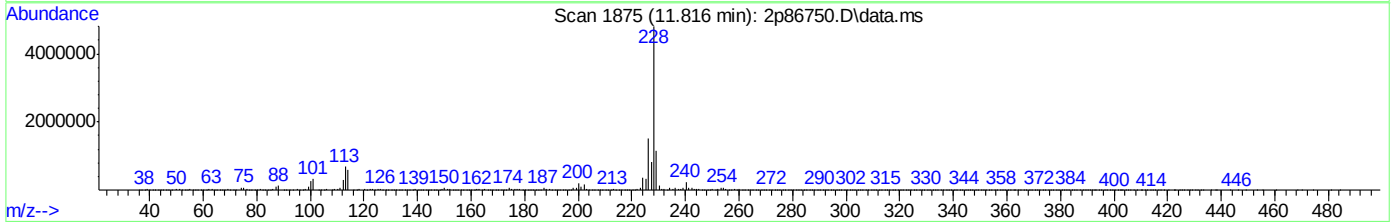
Ion	Exp%	Act%
240.10	100	100
120.00	13.40	11.50
236.10	25.10	20.02
0.00	0.00	0.00

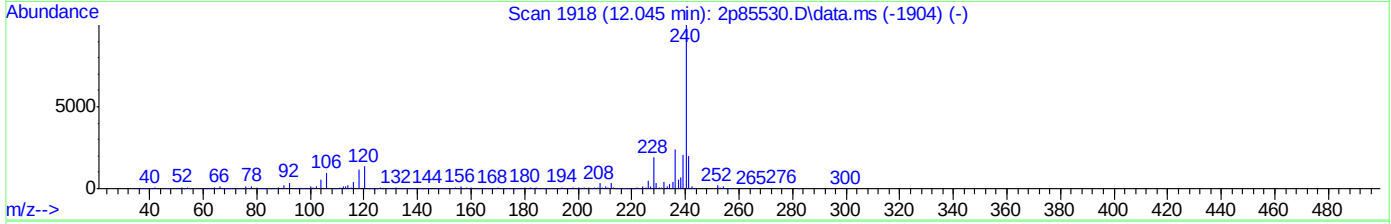
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86750.D
Acq On : 19 Apr 2019 6:37 am
Operator : carolb
Sample : jc86406-14
Misc : op19810,e2p3831,30.3,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 19 11:59:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86750.D\data.ms

(108) Chrysene-d12a (I)

11.816min (+0.198) 40.00ppm m

response 1187716

Ion	Exp%	Act%
240.10	100	100
120.00	13.40	17.12
236.10	25.10	28.32
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/29/19 11:52

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:52:02 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	67731	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	263345	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	142909	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	282015	40.00	ppm	0.00
83) Chrysene-d12	11.242	240	264855	40.00	ppm	0.00
91) Perylene-d12	13.277	264	229231	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	67731	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	282015	40.00	ppm	0.00
107) Chrysene-d12a	11.242	240	264855	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	142909	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	263345	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	282015	40.00	ppm	0.00
115) Chrysene-d12b	11.242	240	264855	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.089	112	2519	1.29	ppm	0.02
Spiked Amount 50.000			Recovery =	2.58%		
8) Phenol-d5	3.853	99	4030	1.46	ppm	0.00
Spiked Amount 50.000			Recovery =	2.92%		
25) Nitrobenzene-d5	4.494	82	3780	1.55	ppm	0.00
Spiked Amount 50.000			Recovery =	3.10%		
51) 2-Fluorobiphenyl	5.766	172	9448	1.95	ppm	0.00
Spiked Amount 50.000			Recovery =	3.90%		
73) 2,4,6-Tribromophenol	6.931	330	998m	1.33	ppm	0.00
Spiked Amount 50.000			Recovery =	2.66%		
85) Terphenyl-d14	9.741	244	11806	2.15	ppm	0.00
Spiked Amount 50.000			Recovery =	4.30%		
104) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
9) Phenol	3.864	94	2216	0.74	ppm	98
38) Naphthalene	5.013	128	20893	3.04	ppm	97
44) 2-Methylnaphthalene	5.504	141	8845	2.32	ppm	96
53) Biphenyl	5.835	154	3515	0.64	ppm	96
56) Acenaphthylene	6.140	152	98422	14.57	ppm	99
59) Acenaphthene	6.273	153	3015	0.66	ppm	81
62) Dibenzofuran	6.412	168	33336	5.60	ppm	98
66) Fluorene	6.701	166	42626	8.59	ppm	96
77) Phenanthrene	7.668	178	497235	62.12	ppm	99
78) Anthracene	7.721	178	142240	17.83	ppm	98
79) Carbazole	7.924	167	37718	4.73	ppm	97
81) Fluoranthene	9.164	202	1048634	120.39	ppm	99
84) Pyrene	9.457	202	814740	92.08	ppm	95
87) Benzo[a]anthracene	11.231	228	446271	54.12	ppm	99
89) Chrysene	11.279	228	425952	53.02	ppm	98
93) Benzo[b]fluoranthene	12.780	252	476214	65.44	ppm	98
94) Benzo[k]fluoranthene	12.812	252	181965m	28.16	ppm	
95) Benzo[a]pyrene	13.202	252	288119	48.41	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.570	276	174172	31.25	ppm	93
98) Dibenz[a,h]anthracene	14.597	278	41345m	7.14	ppm	
100) Benzo[g,h,i]perylene	14.858	276	154320	29.41	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:52:02 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

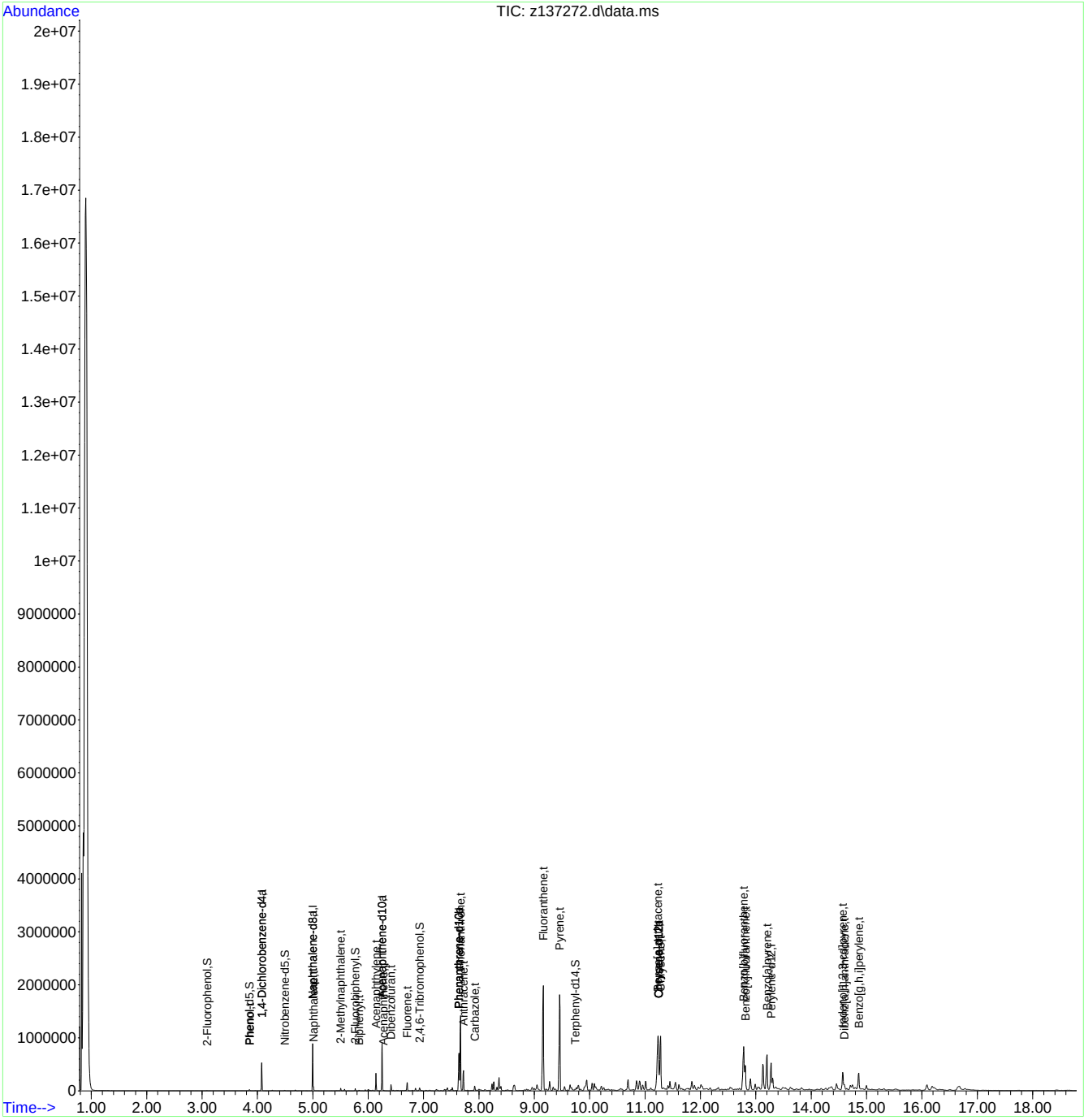
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

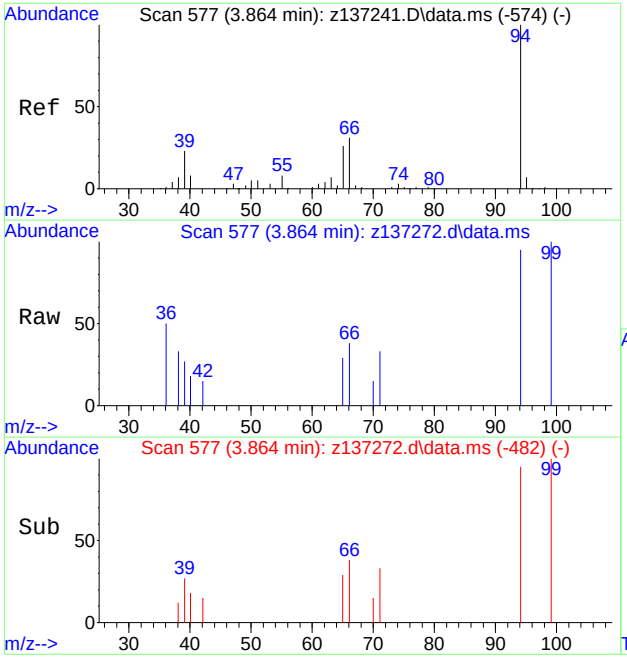
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:52:02 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

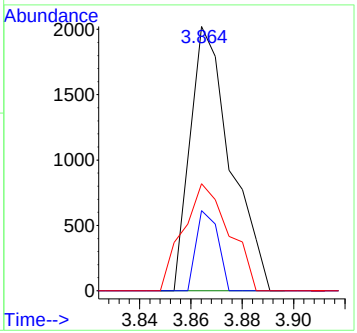


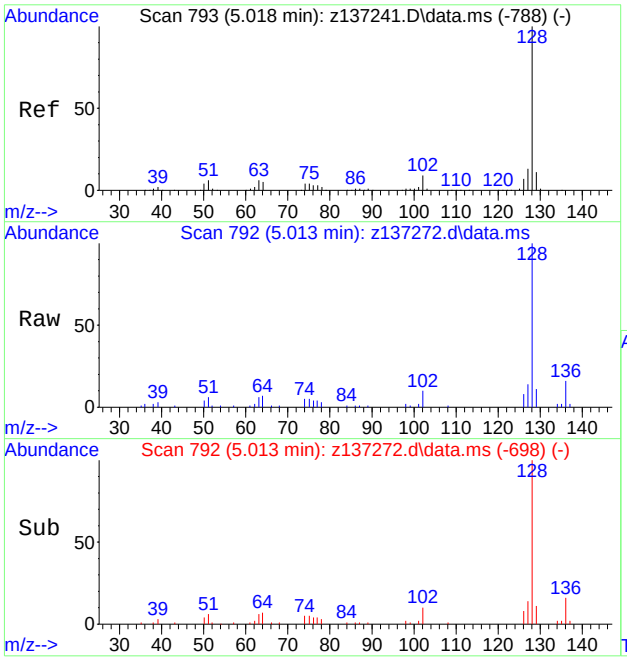


#9
Phenol
Concen: 0.74 ppm
RT: 3.864 min Scan# 577
Delta R.T. 0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion: 94 Resp: 2216

Ion	Ratio	Lower	Upper
94	100		
65	30.3	0.0	59.5
66	40.5	8.6	68.6

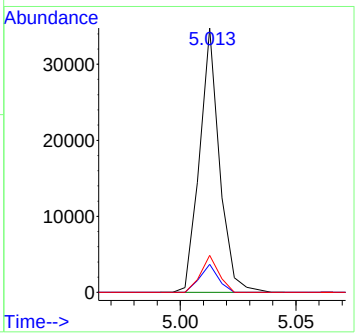


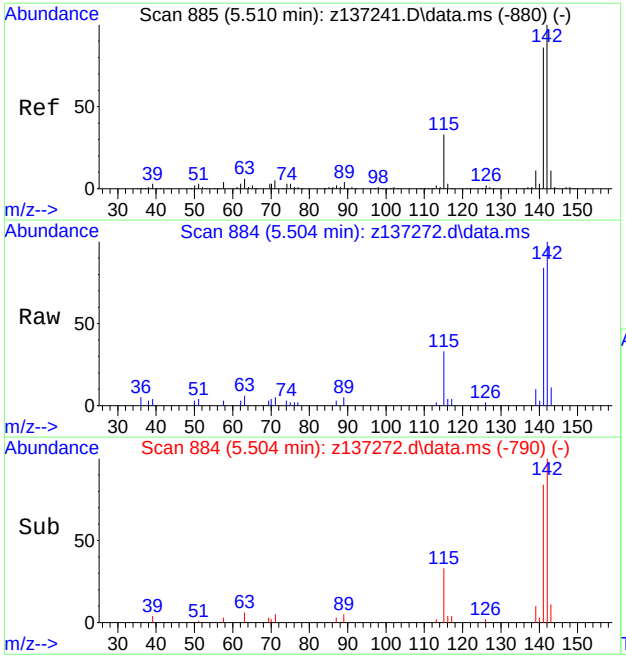


#38
Naphthalene
Concen: 3.04 ppm
RT: 5.013 min Scan# 792
Delta R.T. 0.000 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:128 Resp: 20893

Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	41.4
127	14.0	0.0	42.7

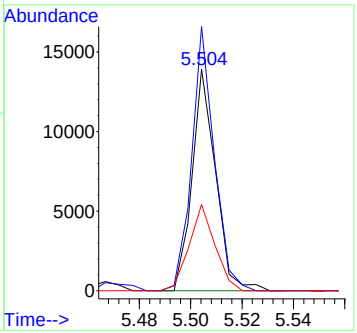


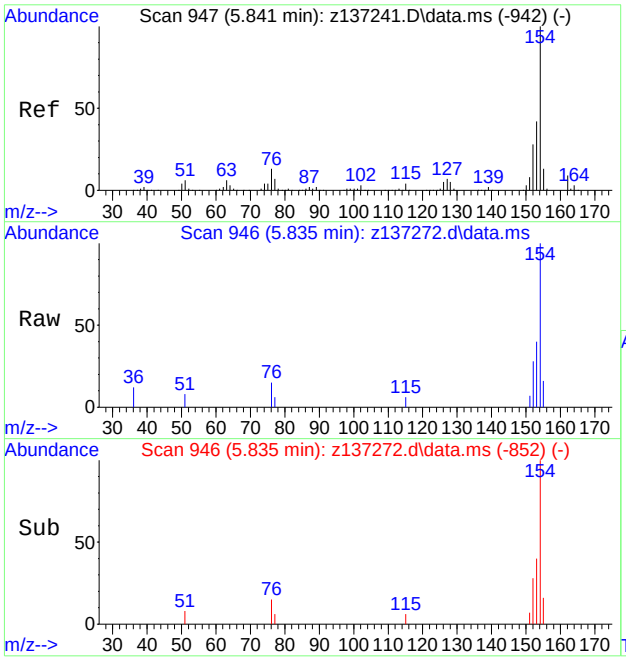


#44
2-Methylnaphthalene
Concen: 2.32 ppm
RT: 5.504 min Scan# 884
Delta R.T. 0.000 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:141 Resp: 8845

Ion	Ratio	Lower	Upper
141	100		
142	119.3	85.9	145.9
115	39.0	12.3	72.3

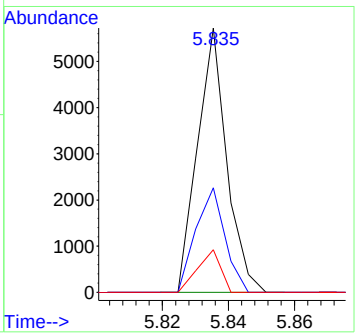


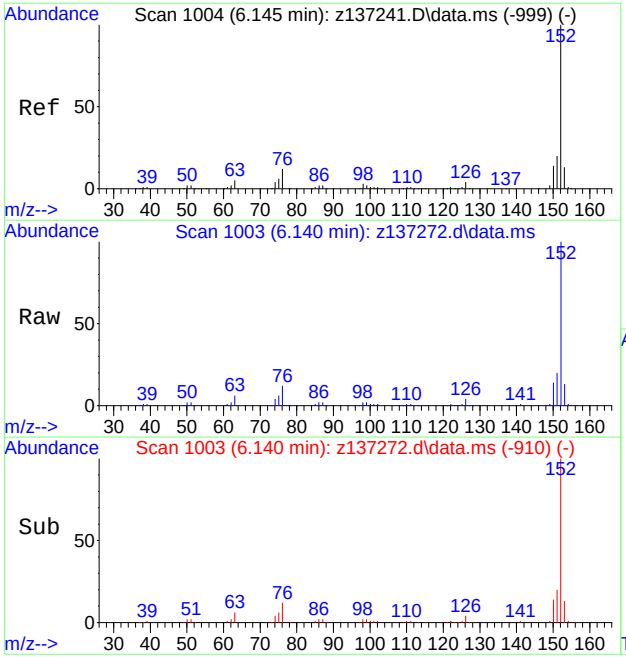


#53
Biphenyl
Concen: 0.64 ppm
RT: 5.835 min Scan# 946
Delta R.T. 0.000 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:154 Resp: 3515

Ion	Ratio	Lower	Upper
154	100		
153	39.6	11.1	71.1
155	16.1	0.0	43.2

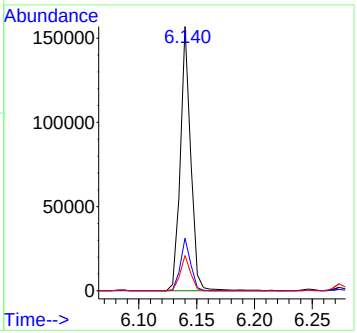


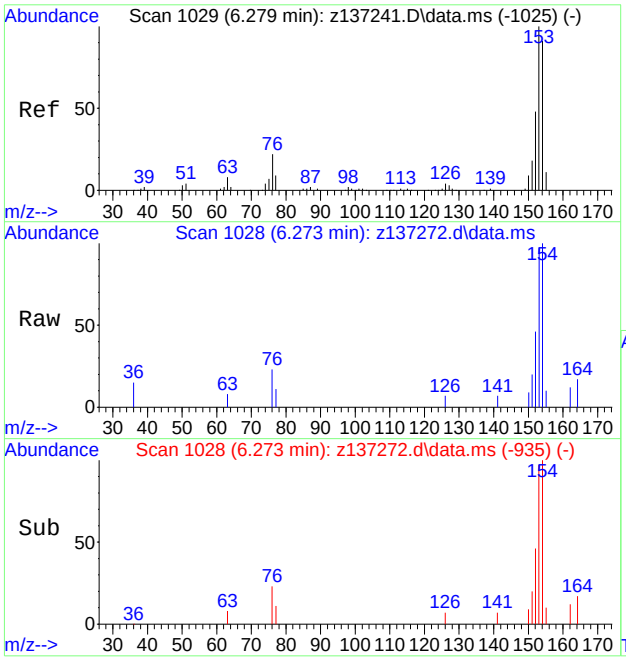


#56
Acenaphthylene
Concen: 14.57 ppm
RT: 6.140 min Scan# 1003
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:152 Resp: 98422

Ion	Ratio	Lower	Upper
152	100		
151	20.0	0.0	50.3
153	13.3	0.0	42.9

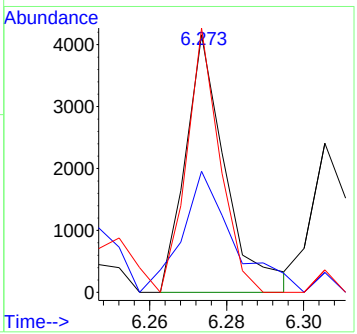


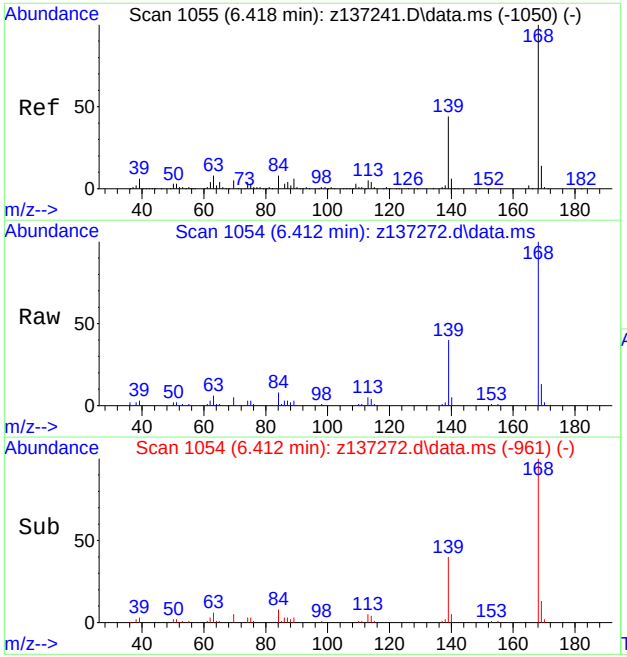


#59
Acenaphthene
Concen: 0.66 ppm
RT: 6.273 min Scan# 1028
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:153 Resp: 3015

Ion	Ratio	Lower	Upper
153	100		
152	40.5	16.7	76.7
154	106.9	55.0	115.0

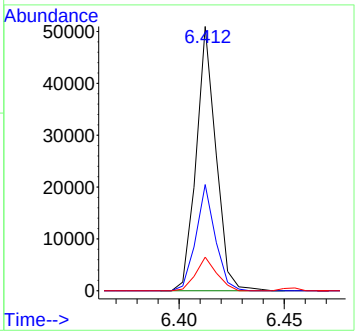


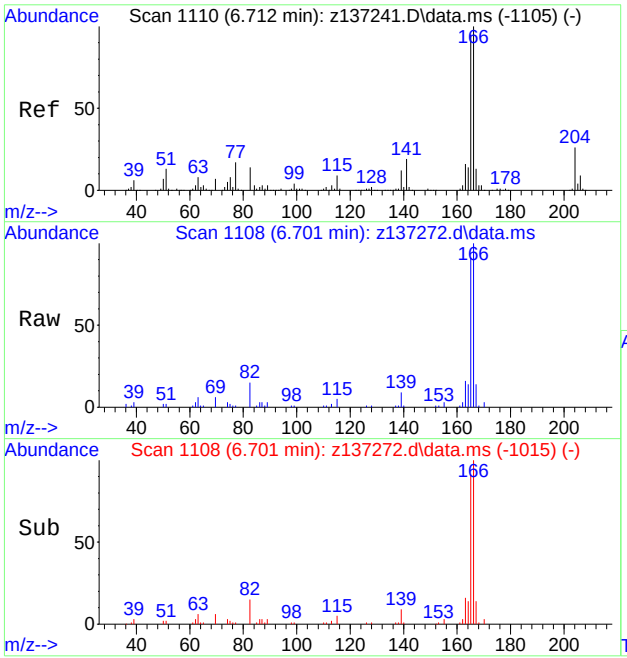


#62
Dibenzofuran
Concen: 5.60 ppm
RT: 6.412 min Scan# 1054
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:168 Resp: 33336

Ion	Ratio	Lower	Upper
168	100		
139	40.2	9.0	69.0
169	12.3	0.0	43.4

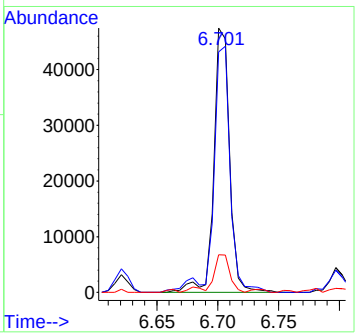


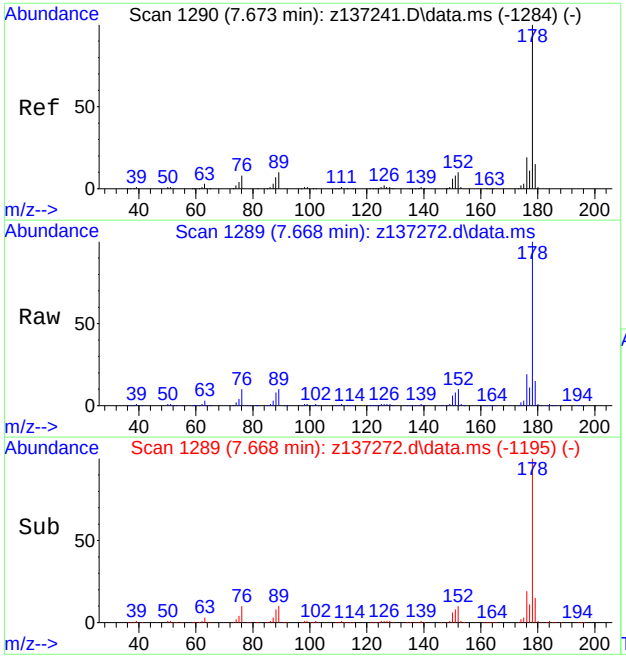


#66
Fluorene
Concen: 8.59 ppm
RT: 6.701 min Scan# 1108
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:166 Resp: 42626

Ion	Ratio	Lower	Upper
166	100		
165	91.0	65.1	125.1
167	13.8	0.0	43.6

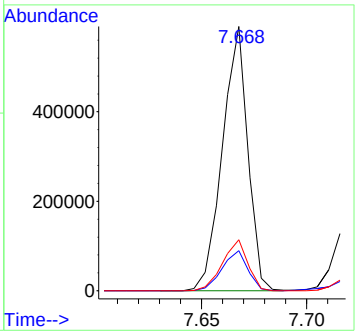


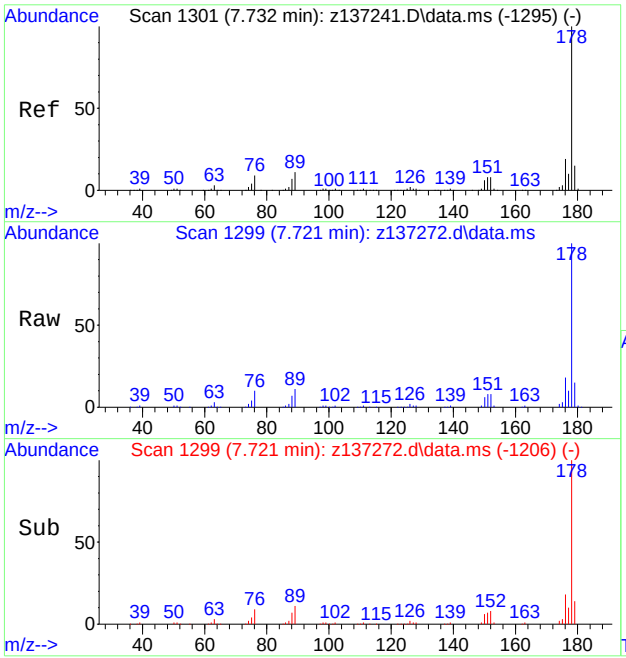


#77
Phenanthrene
Concen: 62.12 ppm
RT: 7.668 min Scan# 1289
Delta R.T. 0.000 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:178 Resp: 497235

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	44.7
176	19.2	0.0	49.0

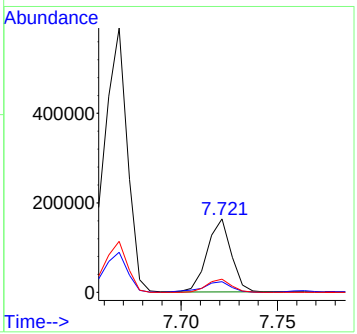


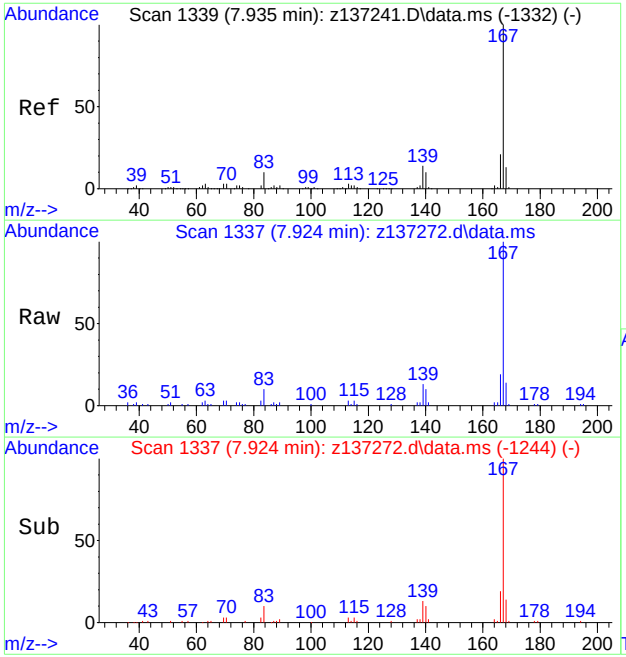


#78
Anthracene
Concen: 17.83 ppm
RT: 7.721 min Scan# 1299
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:178 Resp: 142240

Ion	Ratio	Lower	Upper
178	100		
179	14.0	0.0	44.9
176	18.1	0.0	48.7

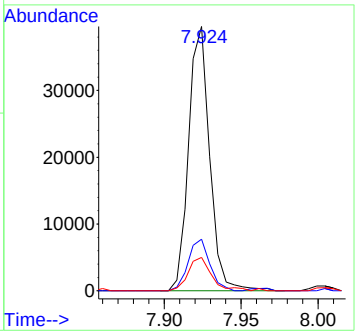


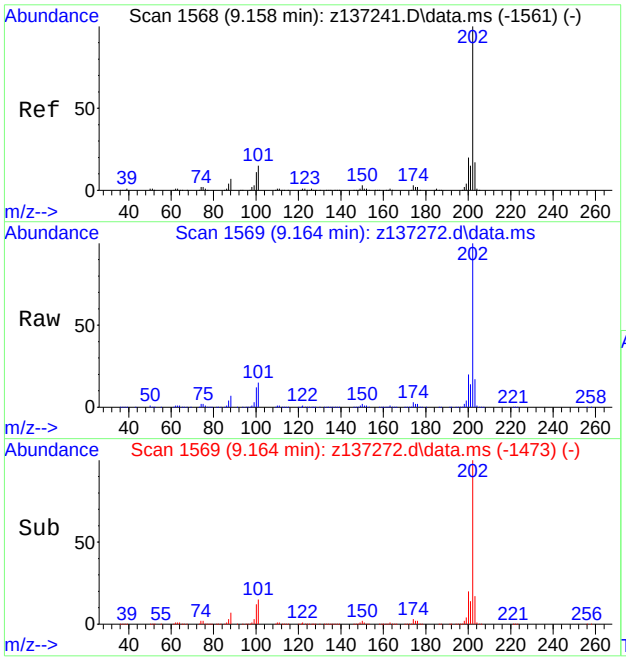


#79
Carbazole
Concen: 4.73 ppm
RT: 7.924 min Scan# 1337
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:167 Resp: 37718

Ion	Ratio	Lower	Upper
167	100		
166	19.5	0.0	51.1
139	12.6	0.0	43.4

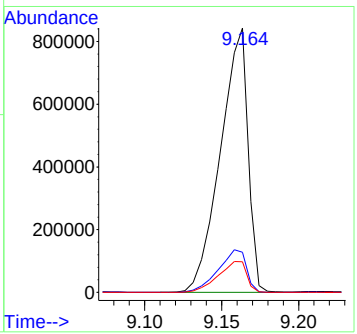


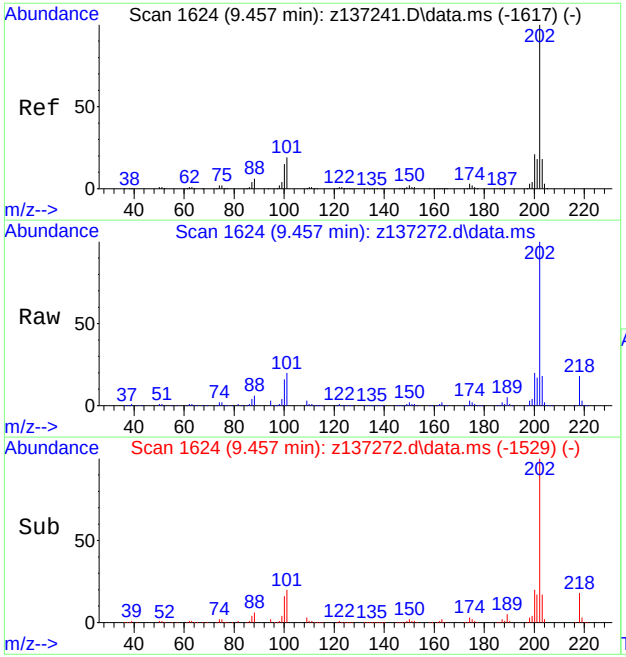


#81
Fluoranthene
Concen: 120.39 ppm
RT: 9.164 min Scan# 1569
Delta R.T. 0.011 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:202 Resp: 1048634

Ion	Ratio	Lower	Upper
202	100		
101	15.2	0.0	45.3
100	11.6	0.0	40.9

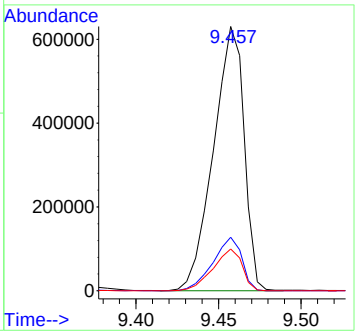


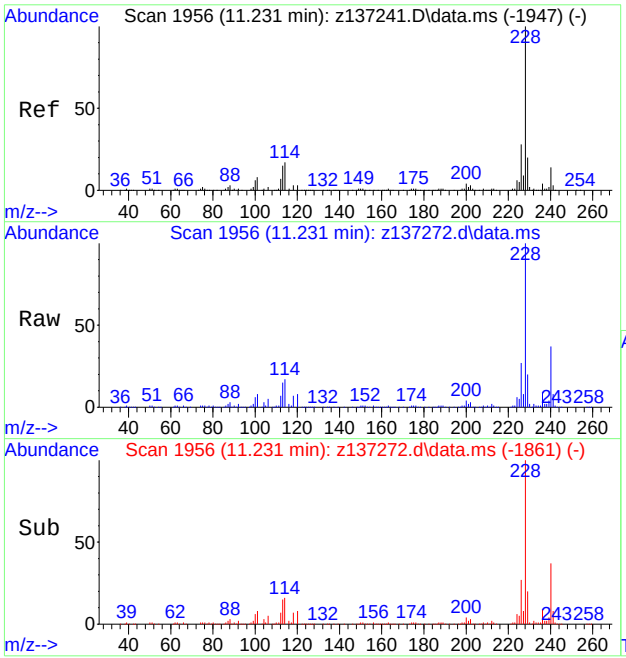


#84
Pyrene
Concen: 92.08 ppm
RT: 9.457 min Scan# 1624
Delta R.T. 0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:202 Resp: 814740

Ion	Ratio	Lower	Upper
202	100		
101	20.3	0.0	47.8
100	15.8	0.0	44.2

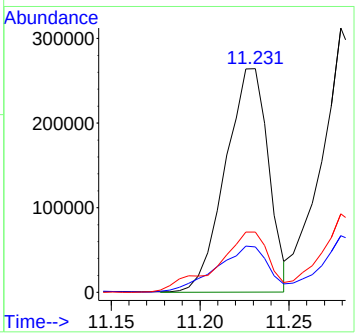


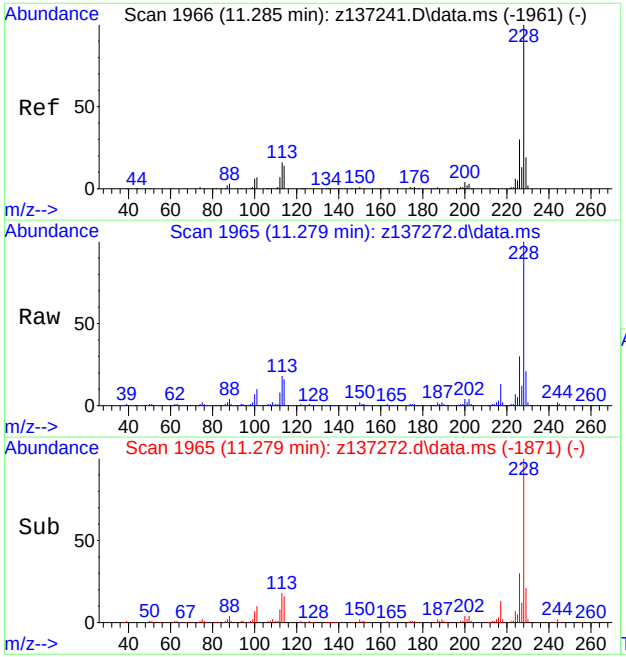


#87
Benzo[a]anthracene
Concen: 54.12 ppm
RT: 11.231 min Scan# 1956
Delta R.T. 0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:228 Resp: 446271

Ion	Ratio	Lower	Upper
228	100		
229	19.6	0.0	49.8
226	26.1	0.0	56.7

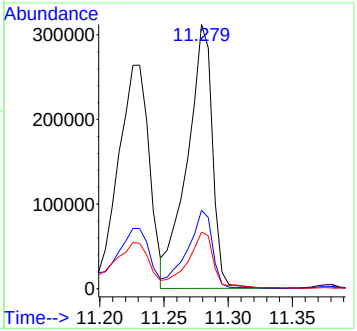


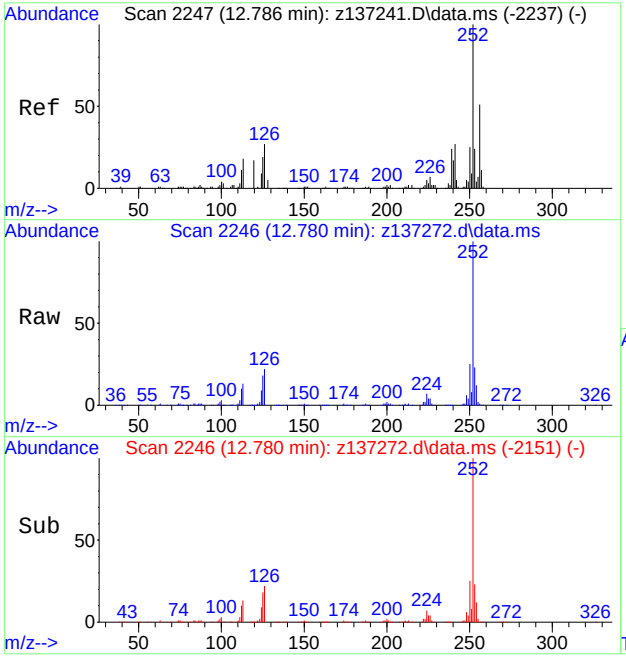


#89
Chrysene
Concen: 53.02 ppm
RT: 11.279 min Scan# 1965
Delta R.T. 0.000 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:228 Resp: 425952

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	59.5
229	20.9	0.0	49.0

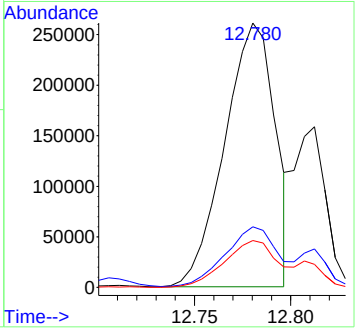


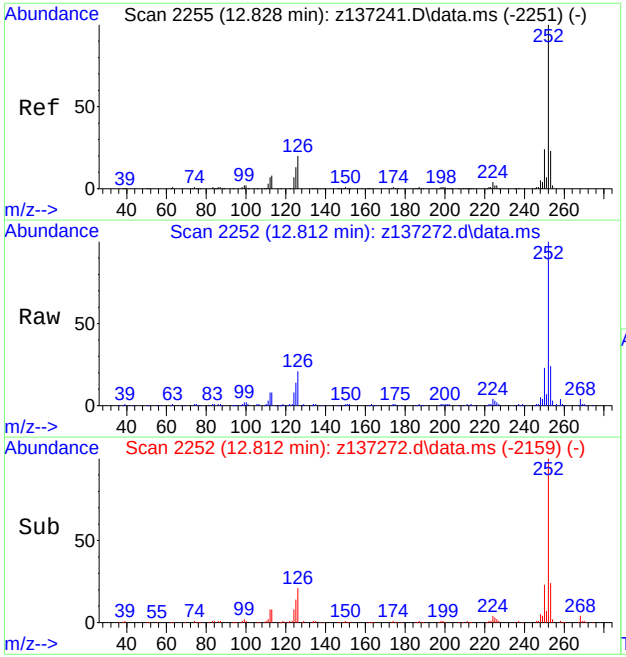


#93
Benzo[b]fluoranthene
Concen: 65.44 ppm
RT: 12.780 min Scan# 2246
Delta R.T. 0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:252 Resp: 476214

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	54.0
125	17.7	0.0	48.3

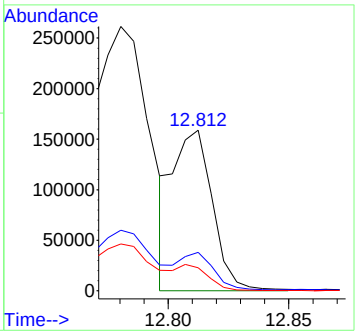


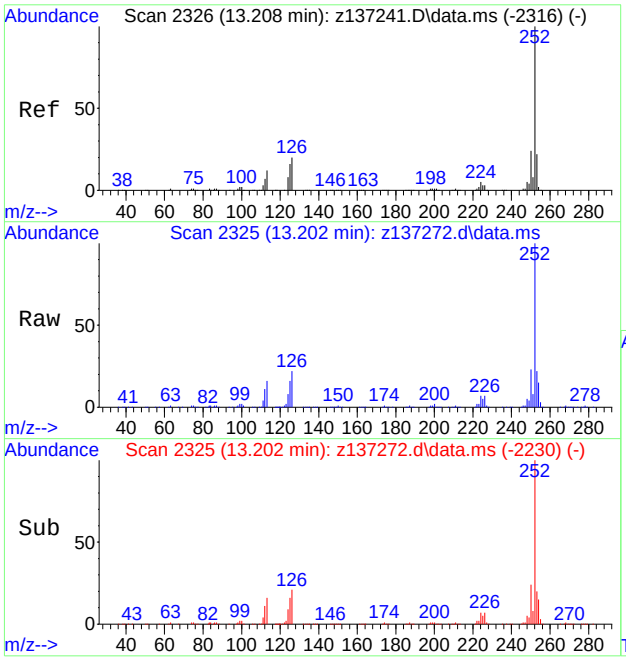


#94
Benzo[k]fluoranthene
Concen: 28.16 ppm m
RT: 12.812 min Scan# 2252
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:252 Resp: 181965

Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	51.7
125	14.4	0.0	44.4

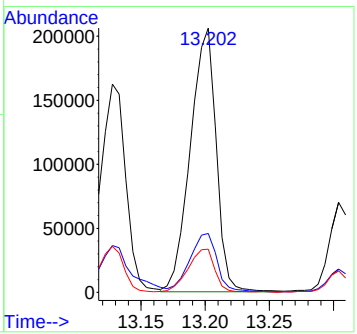


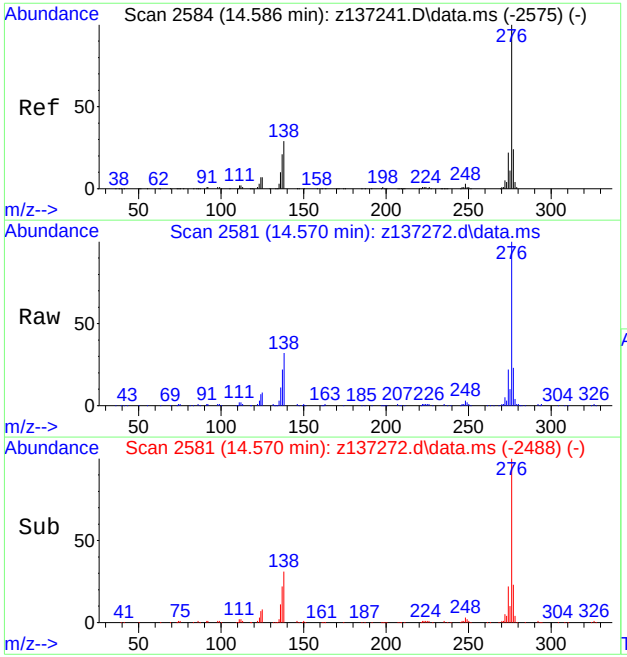


#95
Benzo[a]pyrene
Concen: 48.41 ppm
RT: 13.202 min Scan# 2325
Delta R.T. 0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:252 Resp: 288119

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.9
125	16.1	0.0	45.6

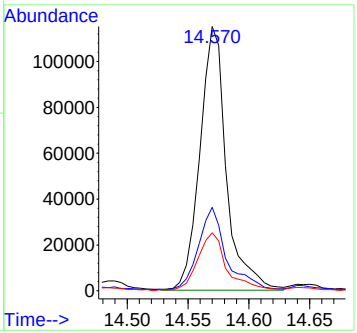


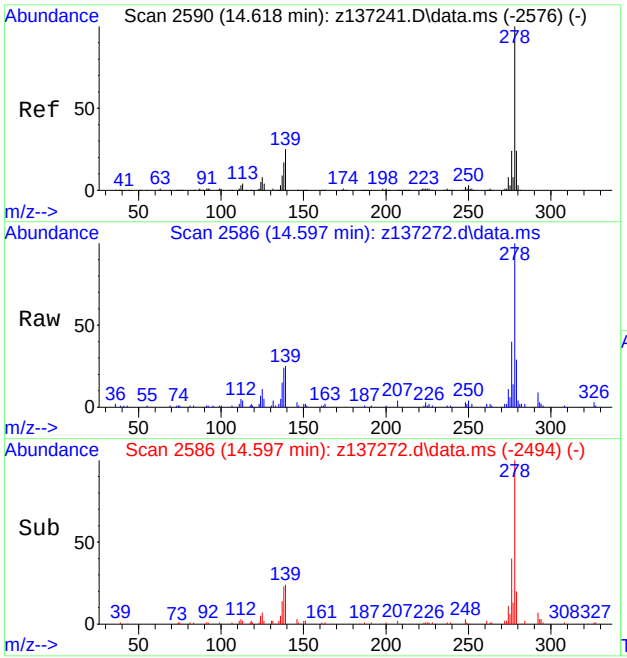


#96
Indeno[1,2,3-cd]pyrene
Concen: 31.25 ppm
RT: 14.570 min Scan# 2581
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:276 Resp: 174172

Ion	Ratio	Lower	Upper
276	100		
138	31.2	0.0	56.2
137	21.7	0.0	50.0

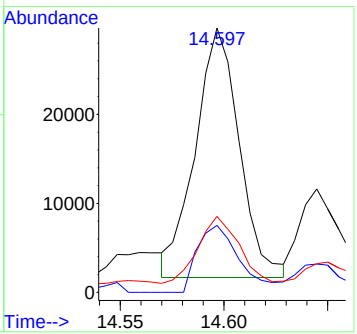


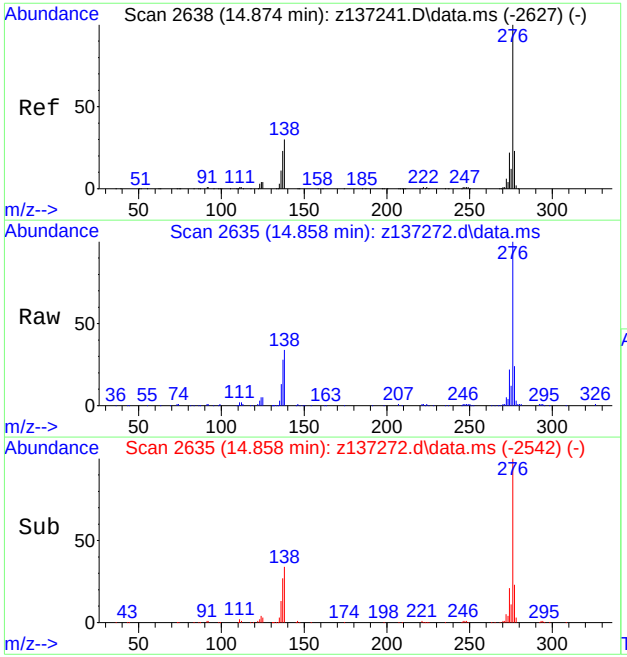


#98
Dibenz[a,h]anthracene
Concen: 7.14 ppm m
RT: 14.597 min Scan# 2586
Delta R.T. -0.011 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:278 Resp: 41345

Ion	Ratio	Lower	Upper
278	100		
139	25.4	0.0	55.5
279	28.8	0.0	53.4

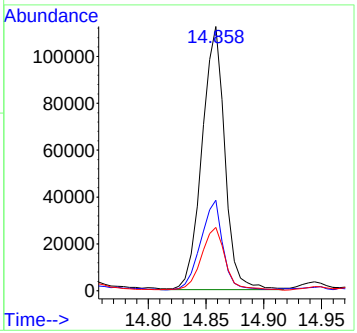




#100
Benzo[g,h,i]perylene
Concen: 29.41 ppm
RT: 14.858 min Scan# 2635
Delta R.T. -0.005 min
Lab File: z137272.d
Acq: 25 Apr 2019 11:27 pm

Tgt Ion:276 Resp: 154320

Ion	Ratio	Lower	Upper
276	100		
138	33.9	0.2	60.2
277	23.8	0.0	53.7



Manual Integration Approval Summary

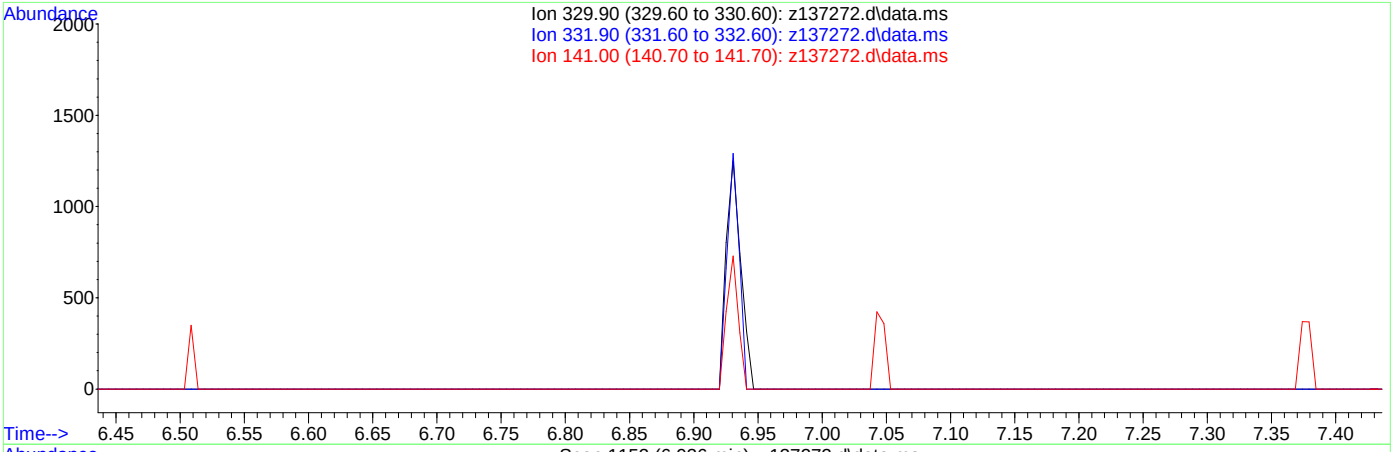
Sample Number: JC86406-14
Lab FileID: Z137272.D
Injection Time: 04/25/19 23:27
Method: SW846 8270D
Analyst approved: 04/26/19 03:57 Michelle Co
Supervisor approved: 04/29/19 11:52 Kristi Schollenberger

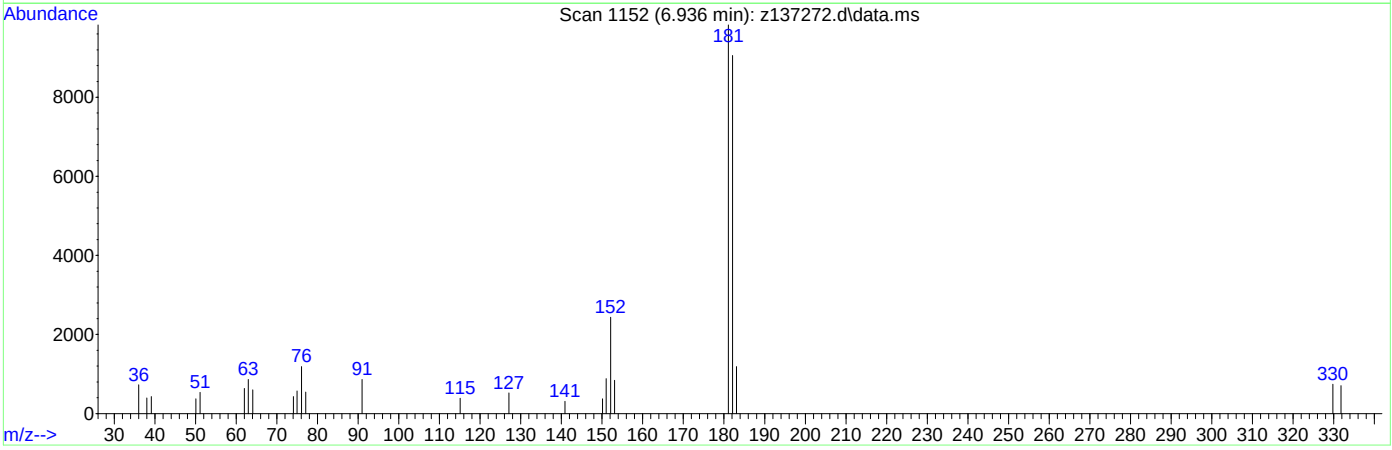
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Tribromophenol	118-79-6		6.93	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		12.81	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.60	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:15:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration





TIC: z137272.d\data.ms

(73) 2,4,6-Tribromophenol (S)

6.936min (-6.936) 0.00ppm

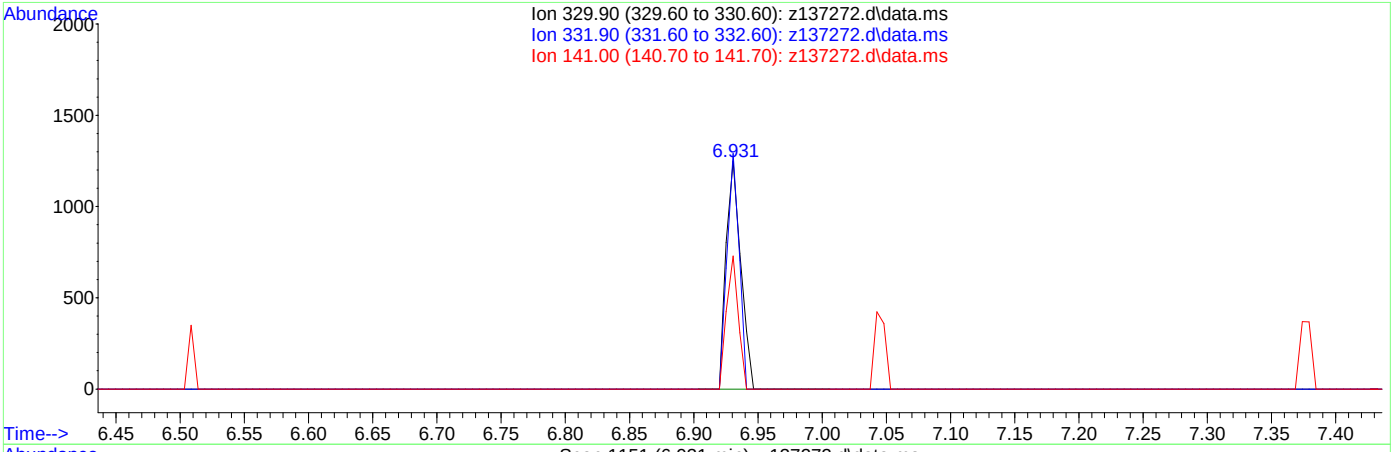
response 0

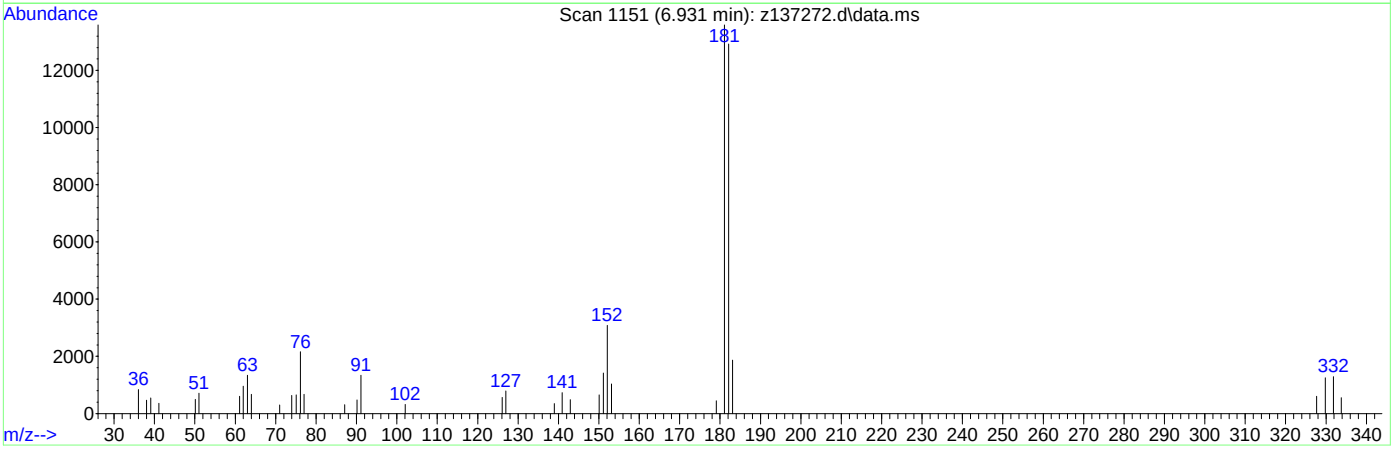
Ion	Exp%	Act%
329.90	100	0.00
331.90	99.90	0.00#
141.00	40.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:15:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration





TIC: z137272.d\data.ms

(73) 2,4,6-Tribromophenol (S)

6.931min (-0.005) 1.33ppm m

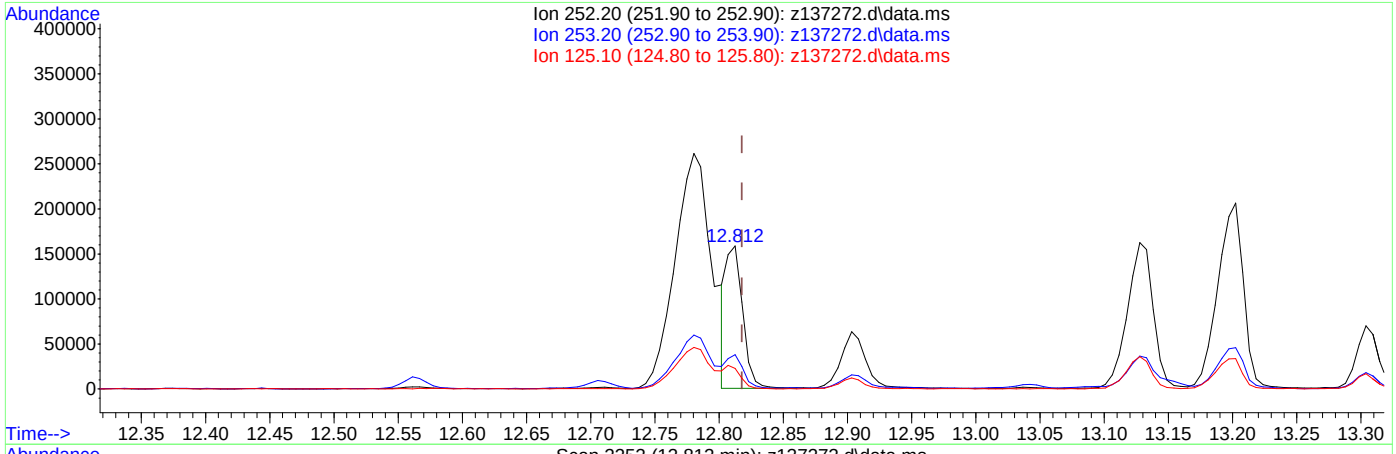
response 998

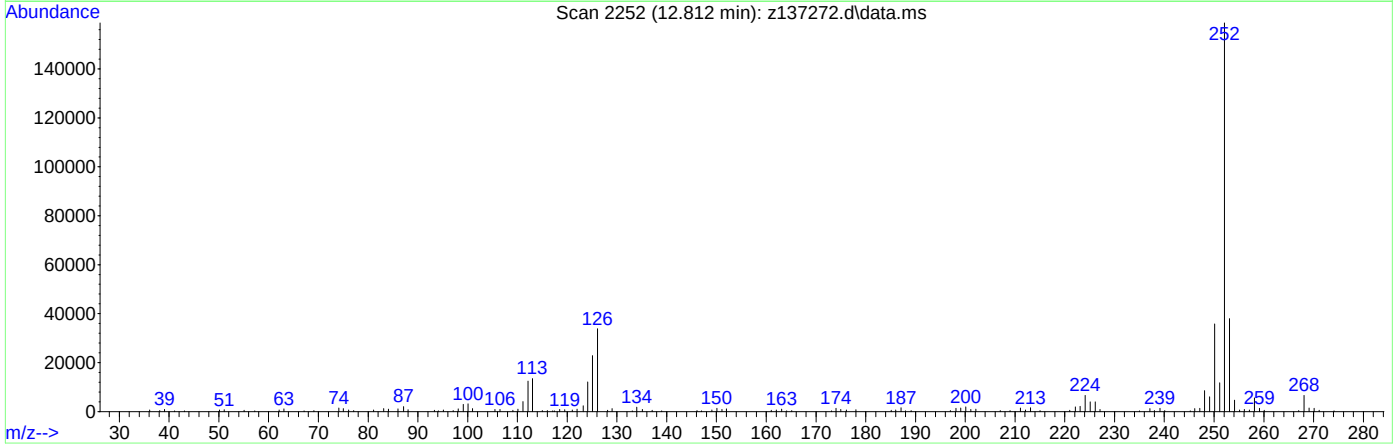
Ion	Exp%	Act%
329.90	100	100
331.90	99.90	103.28
141.00	40.60	58.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:15:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration





TIC: z137272.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.812min (-0.005) 22.18ppm

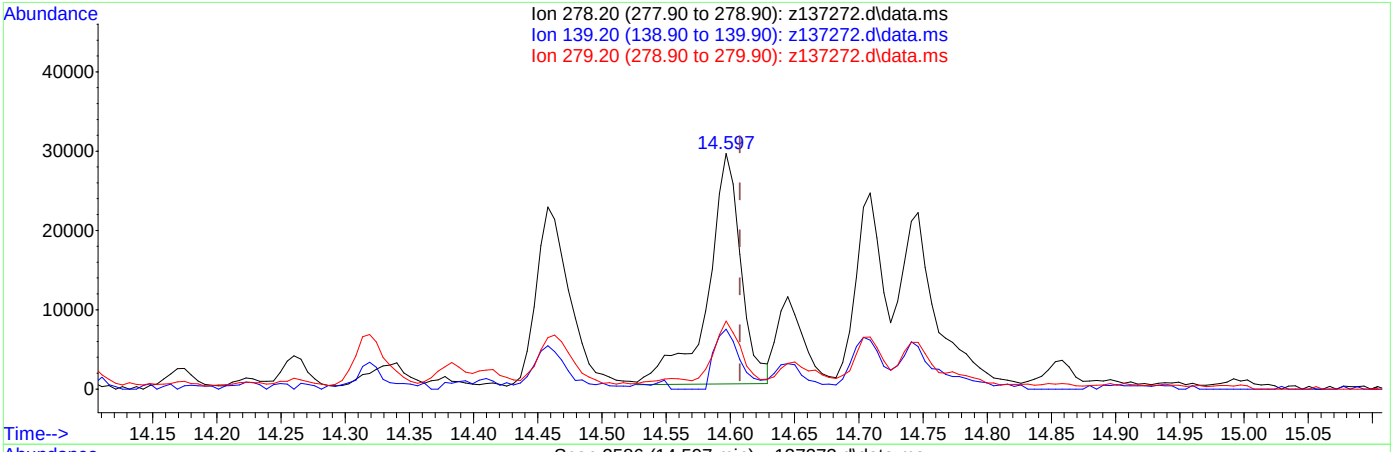
response 143313

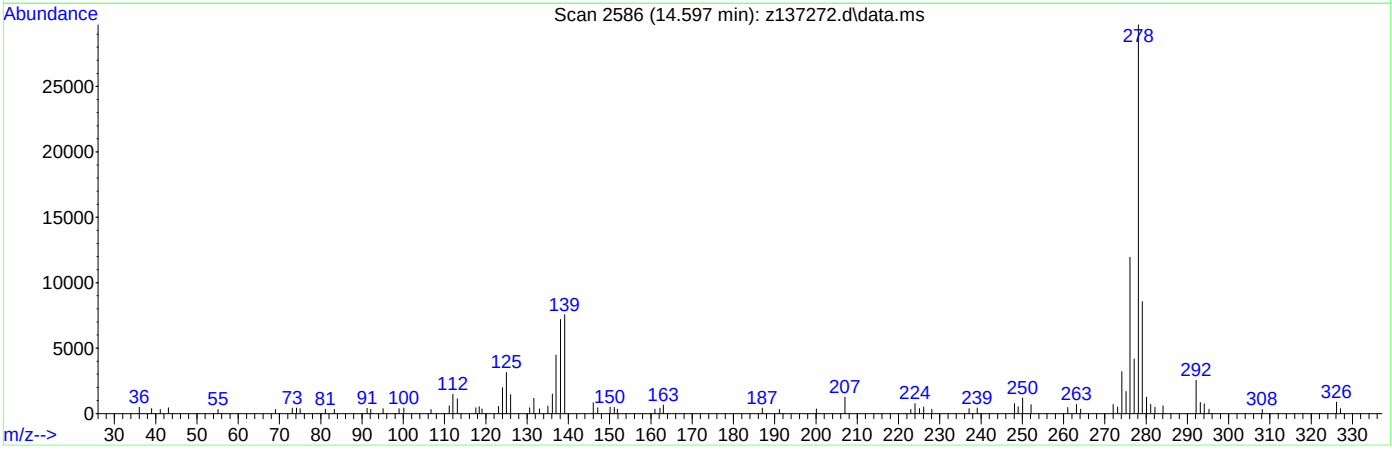
Ion	Exp%	Act%
252.20	100	100
253.20	21.70	24.71
125.10	14.40	12.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137272.d
Acq On : 25 Apr 2019 11:27 pm
Operator : angelar
Sample : jc86406-14 Inst : GCMSZ
Misc : op19810,ez6762,30.3,,,1,20
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:15:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration





TIC: z137272.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.597min (-0.011) 9.07ppm

response 52568

Ion	Exp%	Act%
278.20	100	100
139.20	25.50	23.96
279.20	23.40	27.35
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137308.D
Acq On : 26 Apr 2019 8:10 pm
Operator : angelar
Sample : jc86406-14
Misc : op19810,ez6764,30.3,,,1,50
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 29 10:52:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	65103	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	250514	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	127116	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	226816	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	195928	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	191657	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	65103	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	226816	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	195928	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	127116	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	250514	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	226816	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	195928	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	5.750	172	2576	0.60	ppm	-0.02
Spiked Amount 50.000			Recovery =	1.20%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	9.709	244	2921	0.72	ppm	-0.04
Spiked Amount 50.000			Recovery =	1.44%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	4.997	128	6958	1.07	ppm	96
44) 2-Methylnaphthalene	5.488	141	2450	0.67	ppm	92
56) Acenaphthylene	6.124	152	29609	4.93	ppm	98
62) Dibenzofuran	6.396	168	10624	2.00	ppm	90
66) Fluorene	6.685	166	12283	2.78	ppm	95
77) Phenanthrene	7.636	178	137209	21.31	ppm	100
78) Anthracene	7.695	178	44007	6.86	ppm	99
79) Carbazole	7.898	167	9594	1.50	ppm	97
81) Fluoranthene	9.121	202	273740	39.07	ppm	100
84) Pyrene	9.420	202	209661	32.03	ppm	93
87) Benzo[a]anthracene	11.188	228	119029	19.51	ppm	99
89) Chrysene	11.236	228	108908	18.33	ppm	98
93) Benzo[b]fluoranthene	12.732	252	136167	22.38	ppm	94
94) Benzo[k]fluoranthene	12.764	252	43218	8.00	ppm	98
95) Benzo[a]pyrene	13.149	252	82781	16.64	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.527	276	59154	12.69	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137308.D
Acq On : 26 Apr 2019 8:10 pm
Operator : angelar
Sample : jc86406-14
Misc : op19810,ez6764,30.3,,,1,50
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 29 10:52:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.554	278	16991	3.51	ppm	95
100) Benzo[g,h,i]perylene	14.810	276	53255	12.14	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

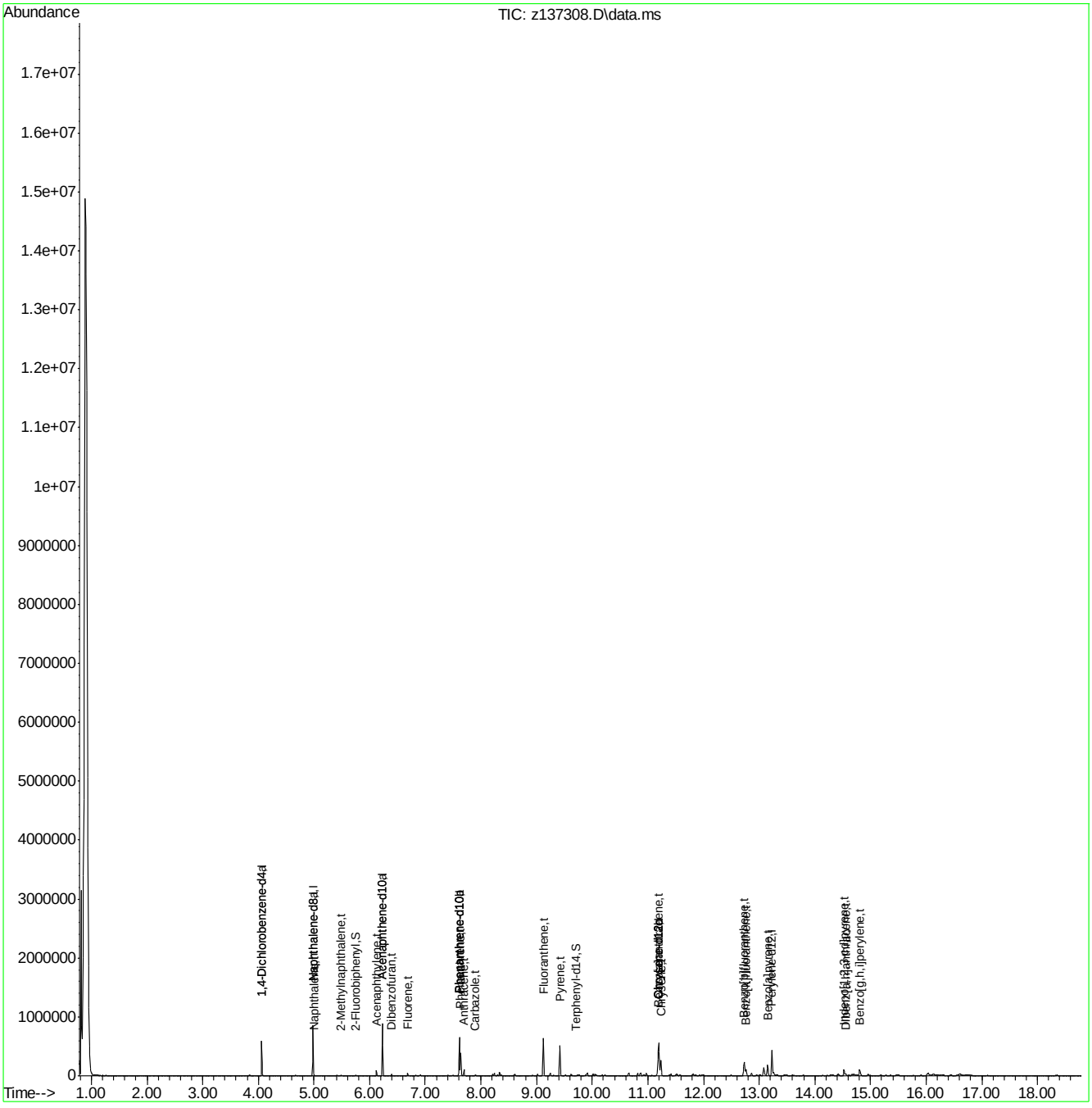
9.1.24

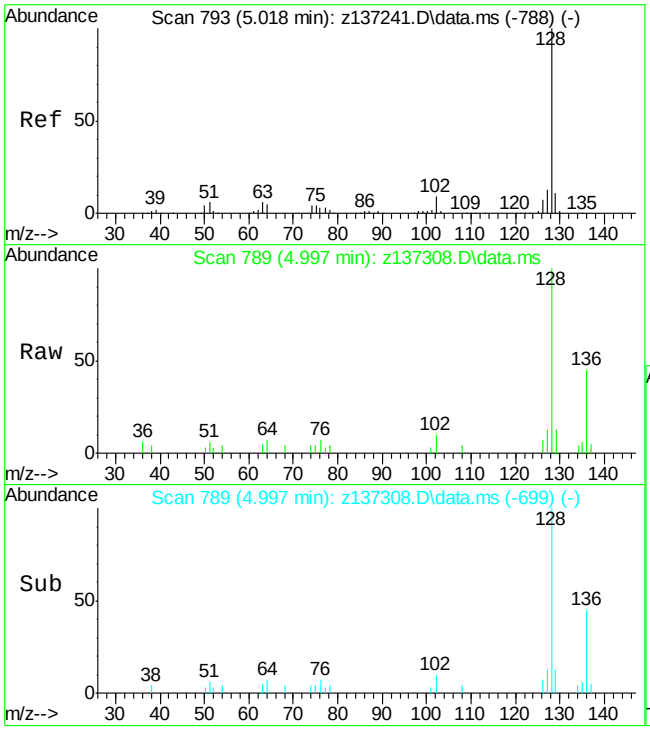
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137308.D
Acq On : 26 Apr 2019 8:10 pm
Operator : angelar
Sample : jc86406-14
Misc : op19810,ez6764,30.3,,,1,50
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 29 10:52:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

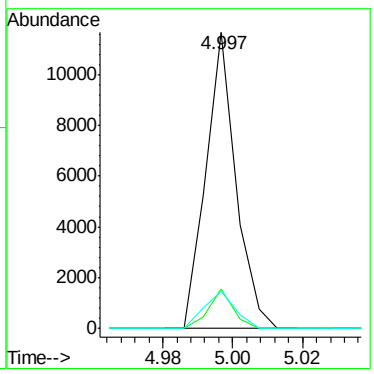


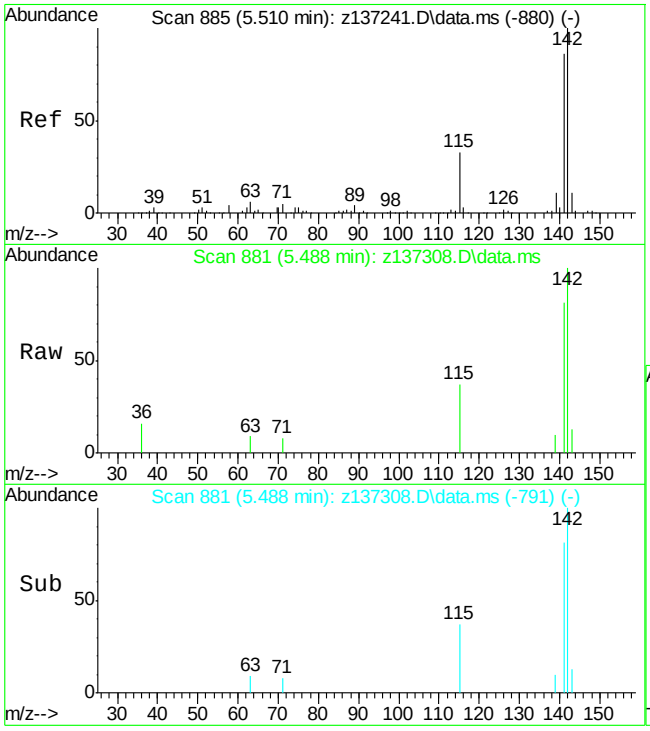


#38
Naphthalene
Concen: 1.07 ppm
RT: 4.997 min Scan# 789
Delta R.T. -0.021 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:128 Resp: 6958

Ion	Ratio	Lower	Upper
128	100		
129	13.3	0.0	40.7
127	12.5	0.0	42.9

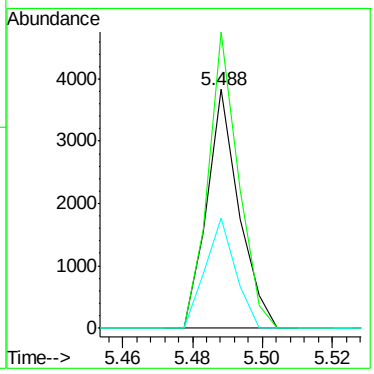


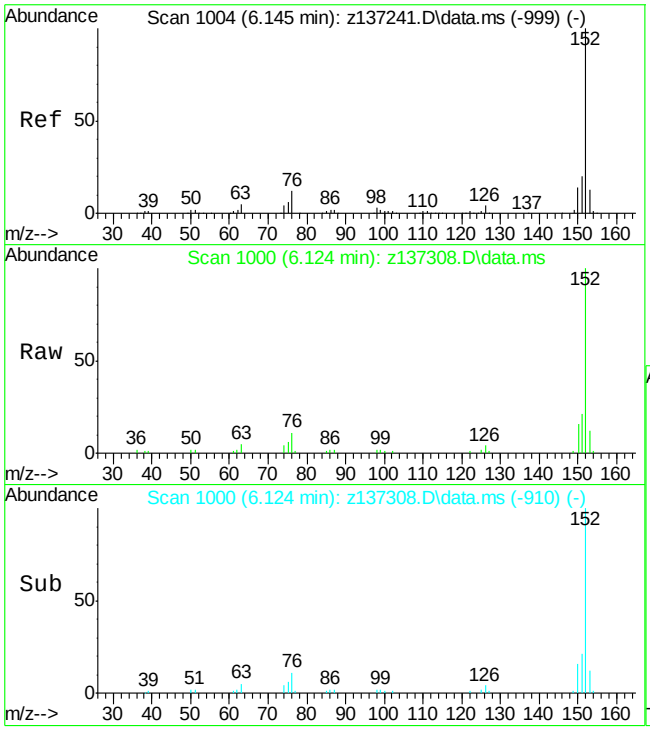


#44
2-Methylnaphthalene
Concen: 0.67 ppm
RT: 5.488 min Scan# 881
Delta R.T. -0.022 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:141 Resp: 2450

Ion	Ratio	Lower	Upper
141	100		
142	124.0	86.4	146.4
115	46.1	8.8	68.8

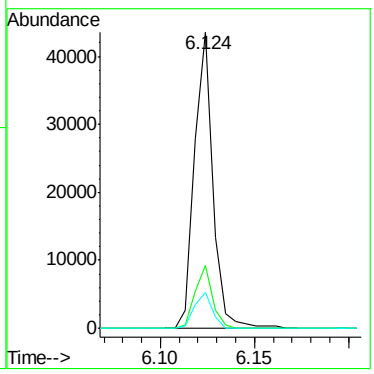


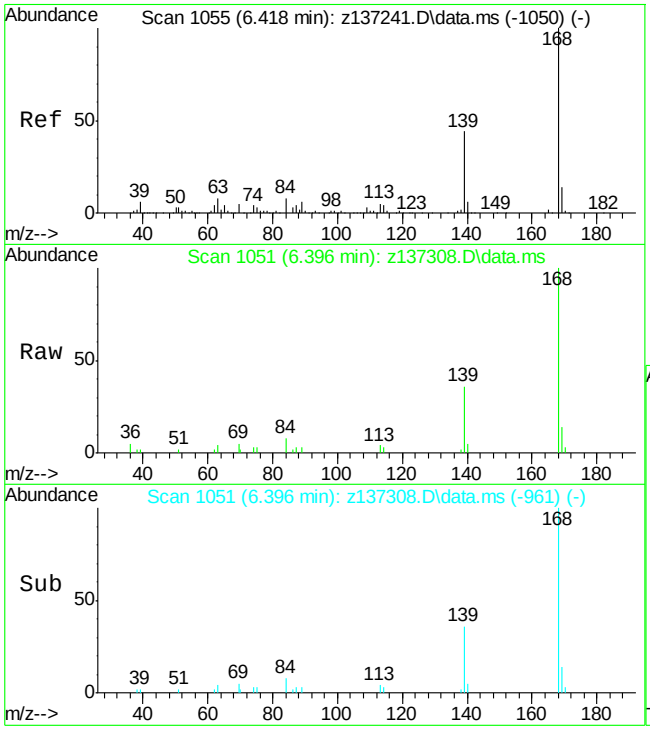


#56
Acenaphthylene
Concen: 4.93 ppm
RT: 6.124 min Scan# 1000
Delta R.T. -0.021 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:152 Resp: 29609

Ion	Ratio	Lower	Upper
152	100		
151	21.1	0.0	50.1
153	12.3	0.0	42.8

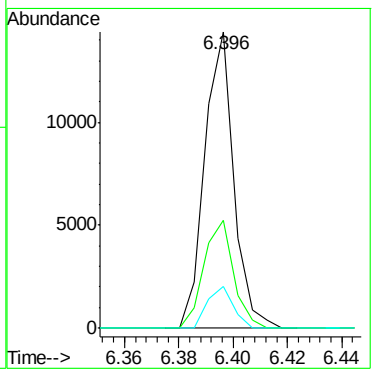


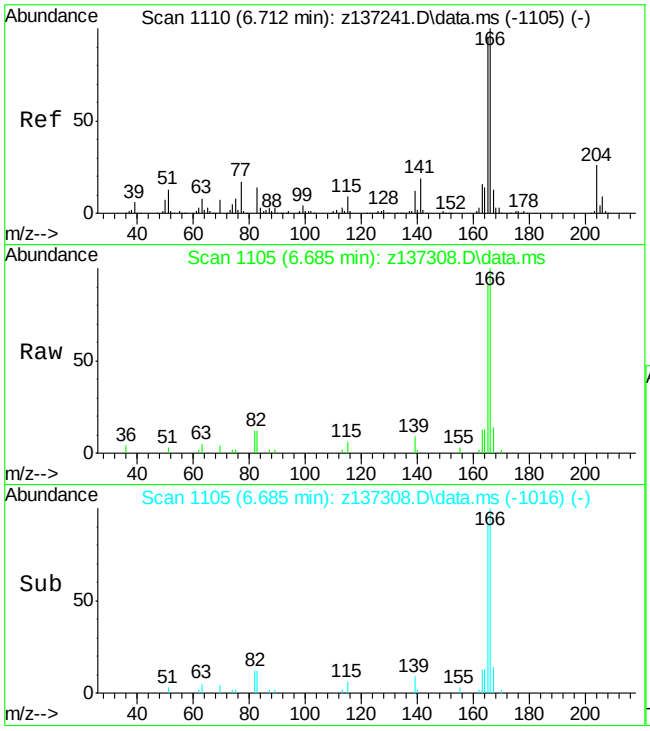


#62
Dibenzofuran
Concen: 2.00 ppm
RT: 6.396 min Scan# 1051
Delta R.T. -0.022 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:168 Resp: 10624

Ion	Ratio	Lower	Upper
168	100		
139	36.2	14.1	74.1
169	14.2	0.0	43.7

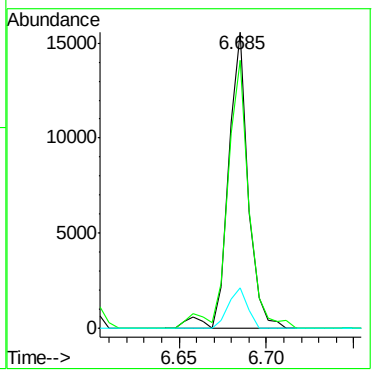


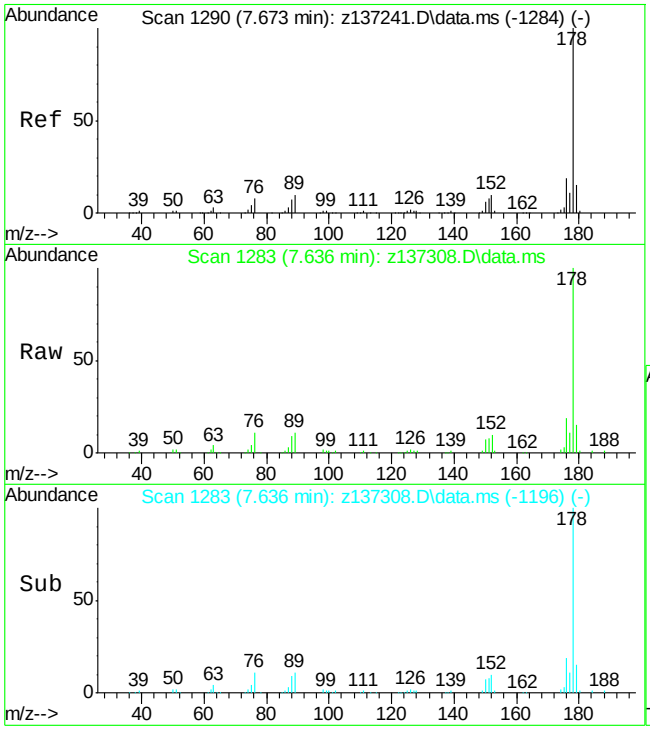


#66
Fluorene
Concen: 2.78 ppm
RT: 6.685 min Scan# 1105
Delta R.T. -0.027 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:166 Resp: 12283

Ion	Ratio	Lower	Upper
166	100		
165	90.6	65.5	125.5
167	13.7	0.0	43.1

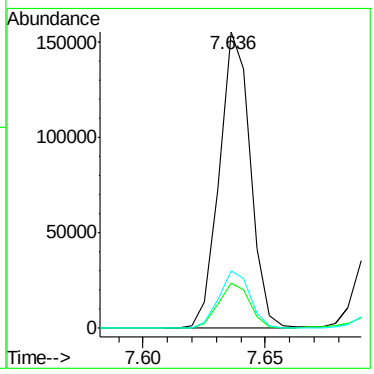


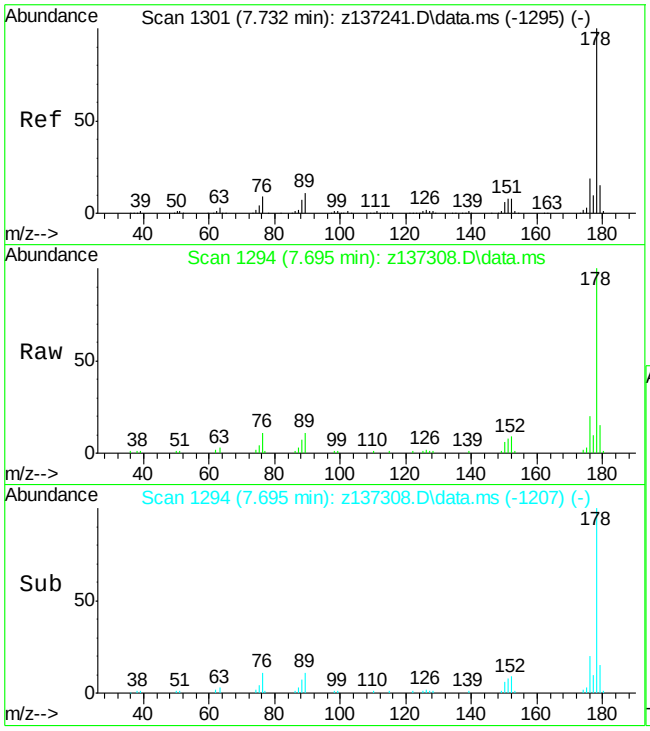


#77
Phenanthrene
Concen: 21.31 ppm
RT: 7.636 min Scan# 1283
Delta R.T. -0.037 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:178 Resp: 137209

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	45.3
176	19.3	0.0	49.0

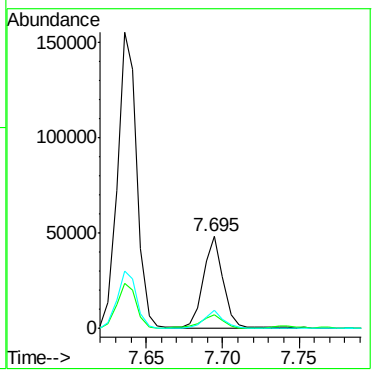


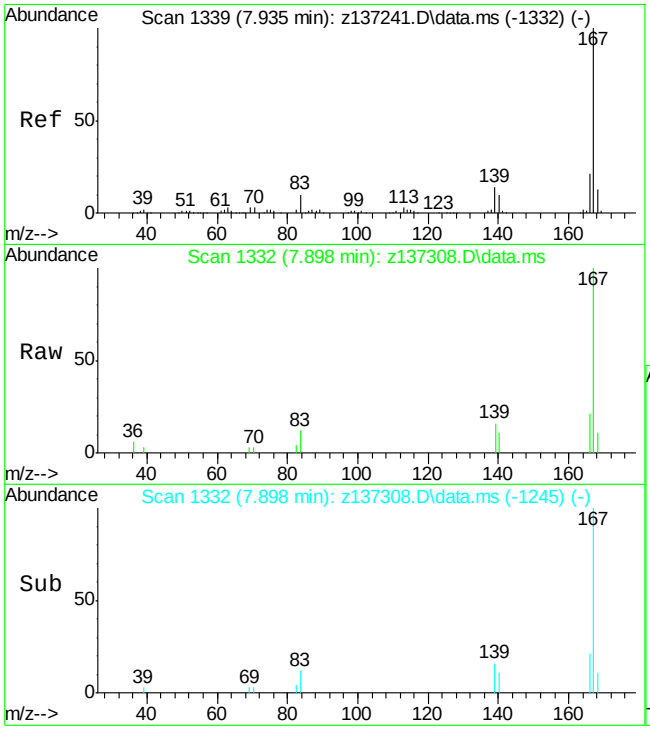


#78
Anthracene
Concen: 6.86 ppm
RT: 7.695 min Scan# 1294
Delta R.T. -0.037 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:178 Resp: 44007

Ion	Ratio	Lower	Upper
178	100		
179	14.5	0.0	44.8
176	19.7	0.0	48.9

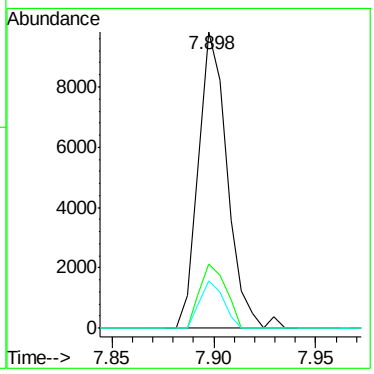


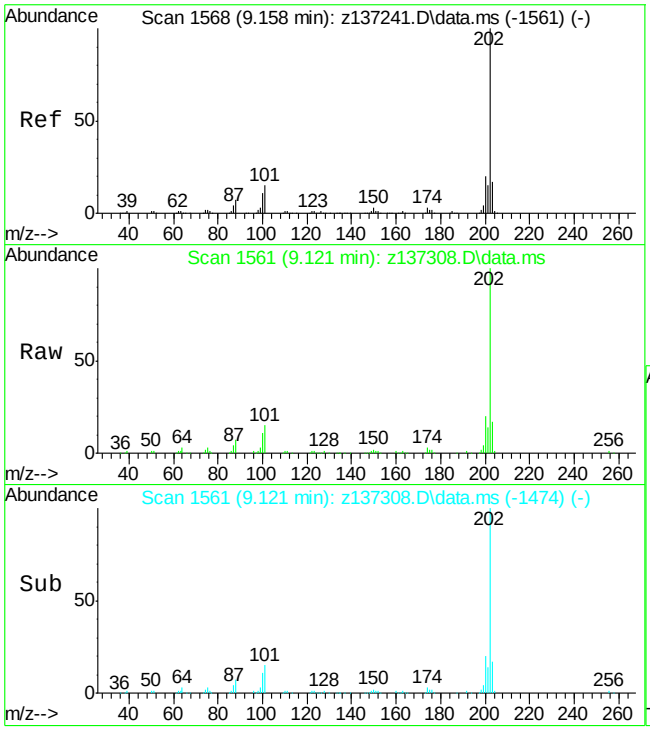


#79
Carbazole
Concen: 1.50 ppm
RT: 7.898 min Scan# 1332
Delta R.T. -0.037 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:167 Resp: 9594

Ion	Ratio	Lower	Upper
167	100		
166	21.4	0.0	51.2
139	16.0	0.0	43.7

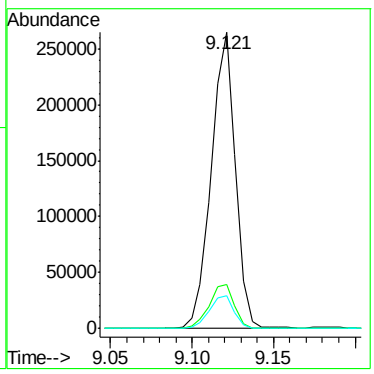


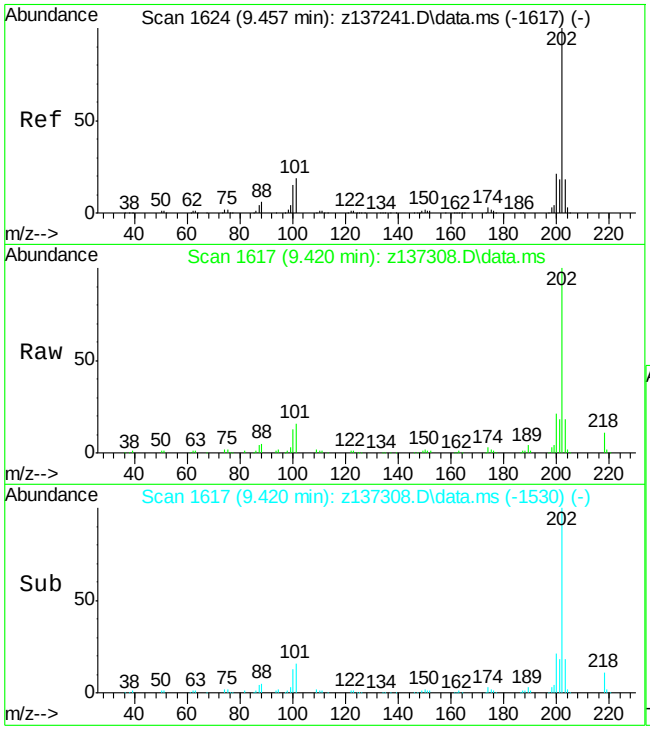


#81
Fluoranthene
Concen: 39.07 ppm
RT: 9.121 min Scan# 1561
Delta R.T. -0.037 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:202 Resp: 273740

Ion	Ratio	Lower	Upper
202	100		
101	14.9	0.0	45.0
100	11.1	0.0	41.4

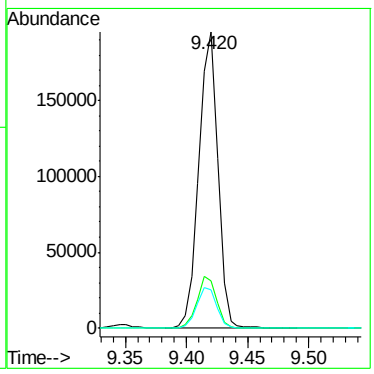


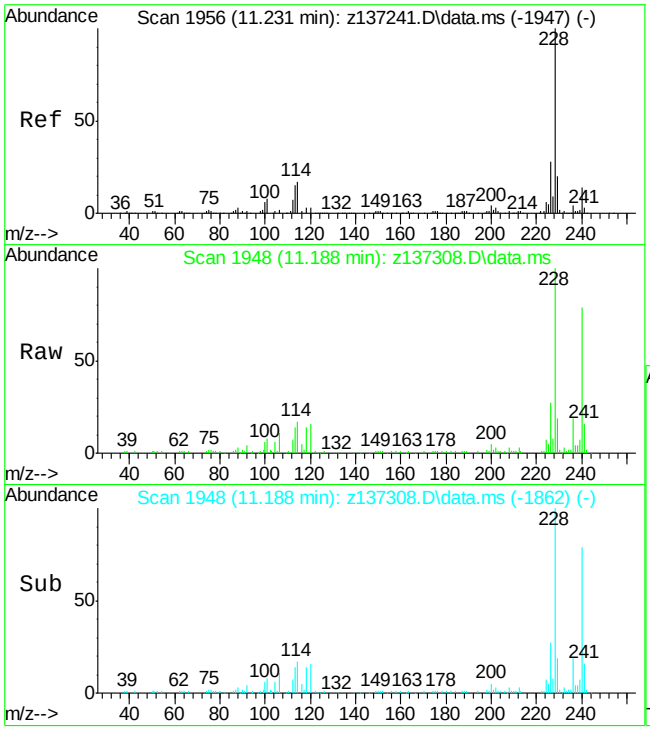


#84
Pyrene
Concen: 32.03 ppm
RT: 9.420 min Scan# 1617
Delta R.T. -0.037 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:202 Resp: 209661

Ion	Ratio	Lower	Upper
202	100		
101	15.9	0.0	49.1
100	12.9	0.0	45.4

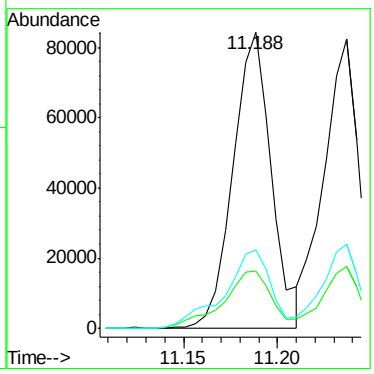


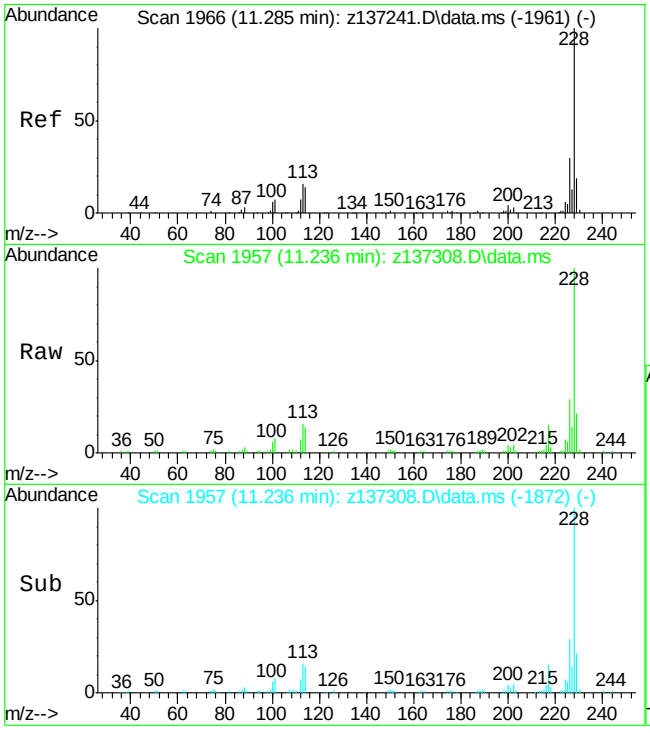


#87
Benzo[a]anthracene
Concen: 19.51 ppm
RT: 11.188 min Scan# 1948
Delta R.T. -0.043 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:228 Resp: 119029

Ion	Ratio	Lower	Upper
228	100		
229	19.0	0.0	49.7
226	26.5	0.0	57.2

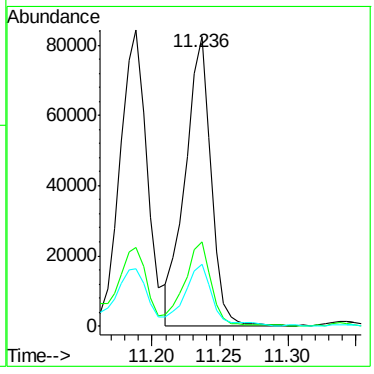


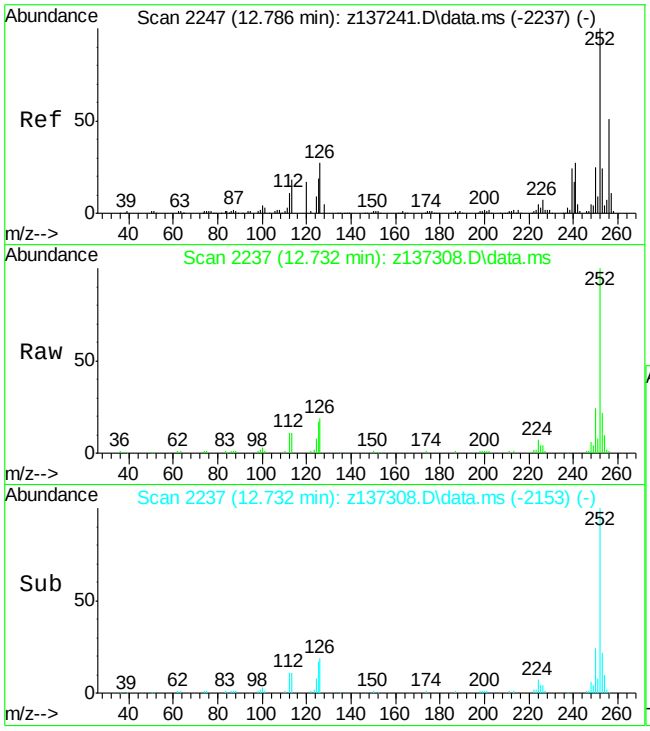


#89
Chrysene
Concen: 18.33 ppm
RT: 11.236 min Scan# 1957
Delta R.T. -0.049 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:228 Resp: 108908

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	59.9
229	21.2	0.0	49.4

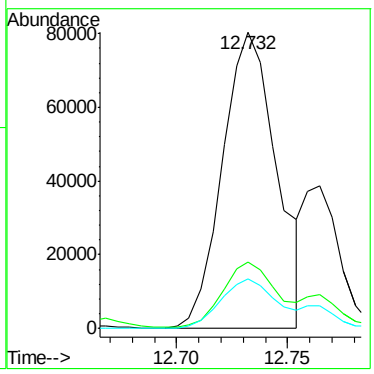


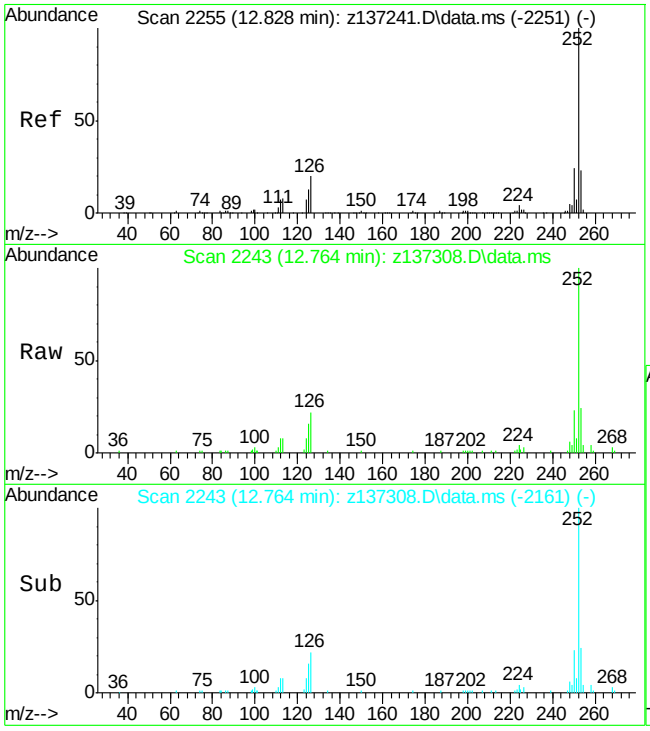


#93
Benzo[b]fluoranthene
Concen: 22.38 ppm
RT: 12.732 min Scan# 2237
Delta R.T. -0.054 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:252 Resp: 136167

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	54.8
125	16.6	0.0	49.4

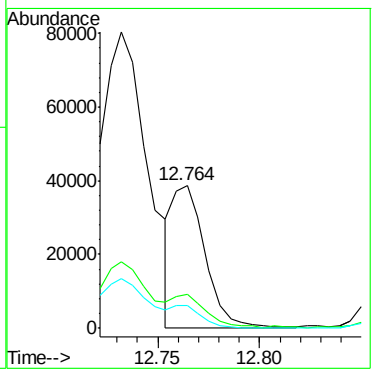


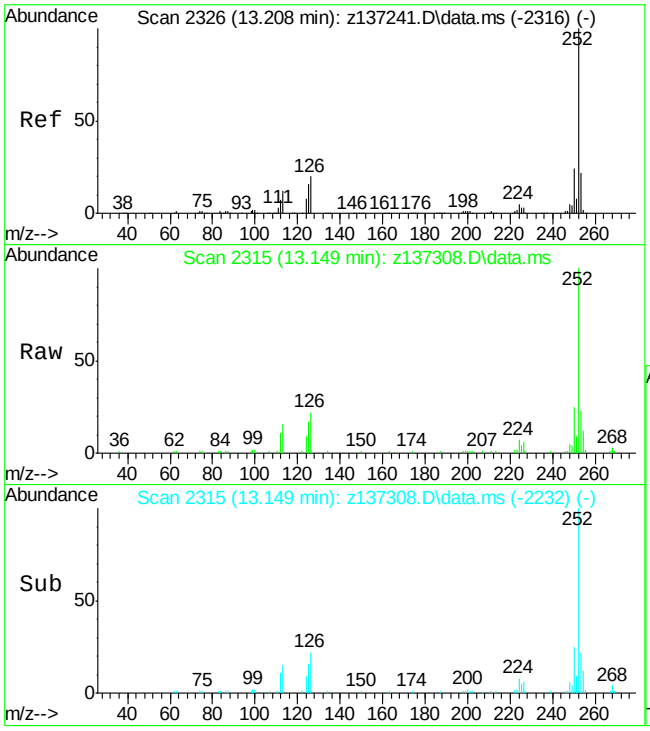


#94
Benzo[k]fluoranthene
Concen: 8.00 ppm
RT: 12.764 min Scan# 2243
Delta R.T. -0.064 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:252 Resp: 43218

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.7
125	15.8	0.0	43.8

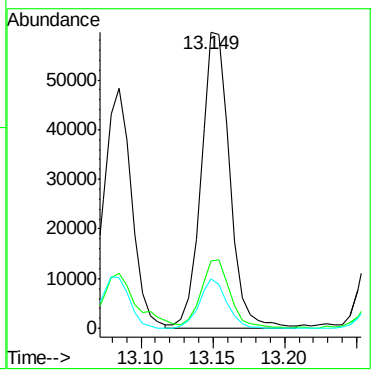


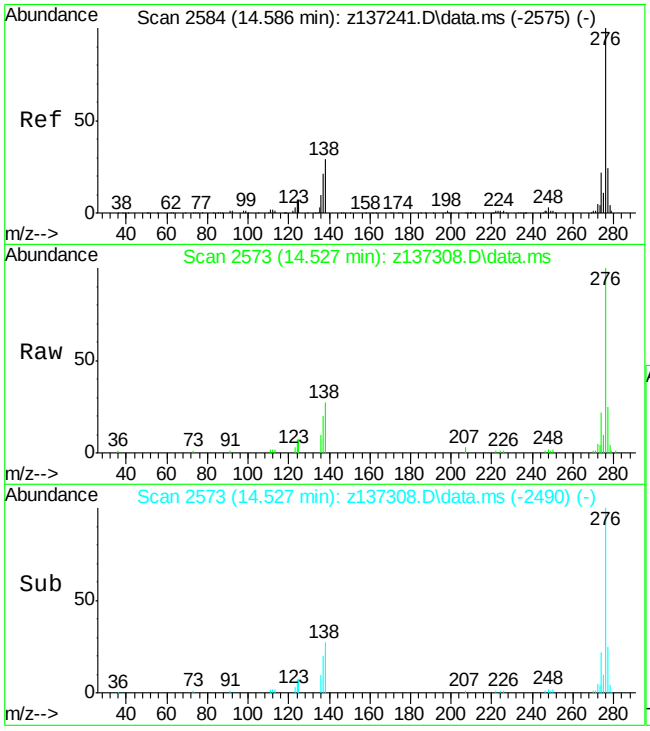


#95
Benzo[a]pyrene
Concen: 16.64 ppm
RT: 13.149 min Scan# 2315
Delta R.T. -0.059 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:252 Resp: 82781

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.8
125	16.7	0.0	45.9

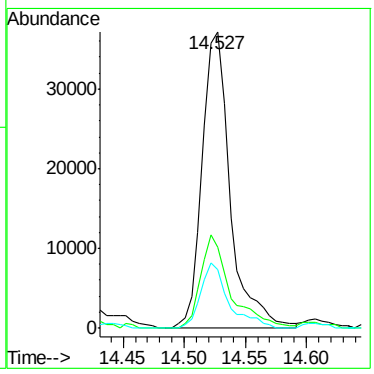


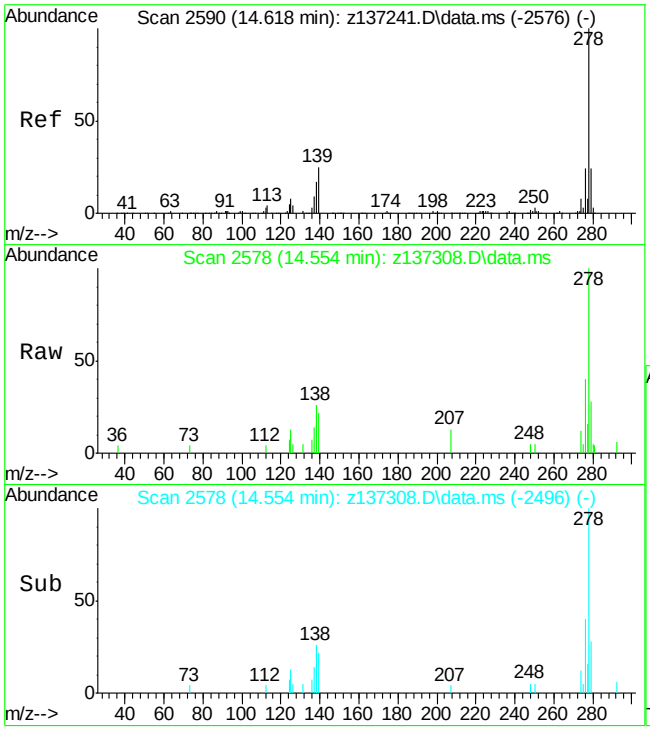


#96
Indeno[1,2,3-cd]pyrene
Concen: 12.69 ppm
RT: 14.527 min Scan# 2573
Delta R.T. -0.059 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:276 Resp: 59154

Ion	Ratio	Lower	Upper
276	100		
138	27.2	0.0	59.0
137	19.9	0.0	51.4

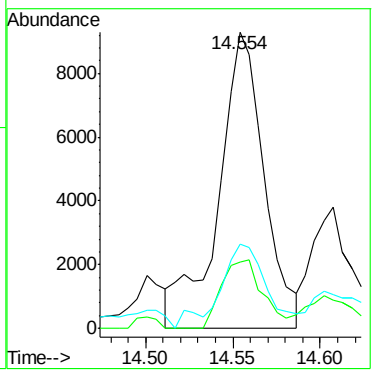


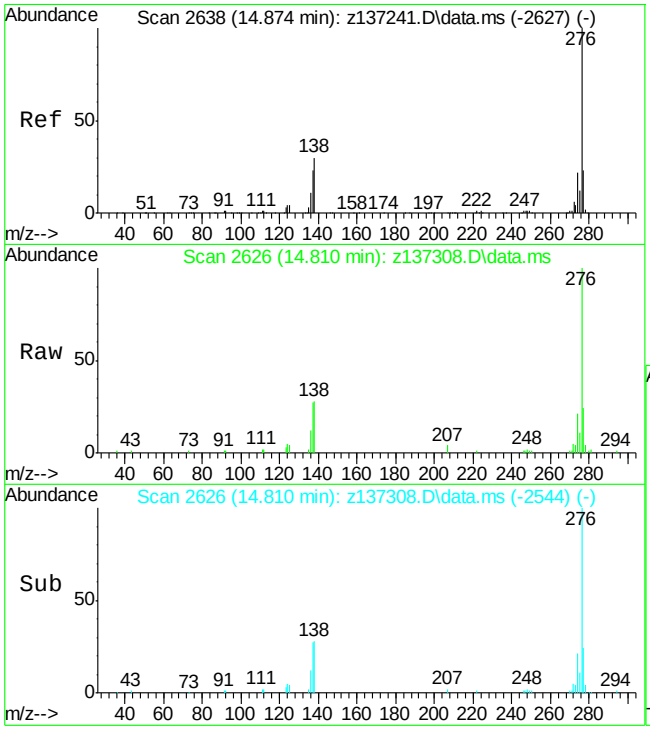


#98
Dibenz[a,h]anthracene
Concen: 3.51 ppm
RT: 14.554 min Scan# 2578
Delta R.T. -0.064 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:278 Resp: 16991

Ion	Ratio	Lower	Upper
278	100		
139	22.7	0.0	54.9
279	27.1	0.0	53.8

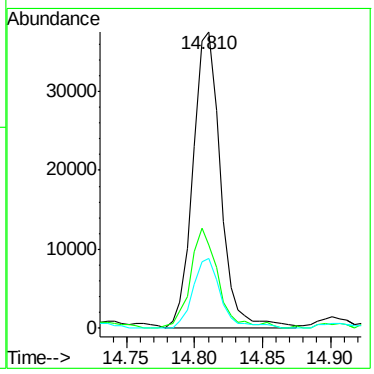




#100
Benzo[g,h,i]perylene
Concen: 12.14 ppm
RT: 14.810 min Scan# 2626
Delta R.T. -0.064 min
Lab File: z137308.D
Acq: 26 Apr 2019 8:10 pm

Tgt Ion:276 Resp: 53255

Ion	Ratio	Lower	Upper
276	100		
138	27.2	0.0	59.6
277	23.7	0.0	53.6



Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
04/25/19 14:42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:55:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.659	152	739570	40.00	ppm	0.00
24) Naphthalene-d8	5.691	136	2457671	40.00	ppm	0.00
47) Acenaphthene-d10	7.125	164	1086336	40.00	ppm	0.00
69) Phenanthrene-d10	8.392	188	1484121	40.00	ppm	0.00
83) Chrysene-d12	11.623	240	1464456	40.00	ppm	0.03
91) Perylene-d12	13.613	264	1534112	40.00	ppm	0.03
101) 1,4-Dichlorobenzene-d4a	4.659	152	739570	40.00	ppm	0.00
103) Naphthalene-d8a	5.691	136	2457671	40.00	ppm	0.00
105) Acenaphthene-d10a	7.125	164	1086336	40.00	ppm	0.00
108) Chrysene-d12a	11.623	240	1464456	40.00	ppm	0.03
110) Phenanthrene-d10a	8.392	188	1484121	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.627	112	1064337	28.60	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 57.20%			
8) Phenol-d5	4.413	99	1419275	34.80	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 69.60%#			
25) Nitrobenzene-d5	5.114	82	1254820	37.99	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 75.98%#			
51) 2-Fluorobiphenyl	6.579	172	1606249	42.72	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 85.44%#			
73) 2,4,6-Tribromophenol	7.777	330	173851	33.40	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 66.80%			
85) Terphenyl-d14	10.211	244	1359352	37.30	ppm	0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 74.60%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Phenol	4.424	94	329443	7.74	ppm	97
18) Acetophenone	5.001	105	10685m	0.29	ppm	
19) 2-Methylphenol	4.905	108	68667	3.16	ppm	94
21) 3&4-Methylphenol	5.034	108	215739	9.80	ppm	82
30) 2,4-Dimethylphenol	5.461	107	43209	1.85	ppm	87
38) Naphthalene	5.707	128	1609528	27.38	ppm	100
44) 2-Methylnaphthalene	6.274	141	187866	5.02	ppm	97
53) Biphenyl	6.659	154	85571	1.97	ppm	99
56) Acenaphthylene	7.007	152	672076	12.65	ppm	100
59) Acenaphthene	7.152	153	261456	8.38	ppm	95
62) Dibenzofuran	7.291	168	413598	9.62	ppm	96
66) Fluorene	7.574	166	299622	8.12	ppm	98
77) Phenanthrene	8.419	178	1745624	47.22	ppm	98
78) Anthracene	8.462	178	619227	16.47	ppm	99
79) Carbazole	8.633	167	164029	4.22	ppm	98
81) Fluoranthene	9.740	202	4140566	78.80	ppm	96
84) Pyrene	9.997	202	3429150m	60.18	ppm	
87) Benzo[a]anthracene	11.612	228	2275987	41.38	ppm	97
89) Chrysene	11.660	228	1854259	47.52	ppm	97
93) Benzo[b]fluoranthene	13.121	252	2962215	58.93	ppm	99
94) Benzo[k]fluoranthene	13.147	252	822174	20.00	ppm	97
95) Benzo[a]pyrene	13.538	252	1879108	44.48	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.950	276	1378714	28.63	ppm	97
98) Dibenz[a,h]anthracene	14.961	278	403127m	10.75	ppm	
100) Benzo[g,h,i]perylene	15.303	276	1244986	32.66	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:55:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

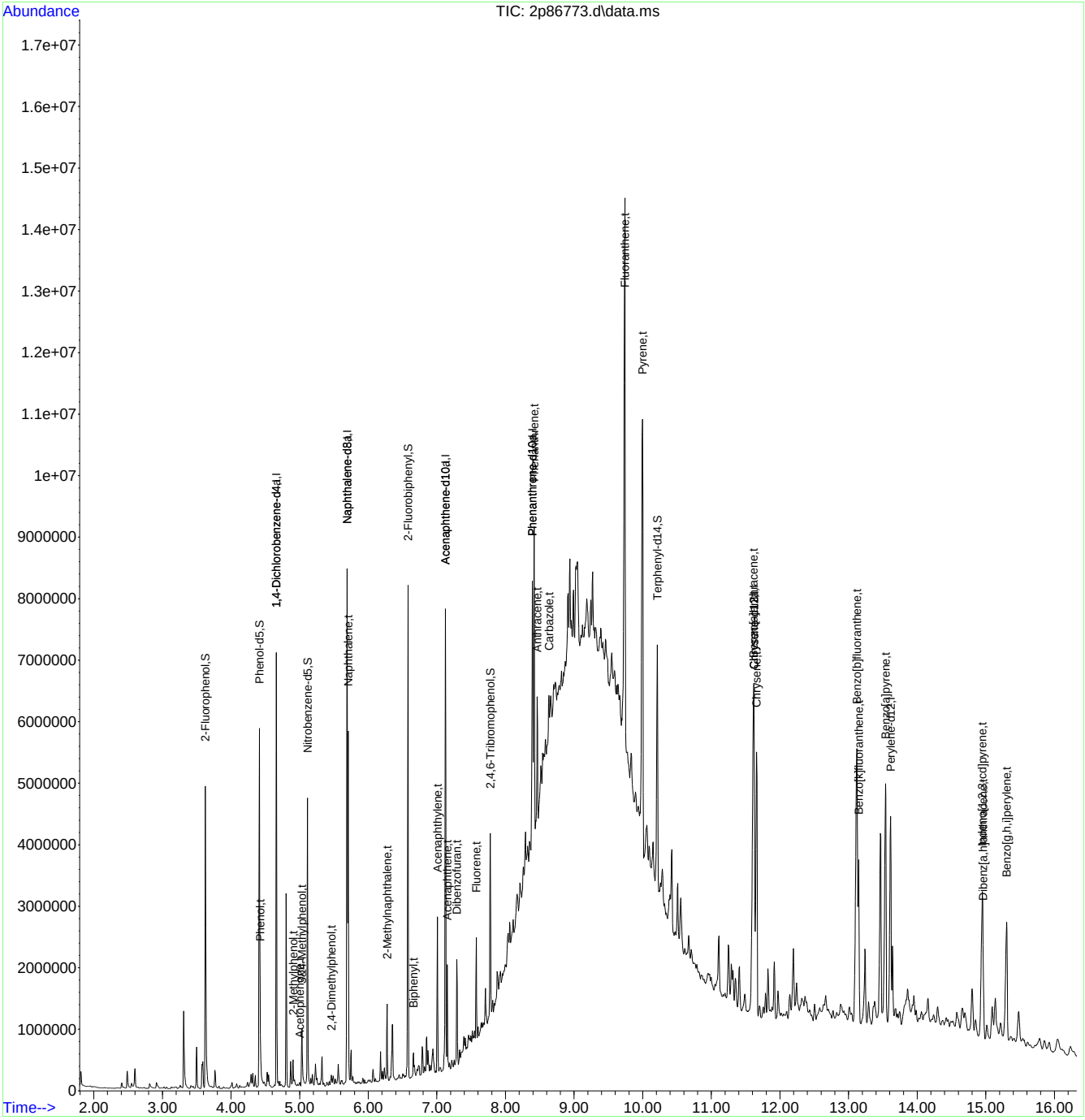
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

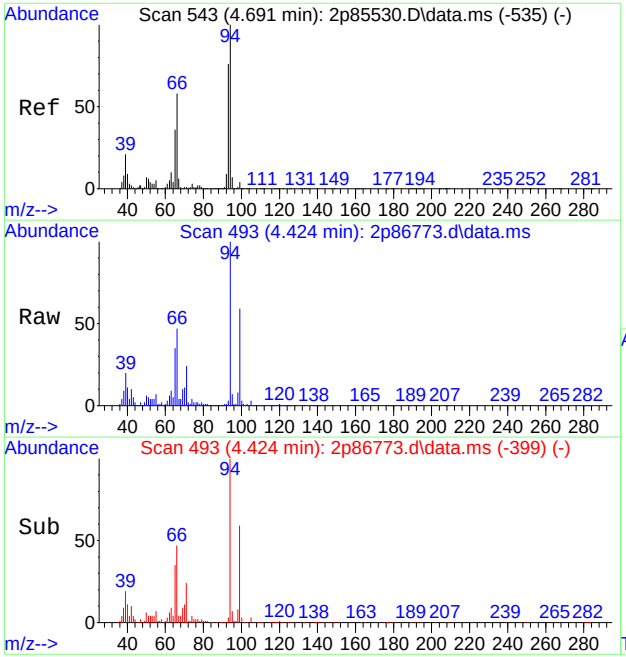
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:55:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration

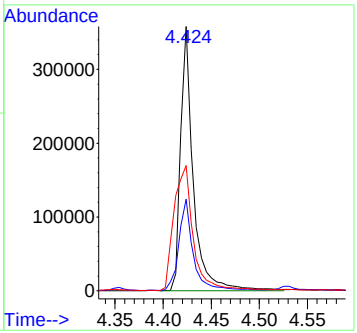


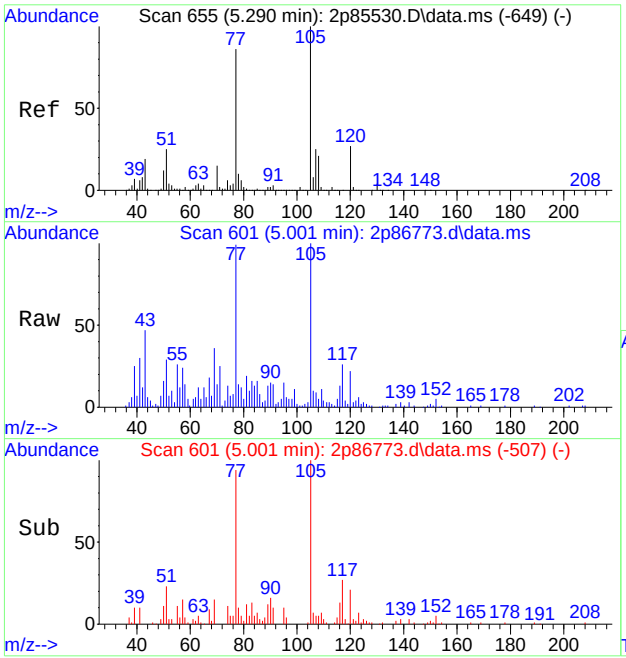


#9
Phenol
Concen: 7.74 ppm
RT: 4.424 min Scan# 493
Delta R.T. 0.000 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion: 94 Resp: 329443

Ion	Ratio	Lower	Upper
94	100		
65	33.8	4.7	64.7
66	47.1	19.9	79.9

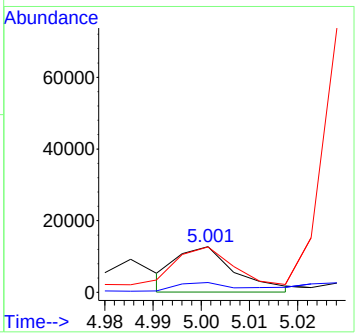


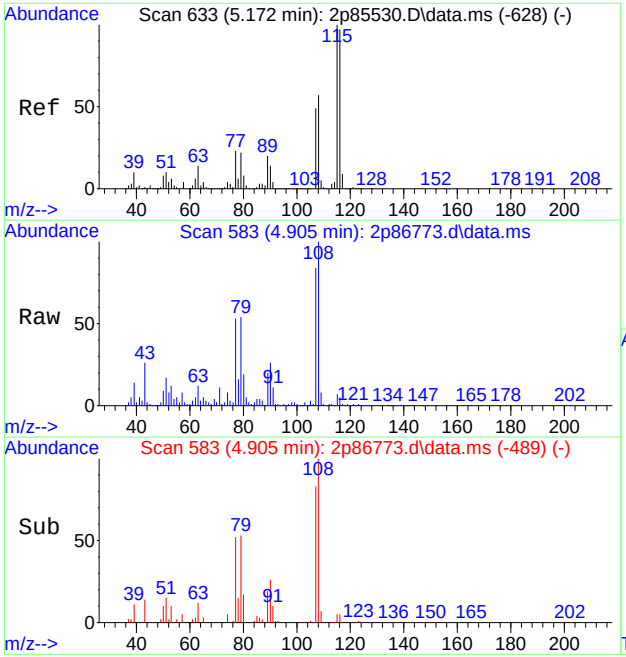


#18
Acetophenone
Concen: 0.29 ppm m
RT: 5.001 min Scan# 601
Delta R.T. 0.000 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:105 Resp: 10685

Ion	Ratio	Lower	Upper
105	100		
120	21.5	0.0	51.7
77	99.3	64.0	124.0

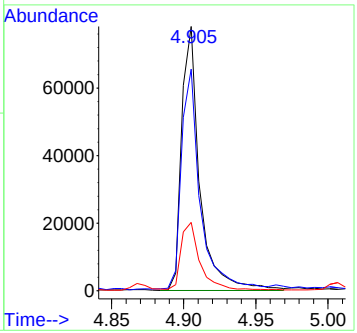


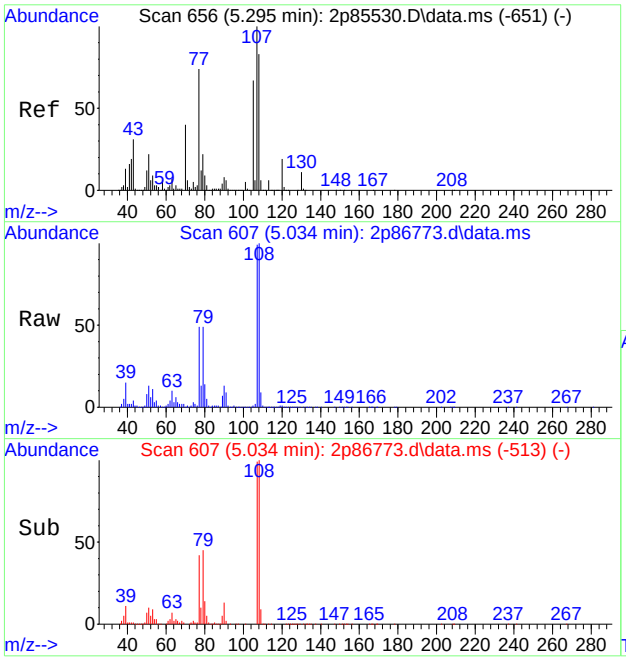


#19
2-Methylphenol
Concen: 3.16 ppm
RT: 4.905 min Scan# 583
Delta R.T. 0.000 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:108 Resp: 68667

Ion	Ratio	Lower	Upper
108	100		
107	83.0	59.9	119.9
90	25.5	0.0	56.3

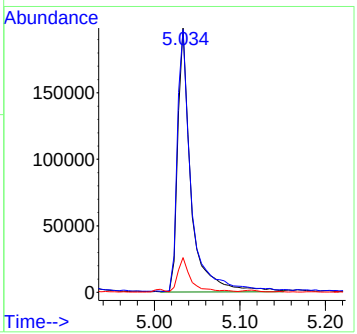


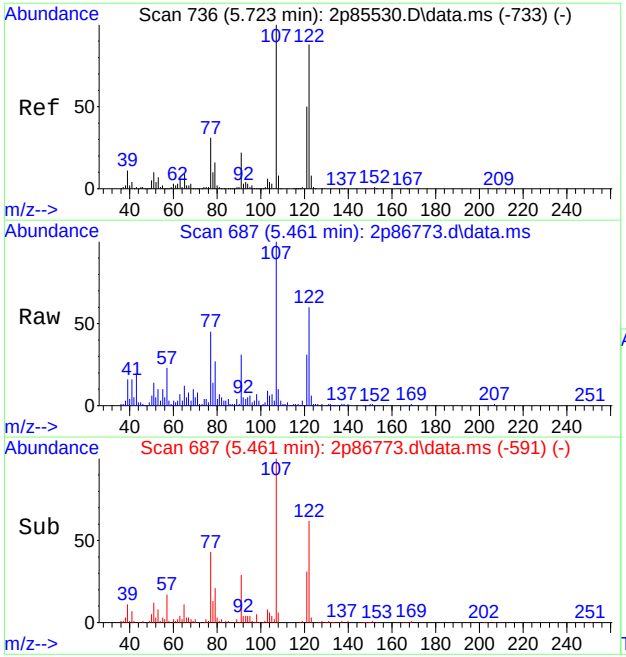


#21
3&4-Methylphenol
Concen: 9.80 ppm
RT: 5.034 min Scan# 607
Delta R.T. 0.000 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:108 Resp: 215739

Ion	Ratio	Lower	Upper
108	100		
107	99.1	89.8	149.8
90	12.5	0.0	40.4

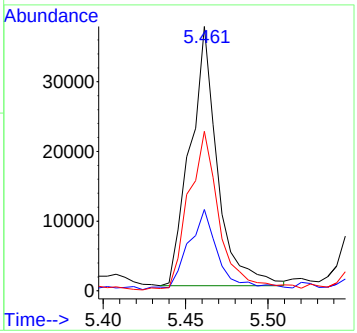


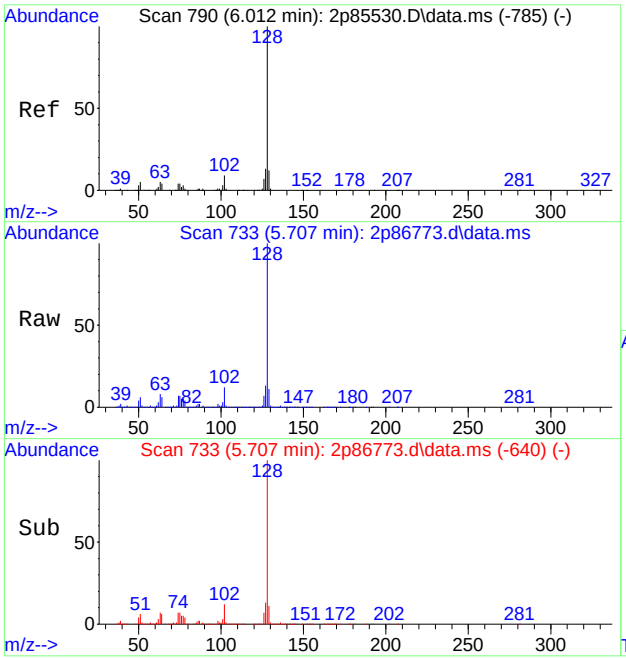


#30
2,4-Dimethylphenol
Concen: 1.85 ppm
RT: 5.461 min Scan# 687
Delta R.T. 0.011 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:107 Resp: 43209

Ion	Ratio	Lower	Upper
107	100		
121	30.2	9.5	69.5
122	60.5	40.1	100.1

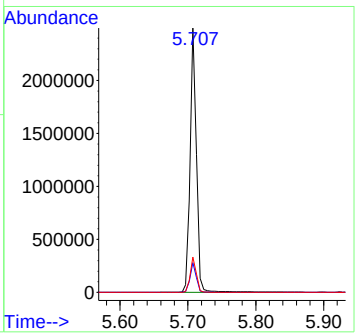


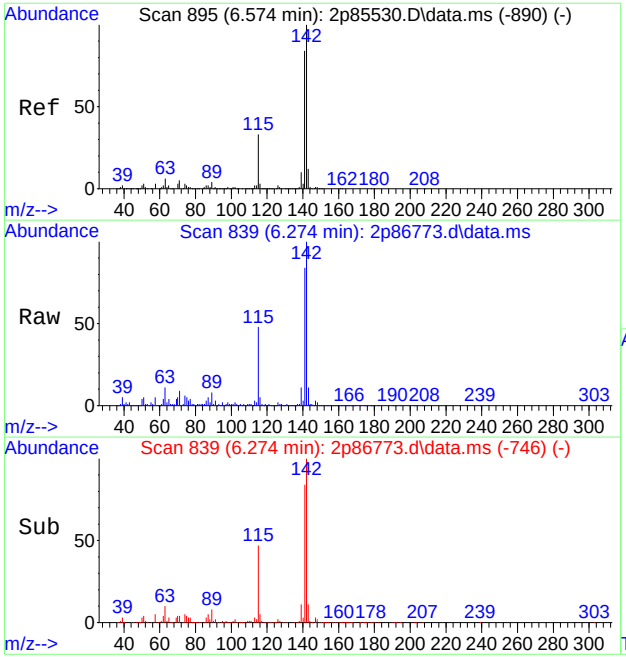


#38
Naphthalene
Concen: 27.38 ppm
RT: 5.707 min Scan# 733
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:128 Resp: 1609528

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	41.5
127	13.4	0.0	43.5

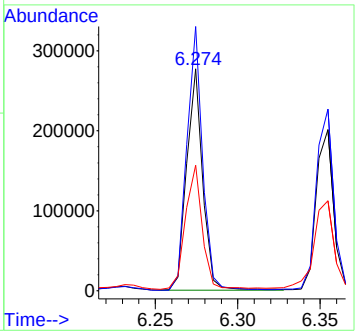


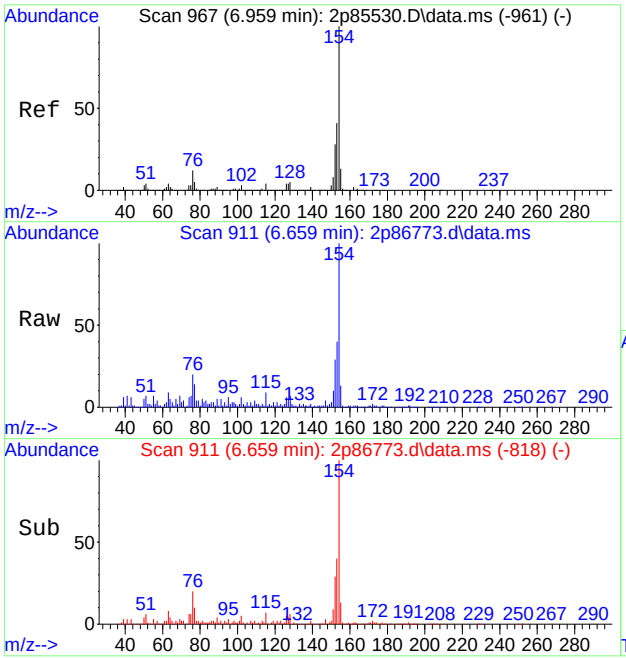


#44
2-Methylnaphthalene
Concen: 5.02 ppm
RT: 6.274 min Scan# 839
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:141 Resp: 187866

Ion	Ratio	Lower	Upper
141	100		
142	119.0	88.5	148.5
115	55.8	20.8	80.8

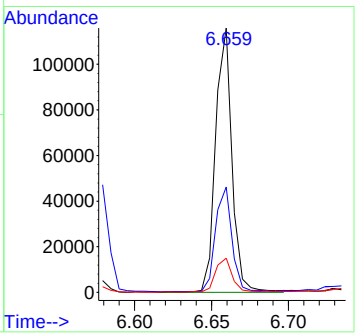


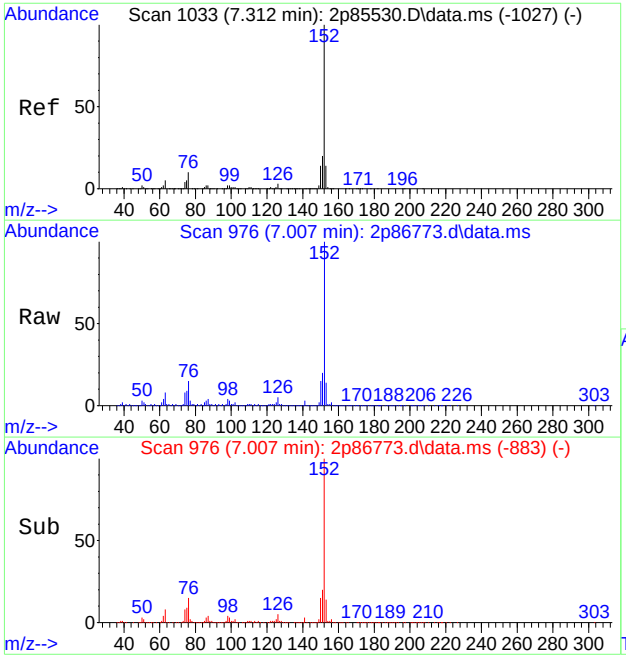


#53
Biphenyl
Concen: 1.97 ppm
RT: 6.659 min Scan# 911
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:154 Resp: 85571

Ion	Ratio	Lower	Upper
154	100		
153	39.5	10.3	70.3
155	12.7	0.0	43.1

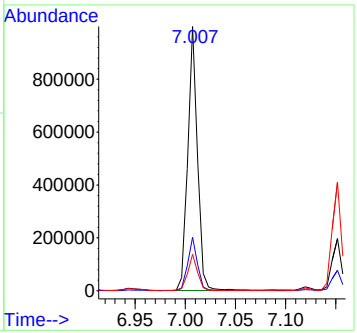


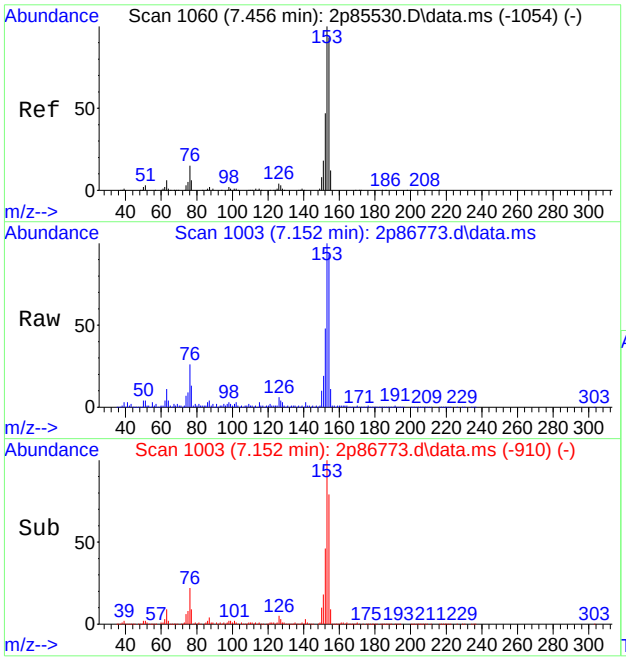


#56
Acenaphthylene
Concen: 12.65 ppm
RT: 7.007 min Scan# 976
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:152 Resp: 672076

Ion	Ratio	Lower	Upper
152	100		
151	20.1	0.0	50.2
153	13.7	0.0	43.6

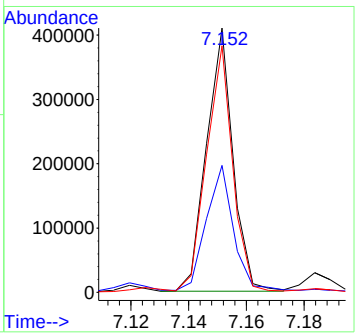


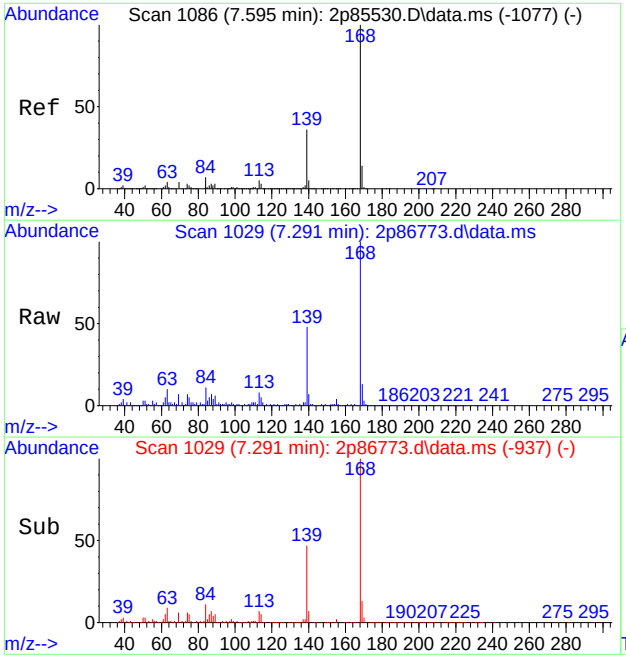


#59
Acenaphthene
Concen: 8.38 ppm
RT: 7.152 min Scan# 1003
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:153 Resp: 261456

Ion	Ratio	Lower	Upper
153	100		
152	47.4	18.5	78.5
154	93.0	56.7	116.7

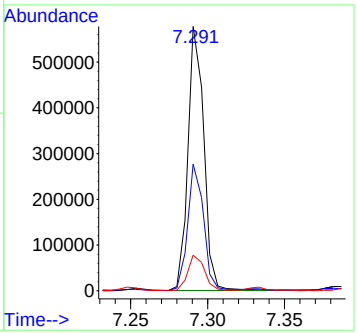


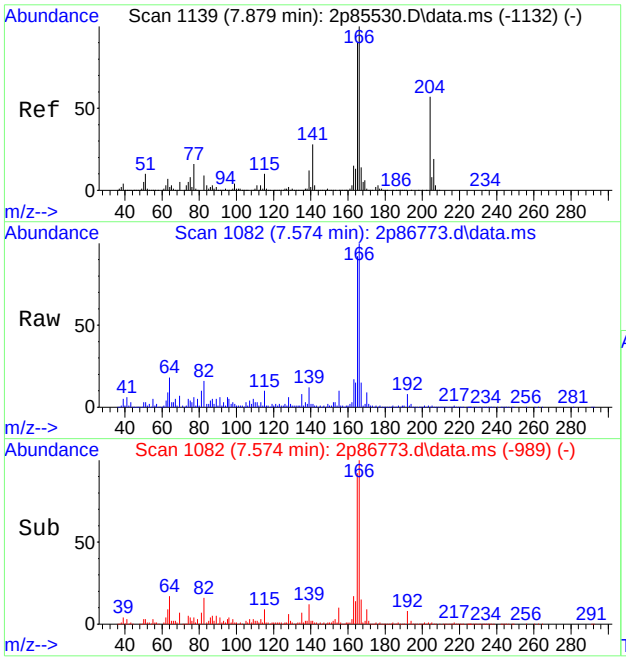


#62
Dibenzofuran
Concen: 9.62 ppm
RT: 7.291 min Scan# 1029
Delta R.T. -0.011 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:168 Resp: 413598

Ion	Ratio	Lower	Upper
168	100		
139	47.7	14.0	74.0
169	13.4	0.0	43.3

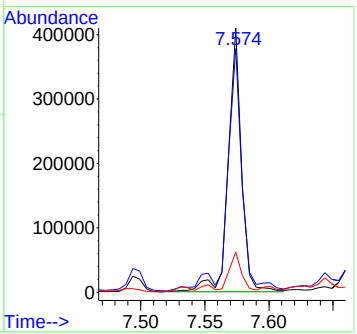


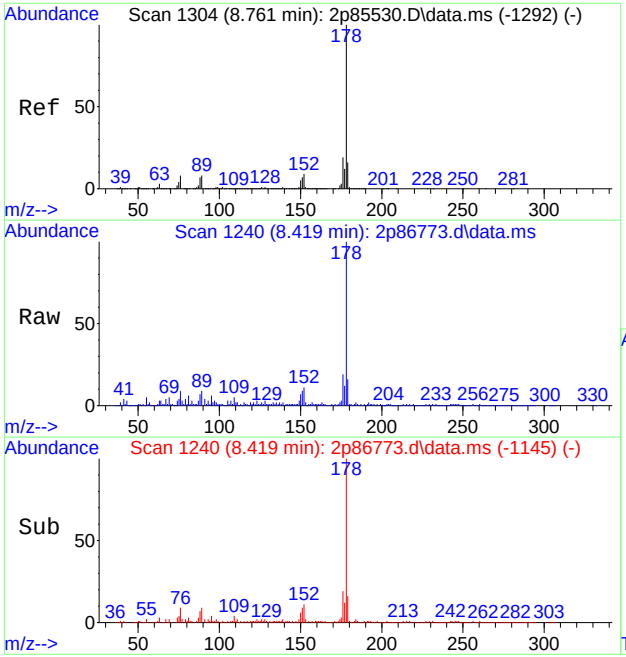


#66
Fluorene
Concen: 8.12 ppm
RT: 7.574 min Scan# 1082
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:166 Resp: 299622

Ion	Ratio	Lower	Upper
166	100		
165	91.7	60.3	120.3
167	14.7	0.0	43.9

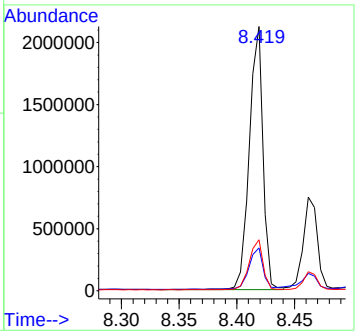


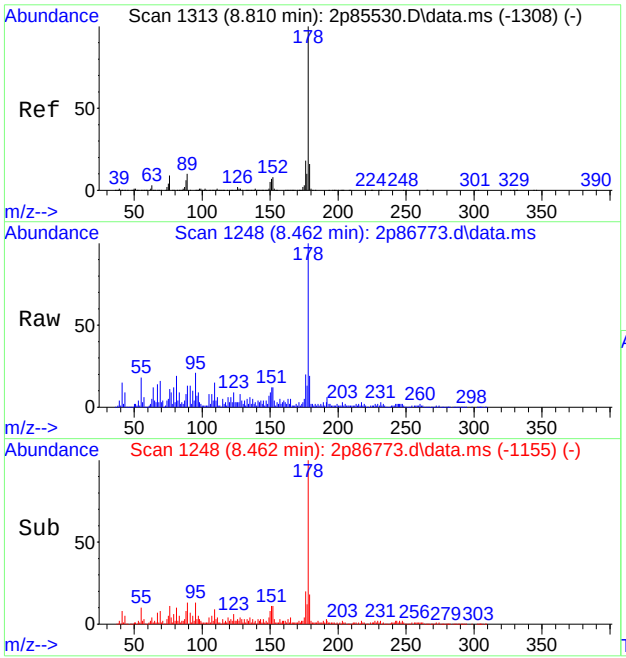


#77
Phenanthrene
Concen: 47.22 ppm
RT: 8.419 min Scan# 1240
Delta R.T. 0.006 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:178 Resp: 1745624

Ion	Ratio	Lower	Upper
178	100		
179	15.4	0.0	45.8
176	19.0	0.0	49.9

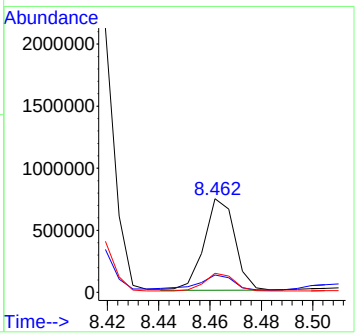


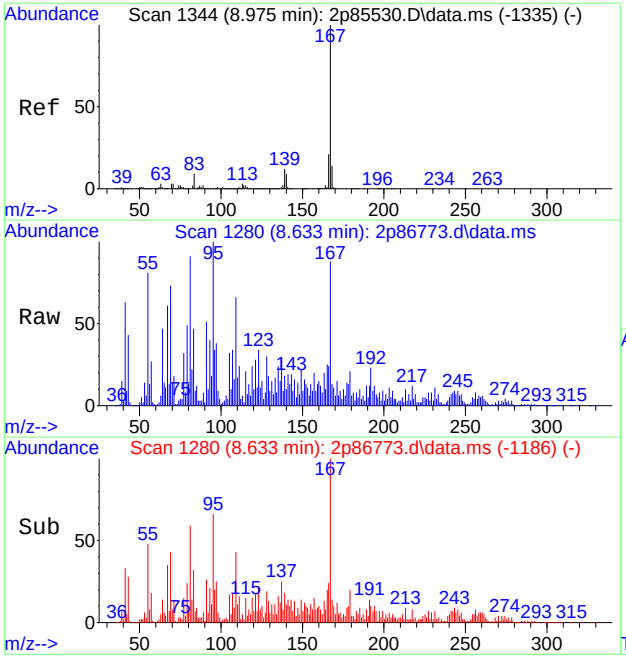


#78
Anthracene
Concen: 16.47 ppm
RT: 8.462 min Scan# 1248
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:178 Resp: 619227

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.3
176	19.3	0.0	49.1

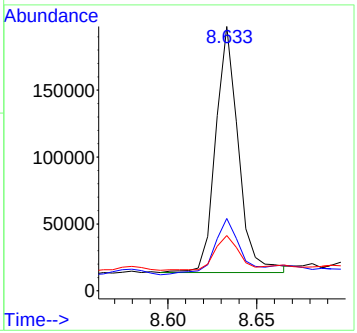


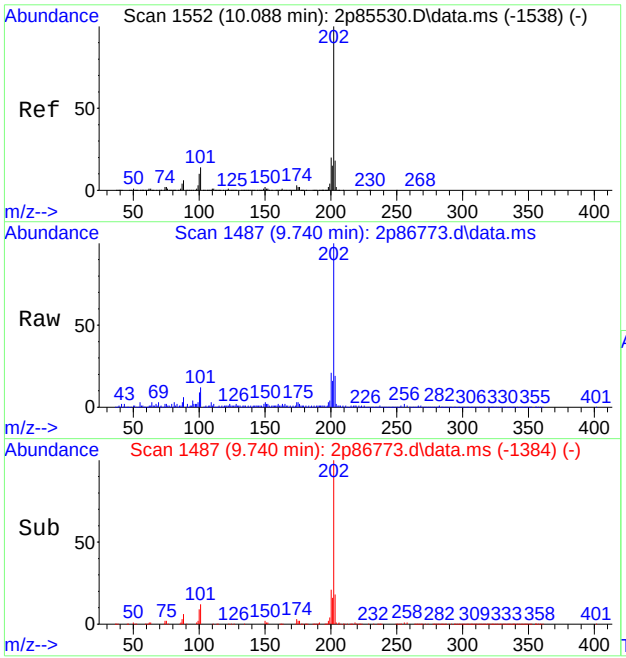


#79
Carbazole
Concen: 4.22 ppm
RT: 8.633 min Scan# 1280
Delta R.T. 0.000 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:167 Resp: 164029

Ion	Ratio	Lower	Upper
167	100		
166	21.3	0.0	51.0
139	13.3	0.0	45.1

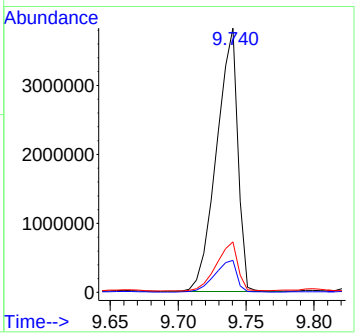


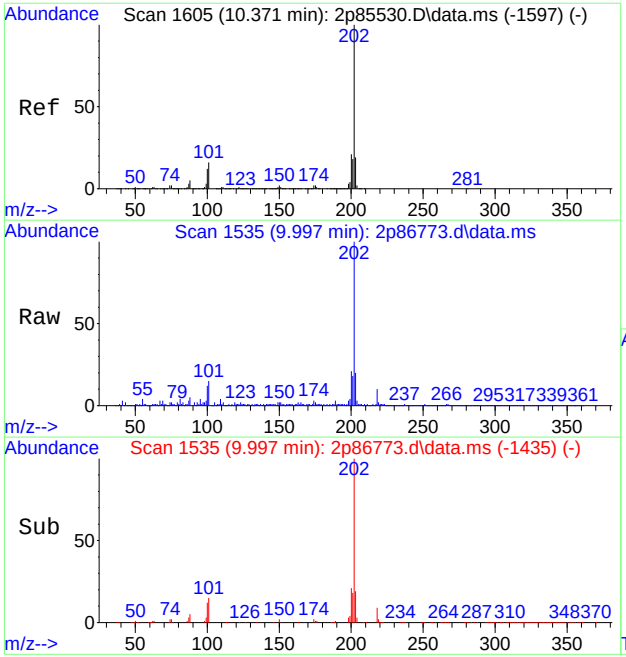


#81
Fluoranthene
Concen: 78.80 ppm
RT: 9.740 min Scan# 1487
Delta R.T. 0.048 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:202 Resp: 4140566

Ion	Ratio	Lower	Upper
202	100		
101	12.0	0.0	45.0
203	18.5	0.0	48.2

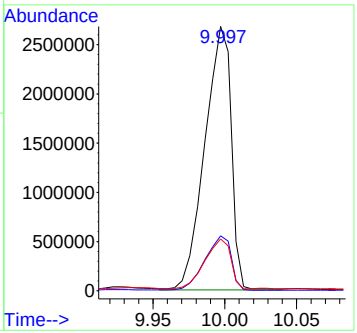


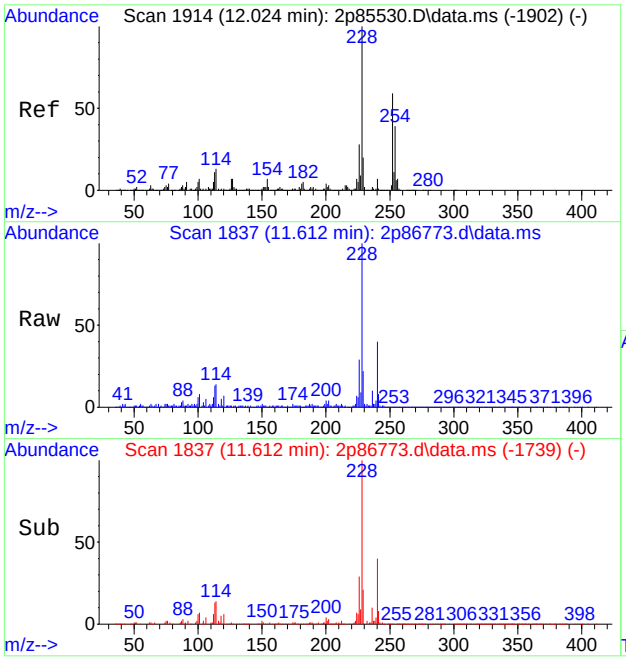


#84
Pyrene
Concen: 60.18 ppm m
RT: 9.997 min Scan# 1535
Delta R.T. 0.032 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:202 Resp: 3429150

Ion	Ratio	Lower	Upper
202	100		
200	20.8	0.0	51.2
203	19.6	0.0	48.2

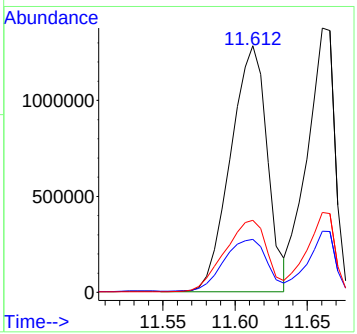


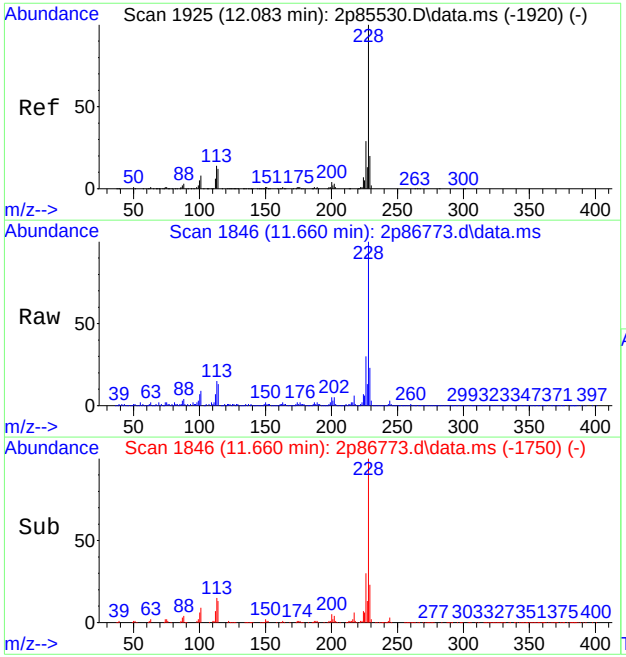


#87
Benzo[a]anthracene
Concen: 41.38 ppm
RT: 11.612 min Scan# 1837
Delta R.T. 0.022 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:228 Resp: 2275987

Ion	Ratio	Lower	Upper
228	100		
229	20.9	0.0	49.9
226	28.7	0.0	57.1

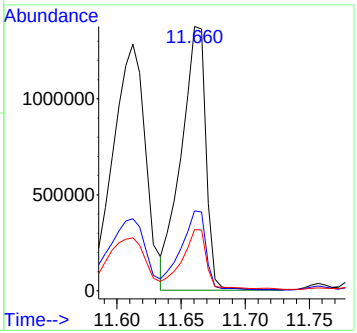


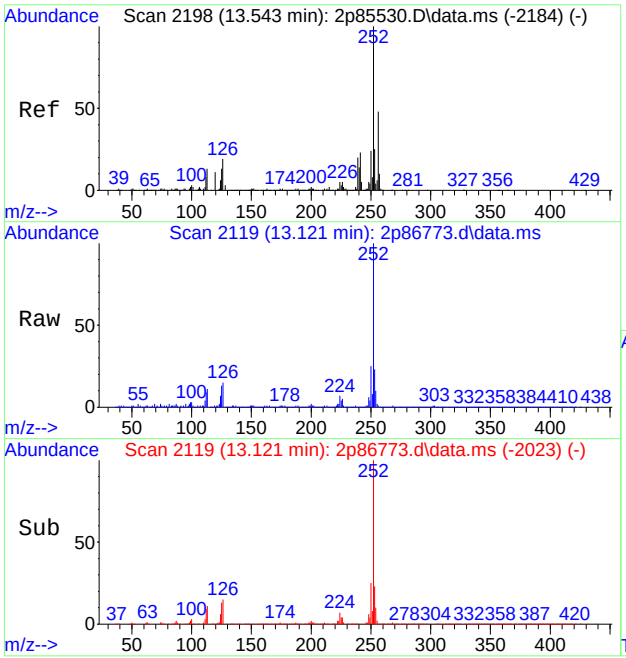


#89
Chrysene
Concen: 47.52 ppm
RT: 11.660 min Scan# 1846
Delta R.T. 0.011 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:228 Resp: 1854259

Ion	Ratio	Lower	Upper
228	100		
226	29.8	0.0	59.7
229	22.6	0.0	49.5

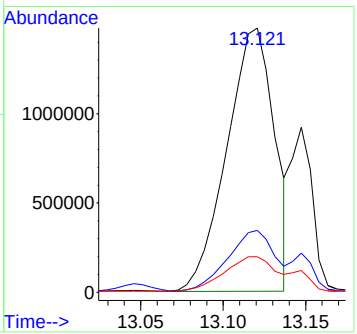


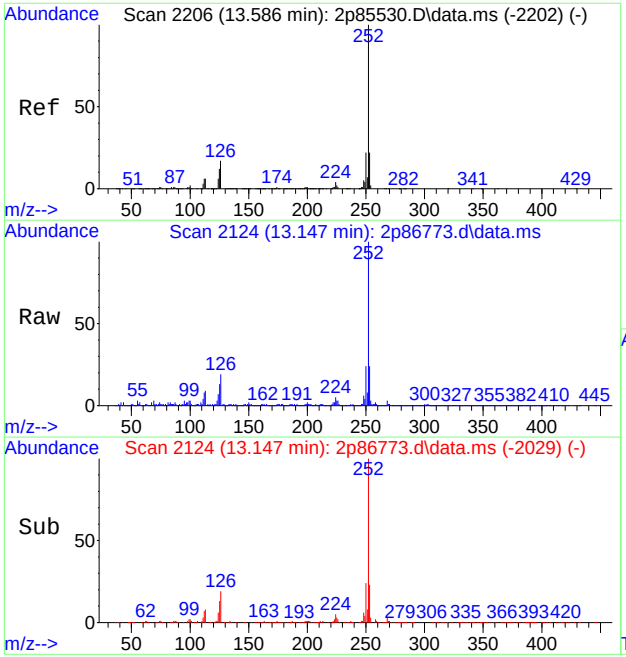


#93
Benzo[b]fluoranthene
Concen: 58.93 ppm
RT: 13.121 min Scan# 2119
Delta R.T. 0.011 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:252 Resp: 2962215

Ion	Ratio	Lower	Upper
252	100		
253	22.9	0.0	51.8
125	12.6	0.0	42.6

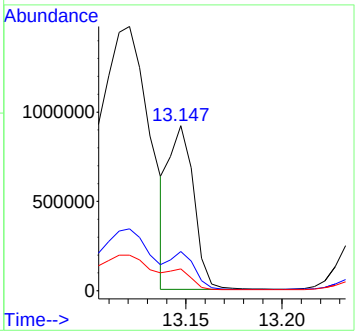


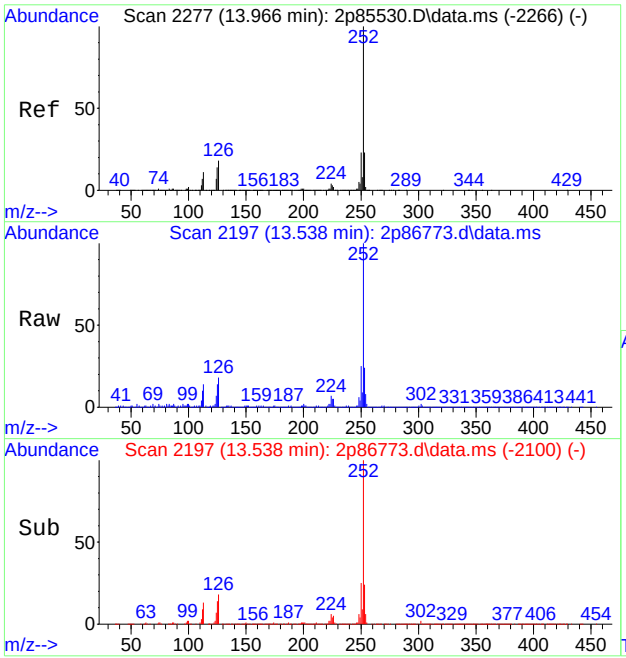


#94
Benzo[k]fluoranthene
Concen: 20.00 ppm
RT: 13.147 min Scan# 2124
Delta R.T. 0.006 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:252 Resp: 822174

Ion	Ratio	Lower	Upper
252	100		
253	23.6	0.0	52.1
125	11.5	0.0	42.9

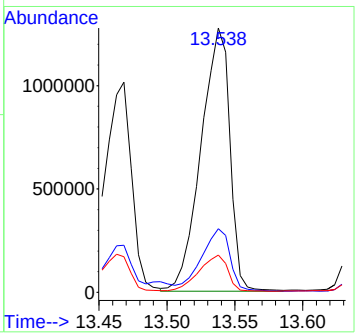


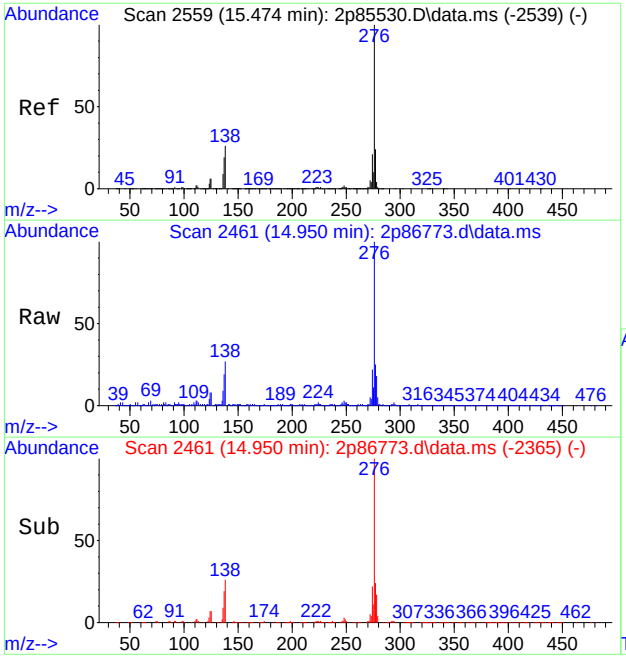


#95
Benzo[a]pyrene
Concen: 44.48 ppm
RT: 13.538 min Scan# 2197
Delta R.T. 0.016 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:252 Resp: 1879108

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	53.0
125	13.6	0.0	44.7

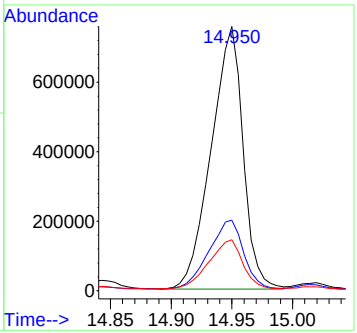


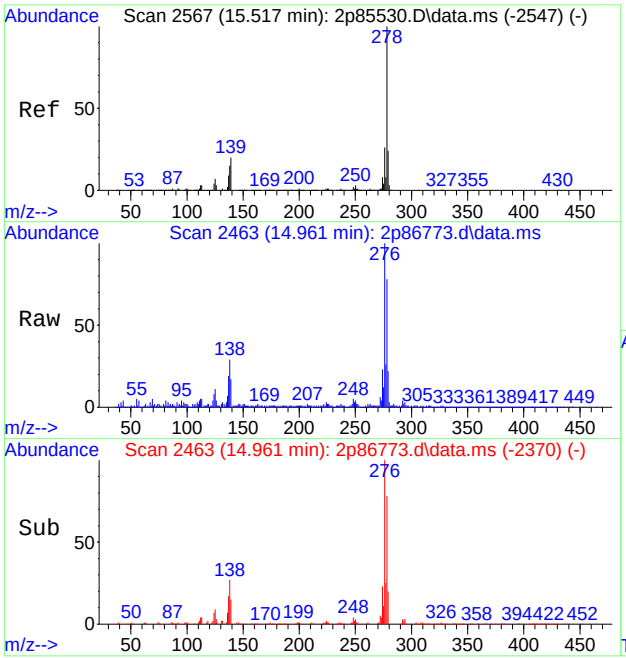


#96
Indeno[1,2,3-cd]pyrene
Concen: 28.63 ppm
RT: 14.950 min Scan# 2461
Delta R.T. 0.011 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:276 Resp: 1378714

Ion	Ratio	Lower	Upper
276	100		
138	26.2	0.0	58.1
137	18.6	0.0	48.2

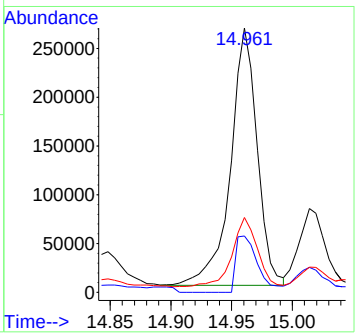


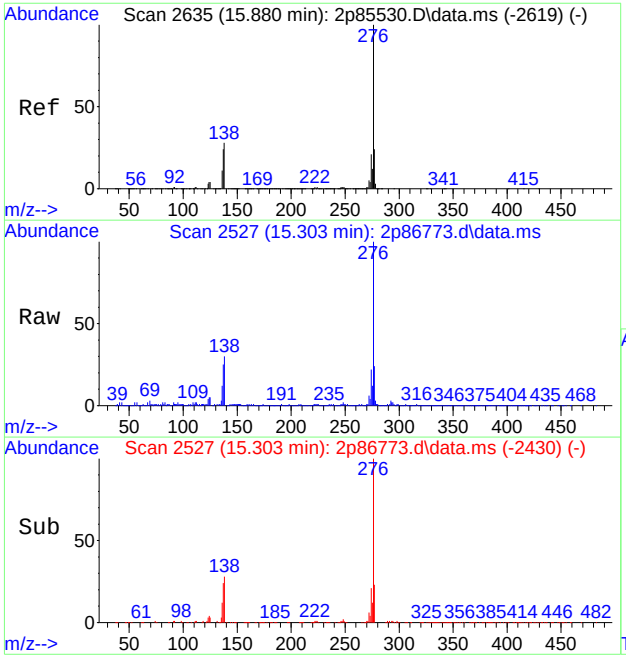


#98
Dibenz[a,h]anthracene
Concen: 10.75 ppm m
RT: 14.961 min Scan# 2463
Delta R.T. -0.005 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:278 Resp: 403127

Ion	Ratio	Lower	Upper
278	100		
139	21.3	0.0	51.1
279	28.3	0.0	54.6

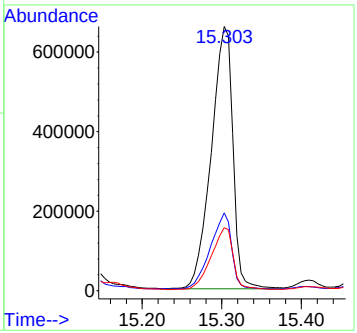




#100
Benzo[g,h,i]perylene
Concen: 32.66 ppm
RT: 15.303 min Scan# 2527
Delta R.T. 0.016 min
Lab File: 2p86773.d
Acq: 22 Apr 2019 8:17 pm

Tgt Ion:276 Resp: 1244986

Ion	Ratio	Lower	Upper
276	100		
138	29.1	0.0	59.8
277	23.5	0.0	53.4



Manual Integration Approval Summary

Sample Number: JC86406-15
Lab FileID: 2P86773.D
Injection Time: 04/22/19 20:17

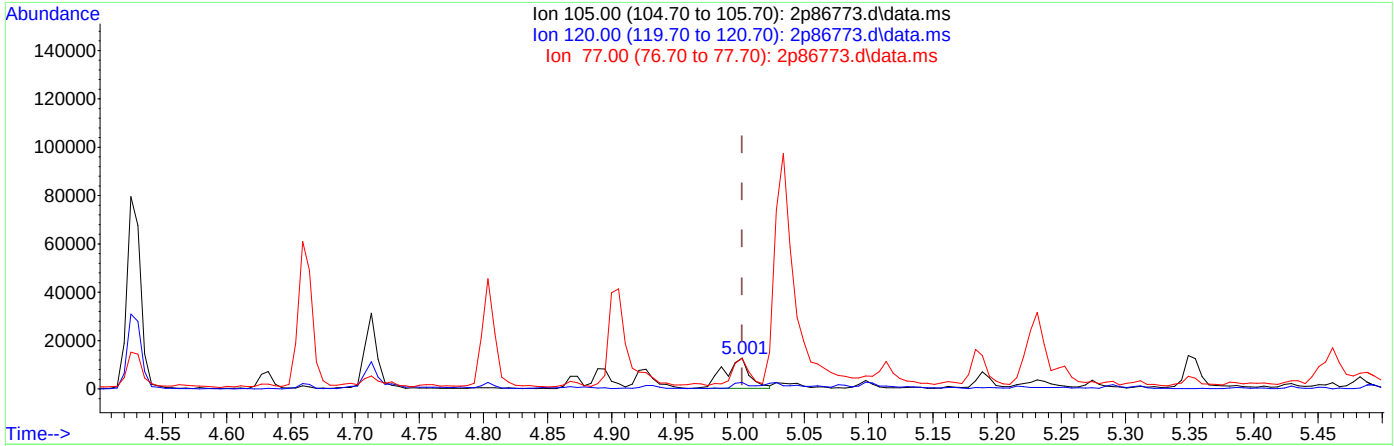
Method: SW846 8270D
Analyst approved: 04/23/19 06:13 Michelle Co
Supervisor approved: 04/25/19 14:42 Nancy Ma

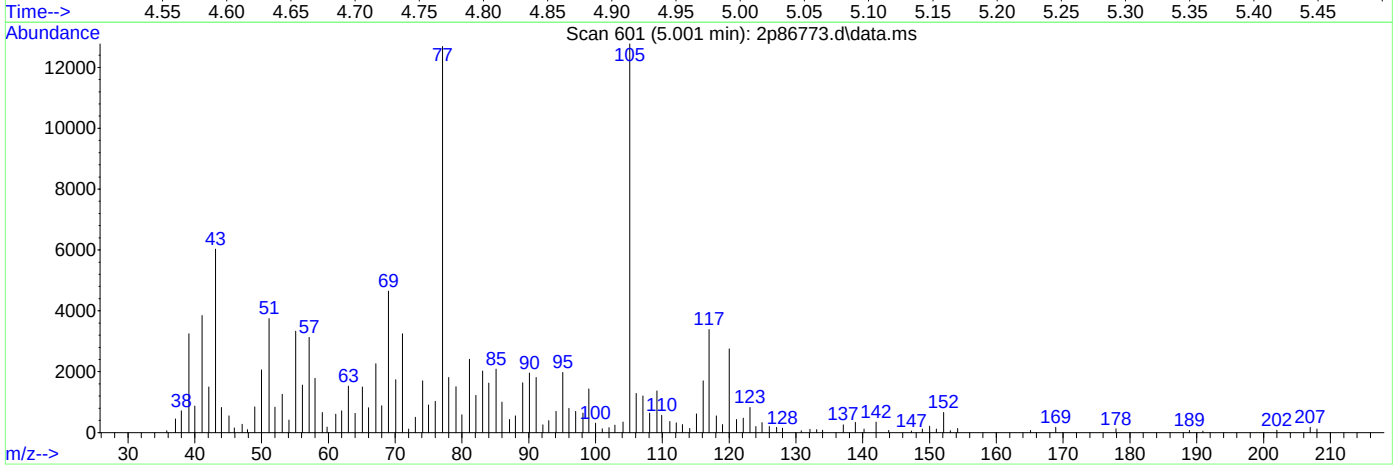
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetophenone	98-86-2		5.00	Poor instrument integration
Pyrene	129-00-0		10.00	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.96	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:52:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration





TIC: 2p86773.d\data.ms

(18) Acetophenone (t)

5.001min (+0.000) 0.46ppm

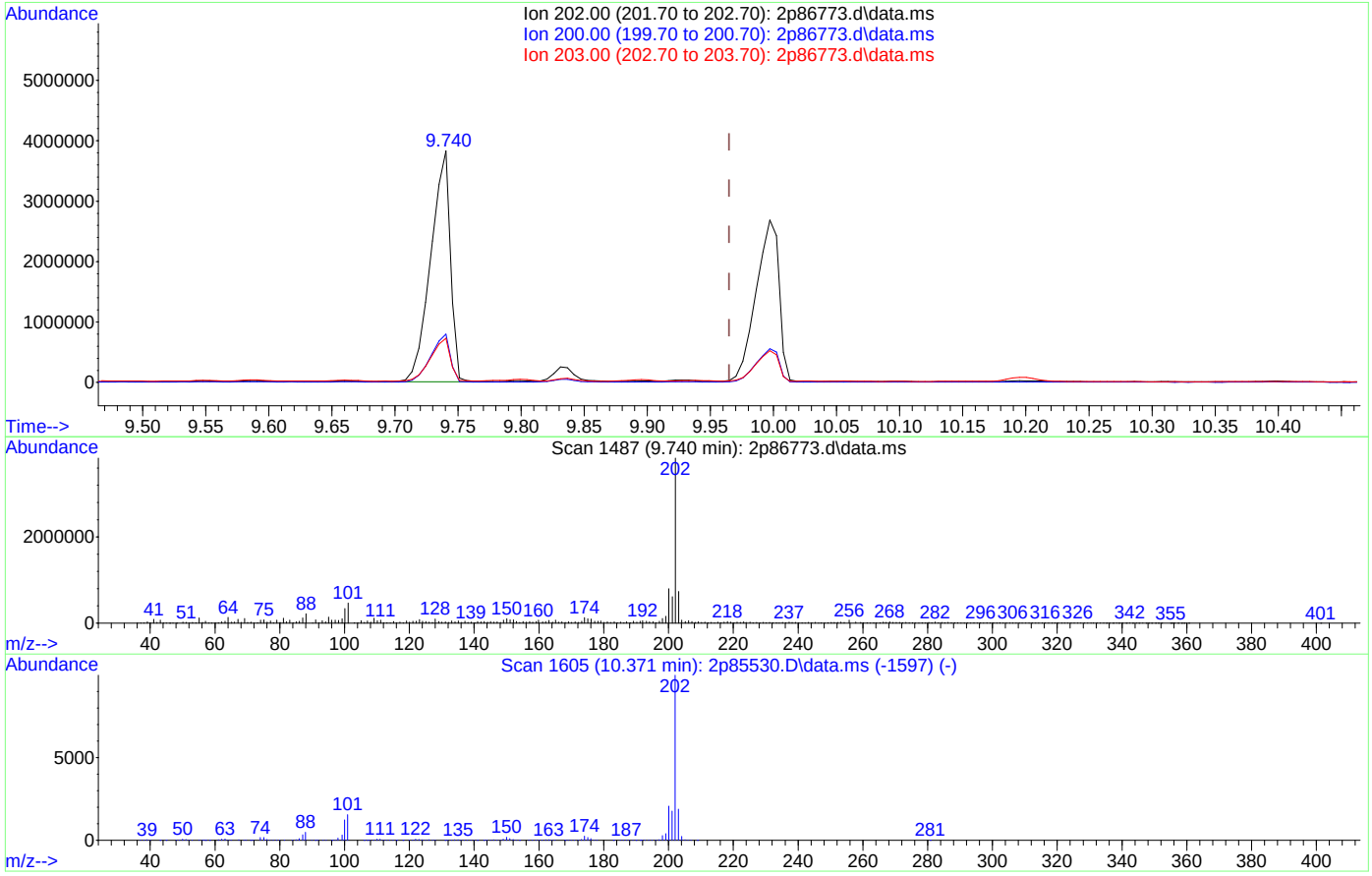
response 17065

Ion	Exp%	Act%
105.00	100	100
120.00	21.70	11.98
77.00	94.00	33.08#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:52:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86773.d\data.ms

(84) Pyrene (t)

9.740min (-0.224) 72.86ppm

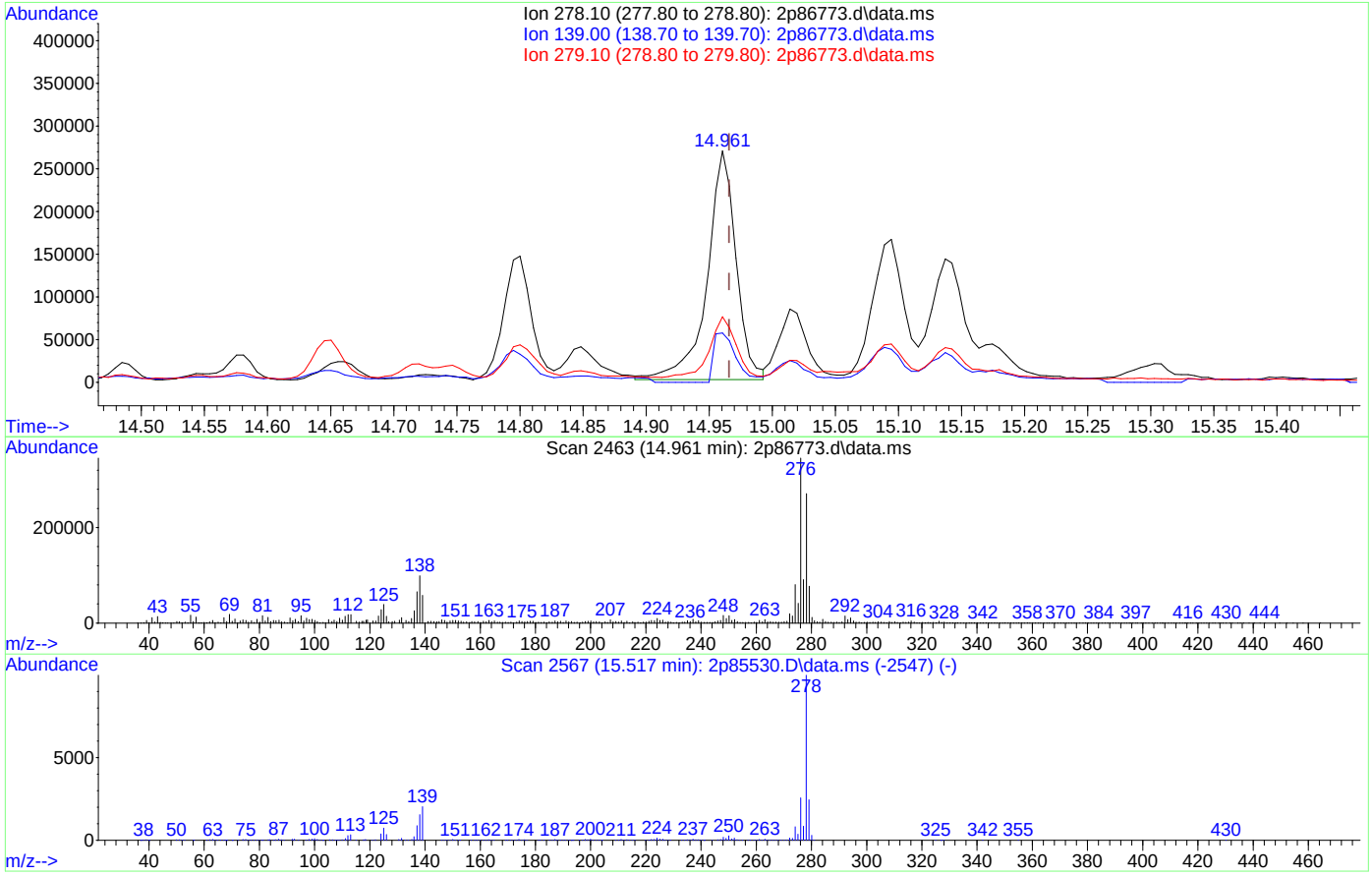
response 4151779

Ion	Exp%	Act%
202.00	100	100
200.00	21.20	20.76
203.00	18.20	18.47
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86773.d
Acq On : 22 Apr 2019 8:17 pm
Operator : yujiac
Sample : jc86406-15 Inst : MS2P
Misc : op19810,e2p3832,31.9,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 05:52:57 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:19:39 2019
Response via : Initial Calibration



TIC: 2p86773.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.961min (-0.005) 11.38ppm

response 426961

Ion	Exp%	Act%
278.10	100	100
139.00	21.10	19.95
279.10	24.60	26.90
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86731.D
Acq On : 18 Apr 2019 11:43 pm
Operator : carolb
Sample : op19810-mb1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 19 10:19:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

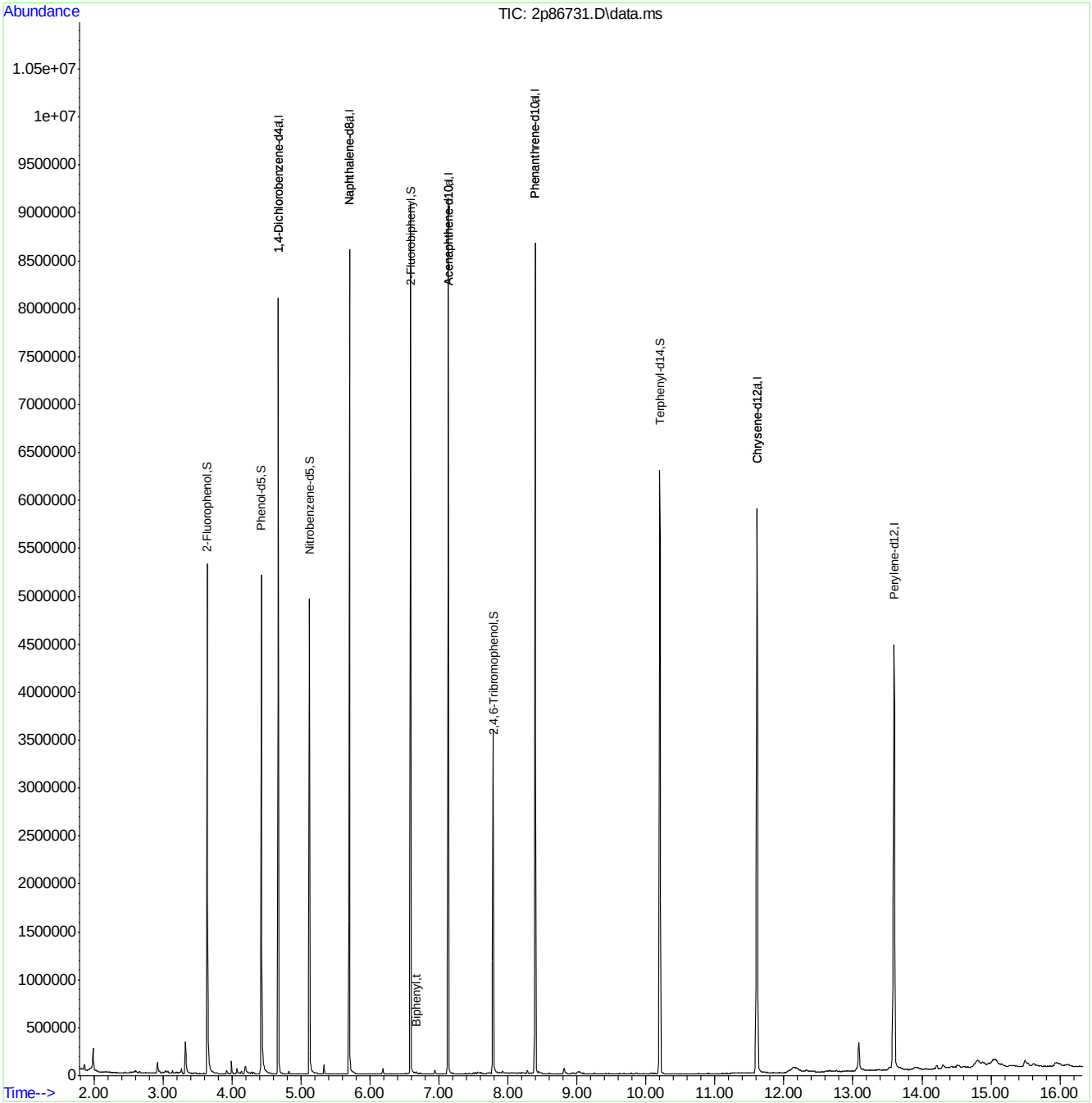
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	820600	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2721374	40.00	ppm	-0.17
47) Acenaphthene-d10	7.136	164	1333863	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	2441864	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	2306309	40.00	ppm	-0.28
91) Perylene-d12	13.597	264	1960282	40.00	ppm	-0.30
101) 1,4-Dichlorobenzene-d4a	4.670	152	820600	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2721374	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.136	164	1333863	40.00	ppm	-0.18
108) Chrysene-d12a	11.612	240	2306309	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	2441864	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1290364	31.25	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 62.50%#			
8) Phenol-d5	4.424	99	1621140	35.82	ppm	-0.16
Spiked Amount 50.000	Range 10 - 59		Recovery = 71.64%#			
25) Nitrobenzene-d5	5.125	82	1496318	40.91	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.82%#			
51) 2-Fluorobiphenyl	6.590	172	1881533	40.75	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 81.50%#			
73) 2,4,6-Tribromophenol	7.788	330	246400	28.77	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 57.54%			
85) Terphenyl-d14	10.200	244	2032519	35.41	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 70.82%#			
111) 1-Chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
53) Biphenyl	6.670	154	4339	0.08	ppm	90

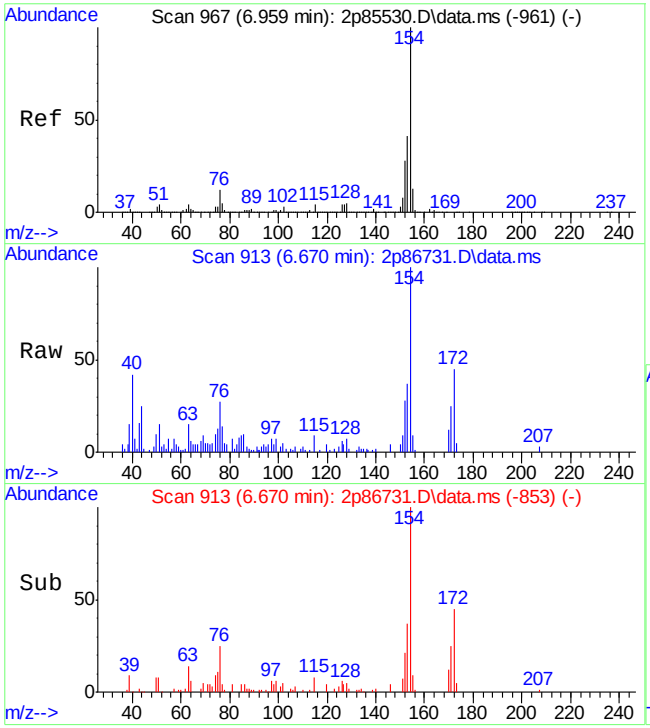
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86731.D
Acq On : 18 Apr 2019 11:43 pm
Operator : carolb
Sample : op19810-mb1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 19 10:19:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

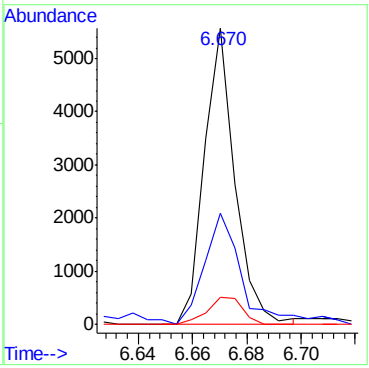




#53
Biphenyl
Concen: 0.08 ppm
RT: 6.670 min Scan# 913
Delta R.T. -0.177 min
Lab File: 2p86731.D
Acq: 18 Apr 2019 11:43 pm

Tgt Ion:154 Resp: 4339

Ion	Ratio	Lower	Upper
154	100		
153	35.3	11.1	71.1
155	9.1	0.0	43.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137258.d
Acq On : 25 Apr 2019 4:53 pm
Operator : angelar
Sample : op19810-mb1 Inst : GCMSZ
Misc : op19810,ez6762,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:24:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	70069	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	269362	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	149115	40.00	ppm	0.00
69) Phenanthrene-d10	7.636	188	297742	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	281605	40.00	ppm	0.00
91) Perylene-d12	13.266	264	273327	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	70069	40.00	ppm	0.00
103) Phenanthrene-d10a	7.636	188	297742	40.00	ppm	0.00
107) Chrysene-d12a	11.231	240	281605	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	149115	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	269362	40.00	ppm	0.00
113) Phenanthrene-d10b	7.636	188	297742	40.00	ppm	0.00
115) Chrysene-d12b	11.231	240	281605	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.079	112	85686	42.45	ppm	0.00
Spiked Amount 50.000			Recovery =	84.90%		
8) Phenol-d5	3.848	99	115033	40.41	ppm	0.00
Spiked Amount 50.000			Recovery =	80.82%		
25) Nitrobenzene-d5	4.489	82	100469	40.28	ppm	0.00
Spiked Amount 50.000			Recovery =	80.56%		
51) 2-Fluorobiphenyl	5.766	172	206364	40.91	ppm	0.00
Spiked Amount 50.000			Recovery =	81.82%		
73) 2,4,6-Tribromophenol	6.931	330	27884	35.26	ppm	0.00
Spiked Amount 50.000			Recovery =	70.52%		
85) Terphenyl-d14	9.741	244	249776	42.70	ppm	0.00
Spiked Amount 50.000			Recovery =	85.40%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		

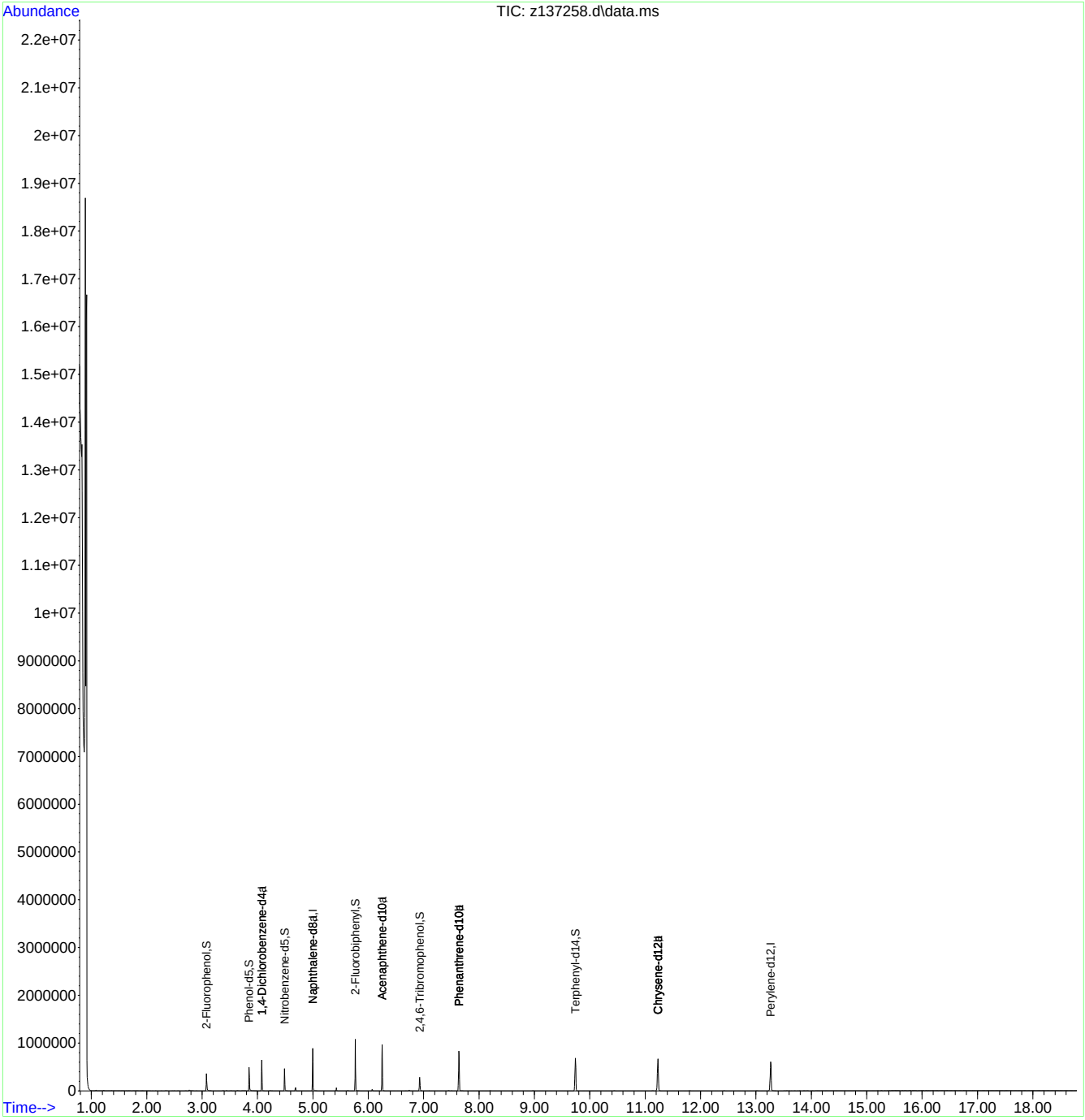
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137258.d
Acq On : 25 Apr 2019 4:53 pm
Operator : angelar
Sample : op19810-mb1 Inst : GCMSZ
Misc : op19810,ez6762,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Results File: MZ6761.RES
Quant Time: Apr 26 03:24:37 2019
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 03:13:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : V:\svoa-gcms\completed\04_apr\04-22-2019\michellc\em6566\
Data File : m153633.d
Acq On : 21 Apr 2019 12:21 am
Operator : carolb
Sample : op19854-mb1
Misc : op19854,em6566,30,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 23 15:18:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

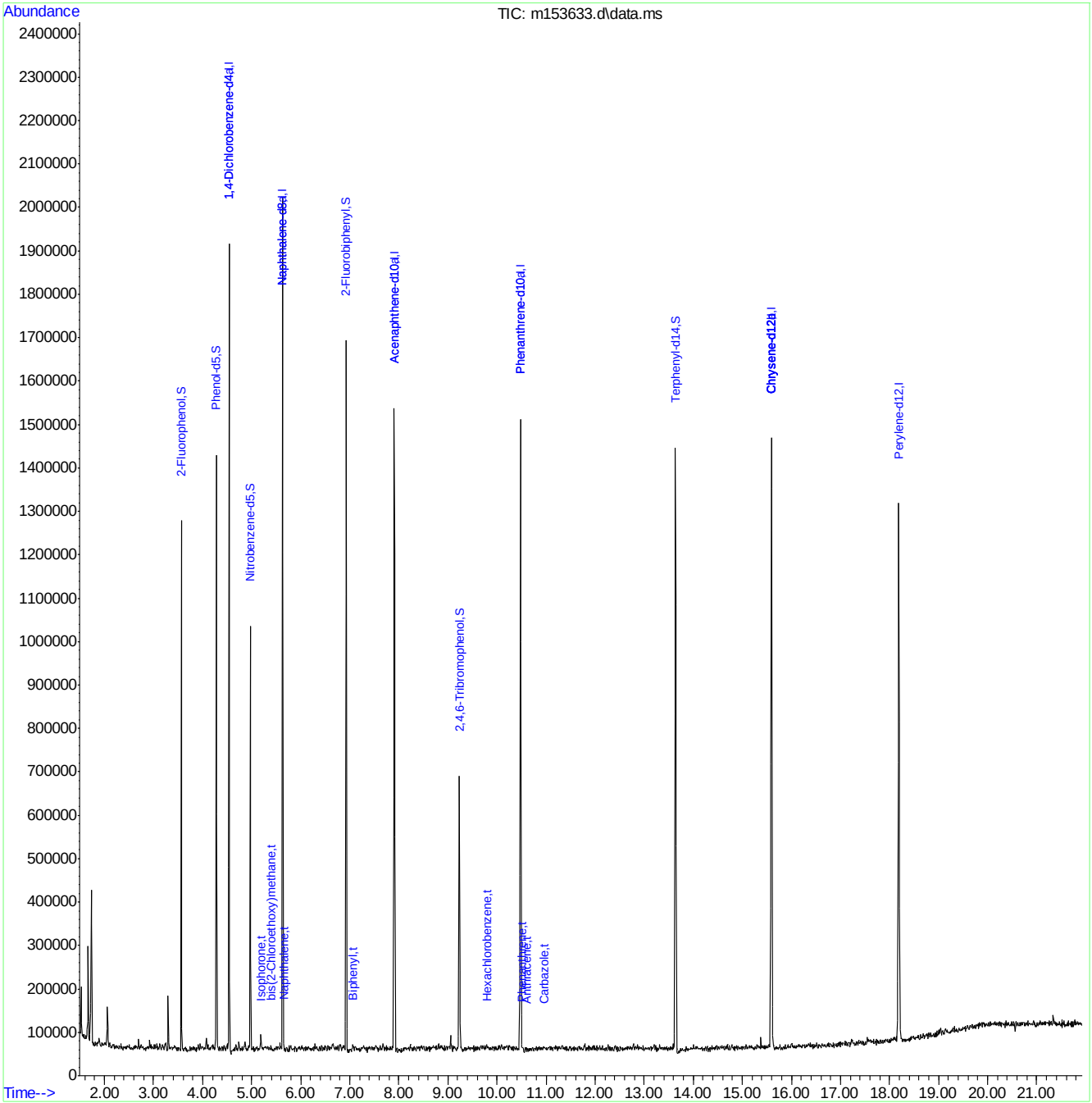
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.537	152	236412	40.00	ppm	0.00
24) Naphthalene-d8	5.632	136	750957	40.00	ppm	0.00
47) Acenaphthene-d10	7.908	164	404716	40.00	ppm	0.00
69) Phenanthrene-d10	10.482	188	770012	40.00	ppm	0.00
83) Chrysene-d12	15.593	240	766292	40.00	ppm	0.00
91) Perylene-d12	18.189	264	740028	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.537	152	236412	40.00	ppm	0.00
103) Acenaphthene-d10a	7.908	164	404716	40.00	ppm	0.00
106) Chrysene-d12a	15.593	240	766292	40.00	ppm	0.00
108) Chrysene-d12b	15.593	240	766292	40.00	ppm	0.00
110) Phenanthrene-d10a	10.482	188	770012	40.00	ppm	0.00
113) Naphthalene-d8a	5.632	136	750957	40.00	ppm	0.00
115) Chrysene-d12c	15.593	240	766292	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.565	112	258904	28.01	ppm	0.00
Spiked Amount 50.000			Recovery = 56.02%			
8) Phenol-d5	4.281	99	319532	27.99	ppm	0.00
Spiked Amount 50.000			Recovery = 55.98%			
25) Nitrobenzene-d5	4.975	82	270176	33.72	ppm	0.00
Spiked Amount 50.000			Recovery = 67.44%			
51) 2-Fluorobiphenyl	6.925	172	571242	37.96	ppm	0.00
Spiked Amount 50.000			Recovery = 75.92%			
73) 2,4,6-Tribromophenol	9.232	330	112494	43.43	ppm	0.00
Spiked Amount 50.000			Recovery = 86.86%			
85) Terphenyl-d14	13.639	244	726358	35.15	ppm	0.00
Spiked Amount 50.000			Recovery = 70.30%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
28) Isophorone	5.200	82	2984	0.21	ppm	92
32) bis(2-Chloroethoxy)met...	5.397	93	1894	0.22	ppm	85
38) Naphthalene	5.654	128	3942	0.21	ppm	84
53) Biphenyl	7.058	154	4504	0.28	ppm	93
75) Hexachlorobenzene	9.793	284	1640	0.28	ppm	90
77) Phenanthrene	10.519	178	6084	0.32	ppm	91
78) Anthracene	10.610	178	4799	0.24	ppm	88
79) Carbazole	10.957	167	3262	0.17	ppm	79

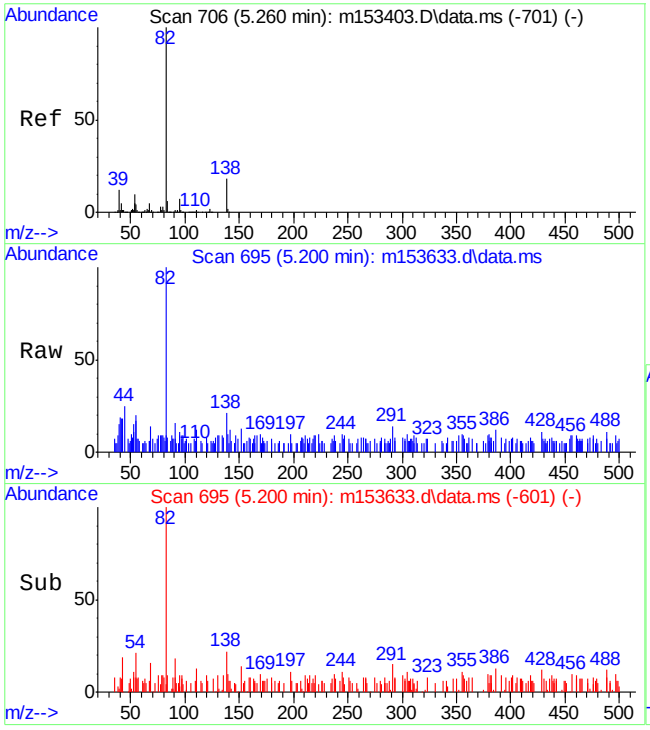
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : V:\svoa-gcms\completed\04_apr\04-22-2019\michellc\em6566\
Data File : m153633.d
Acq On : 21 Apr 2019 12:21 am
Operator : carolb
Sample : op19854-mb1
Misc : op19854,em6566,30,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 23 15:18:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

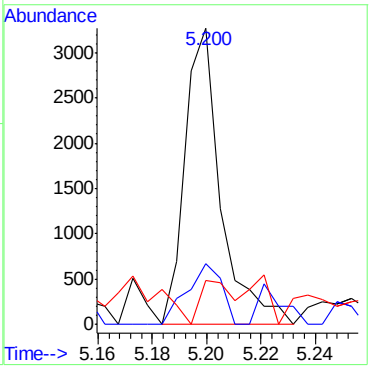


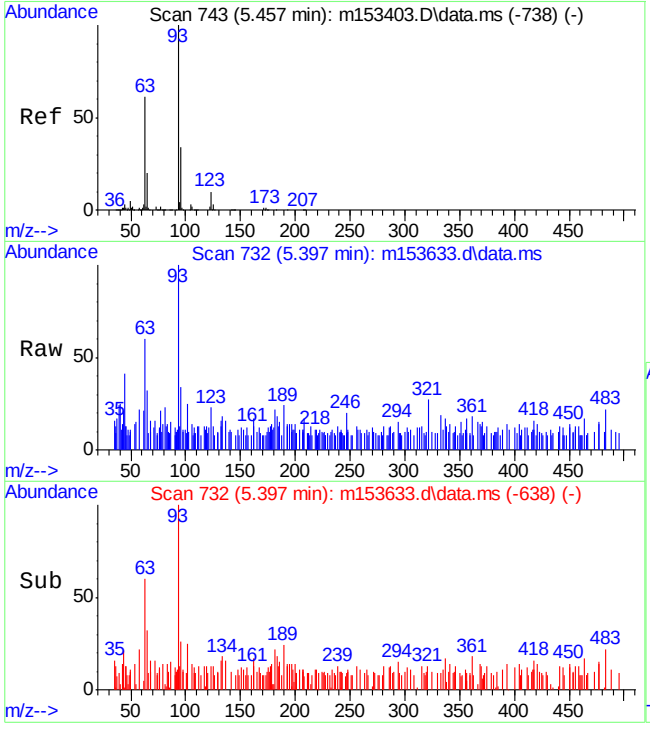


#28
Isophorone
Concen: 0.21 ppm
RT: 5.200 min Scan# 695
Delta R.T. 0.000 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion: 82 Resp: 2984

Ion	Ratio	Lower	Upper
82	100		
138	17.7	0.0	47.8
39	4.2	0.0	41.6

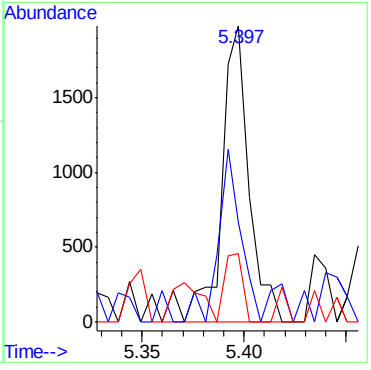


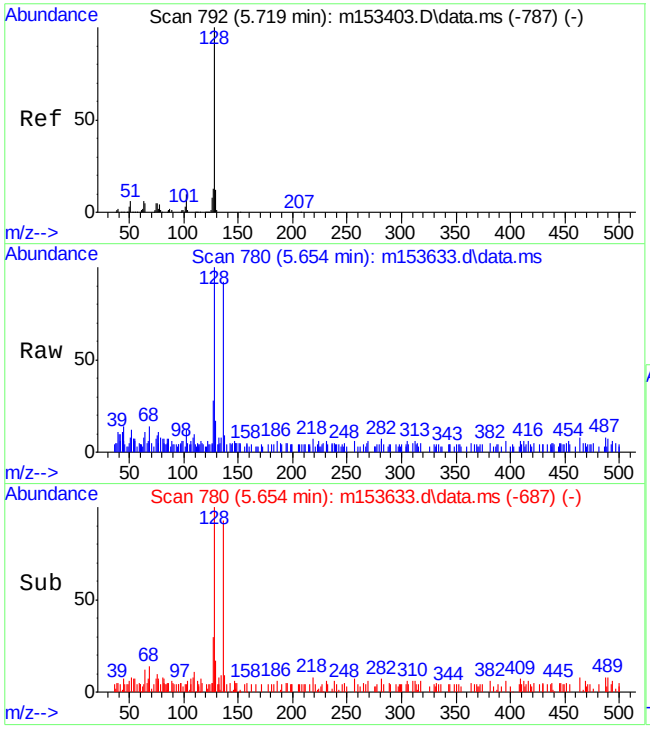


#32
bis(2-Chloroethoxy)methane
Concen: 0.22 ppm
RT: 5.397 min Scan# 732
Delta R.T. 0.000 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion: 93 Resp: 1894

Ion	Ratio	Lower	Upper
93	100		
95	28.5	3.9	63.9
123	23.2	0.0	41.0

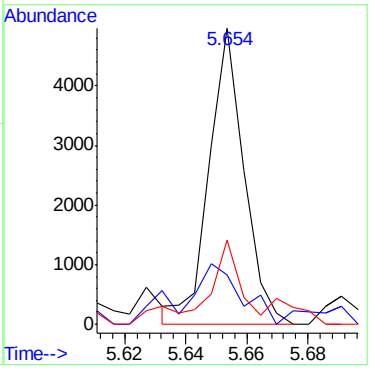


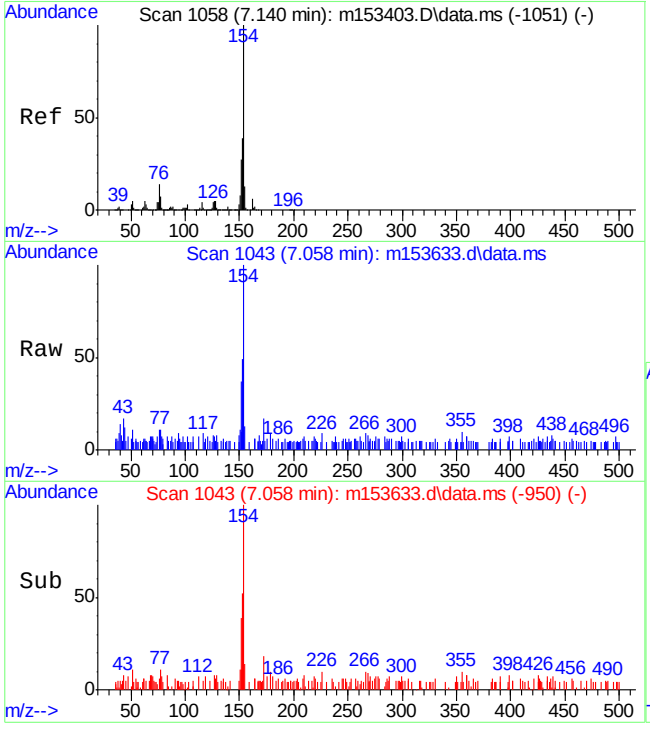


#38
Naphthalene
Concen: 0.21 ppm
RT: 5.654 min Scan# 780
Delta R.T. -0.005 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:128 Resp: 3942

Ion	Ratio	Lower	Upper
128	100		
129	9.0	0.0	41.4
127	23.0	0.0	43.6

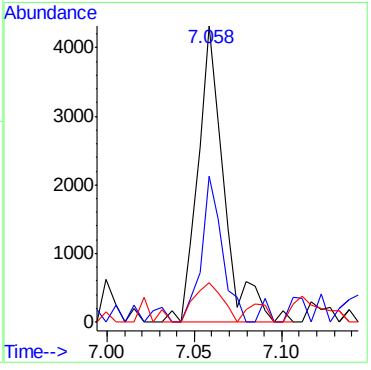


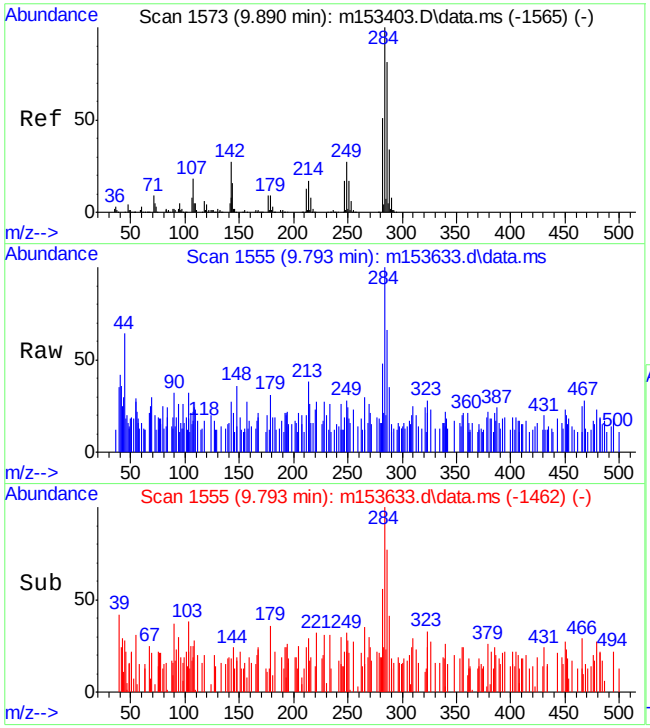


#53
Biphenyl
Concen: 0.28 ppm
RT: 7.058 min Scan# 1043
Delta R.T. -0.005 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:154 Resp: 4504

Ion	Ratio	Lower	Upper
154	100		
153	42.7	9.9	69.9
155	8.1	0.0	43.6

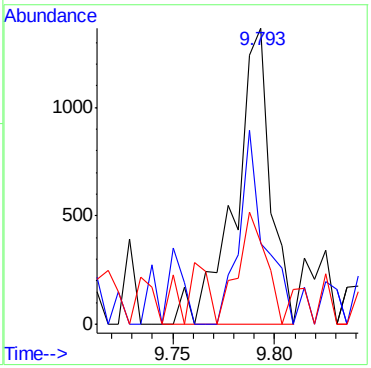


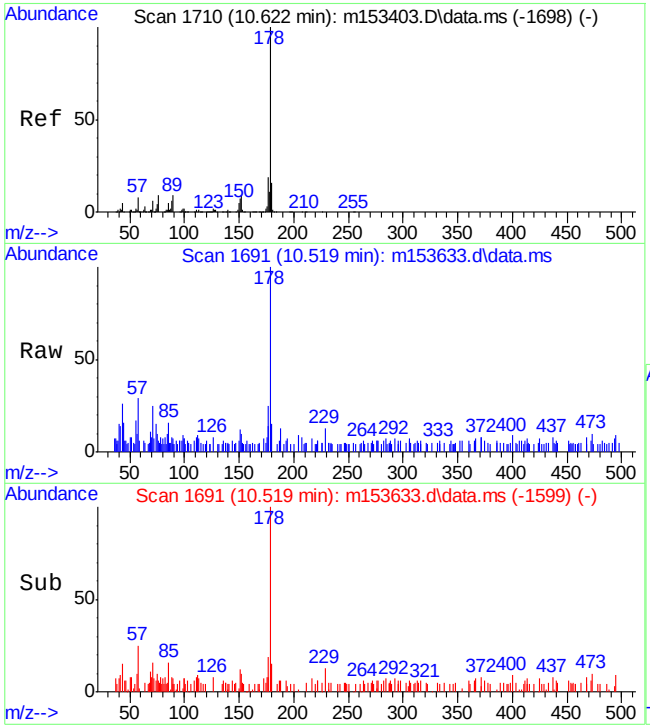


#75
Hexachlorobenzene
Concen: 0.28 ppm
RT: 9.793 min Scan# 1555
Delta R.T. -0.005 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:284 Resp: 1640

Ion	Ratio	Lower	Upper
284	100		
142	27.3	0.0	52.4
249	21.7	0.0	56.5

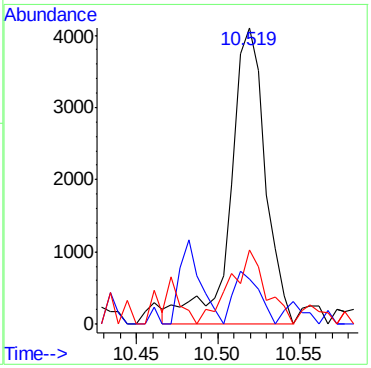


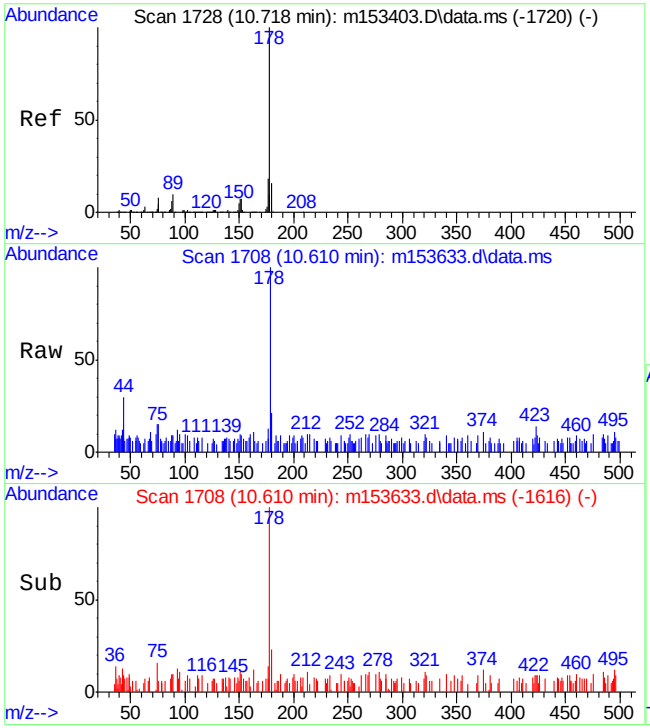


#77
Phenanthrene
Concen: 0.32 ppm
RT: 10.519 min Scan# 1691
Delta R.T. -0.011 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:178 Resp: 6084

Ion	Ratio	Lower	Upper
178	100		
179	11.7	0.0	44.8
176	23.6	0.0	48.6

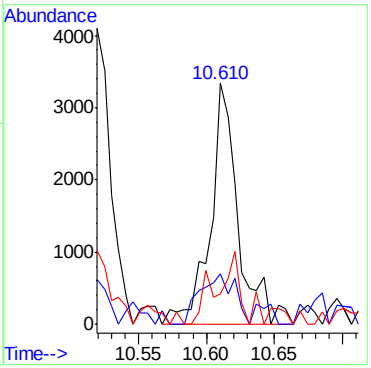


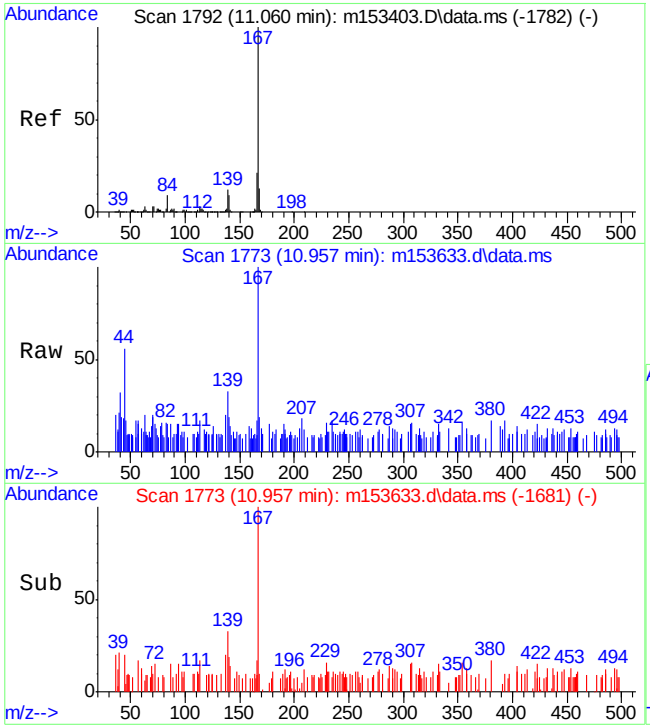


#78
Anthracene
Concen: 0.24 ppm
RT: 10.610 min Scan# 1708
Delta R.T. -0.011 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:178 Resp: 4799

Ion	Ratio	Lower	Upper
178	100		
179	18.2	0.0	45.6
176	10.3	0.0	48.2

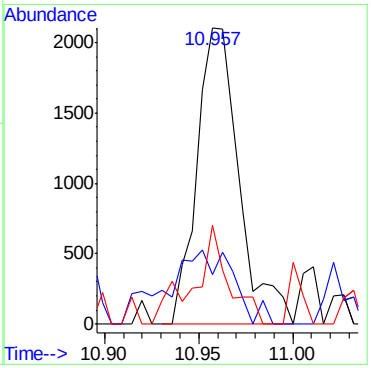




#79
Carbazole
Concen: 0.17 ppm
RT: 10.957 min Scan# 1773
Delta R.T. -0.011 min
Lab File: m153633.d
Acq: 21 Apr 2019 12:21 am

Tgt Ion:167 Resp: 3262

Ion	Ratio	Lower	Upper
167	100		
166	11.1	0.0	50.9
139	18.8	0.0	41.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86732.D
Acq On : 19 Apr 2019 12:05 am
Operator : carolb
Sample : op19810-bs1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 19 12:31:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	528173	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	1683257	40.00	ppm	-0.17
47) Acenaphthene-d10	7.136	164	881729	40.00	ppm	-0.18
69) Phenanthrene-d10	8.403	188	1683487	40.00	ppm	-0.20
83) Chrysene-d12	11.618	240	1760194	40.00	ppm	-0.28
91) Perylene-d12	13.602	264	1454694	40.00	ppm	-0.29
101) 1,4-Dichlorobenzene-d4a	4.670	152	528173	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	1683257	40.00	ppm	#-0.17
105) Acenaphthene-d10a	7.136	164	881729	40.00	ppm	-0.18
108) Chrysene-d12a	11.618	240	1760194	40.00	ppm	0.00
110) Phenanthrene-d10a	8.403	188	1683487	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.643	112	1061439	39.94	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 79.88%#			
8) Phenol-d5	4.429	99	1126149	38.66	ppm	-0.15
Spiked Amount 50.000	Range 10 - 59		Recovery = 77.32%#			
25) Nitrobenzene-d5	5.124	82	877993	38.81	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 77.62%#			
51) 2-Fluorobiphenyl	6.590	172	1120630	36.72	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 73.44%#			
73) 2,4,6-Tribromophenol	7.793	330	210570	35.66	ppm	-0.18
Spiked Amount 50.000	Range 12 - 68		Recovery = 71.32%#			
85) Terphenyl-d14	10.200	244	1649653	37.66	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 75.32%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.001	88	444365	28.88	ppm	99
3) Pyridine	2.349	79	1203516	33.15	ppm	99
4) N-Nitrosodimethylamine	2.332	74	872339	38.37	ppm	99
6) Indene	4.878	116	1124301	39.59	ppm	98
7) Cumene	4.023	105	2350976	35.04	ppm	98
9) Phenol	4.440	94	1133838	37.30	ppm	95
10) Aniline	4.413	93	1370160	40.57	ppm	97
11) bis(2-Chloroethyl)ether	4.472	93	824303	37.94	ppm	99
12) 2-Chlorophenol	4.515	128	717718	36.77	ppm	93
13) Decane	4.563	57	610115	32.99	ppm	96
14) 1,3-Dichlorobenzene	4.627	146	703455	32.66	ppm	100
15) 1,4-Dichlorobenzene	4.686	146	694851	36.09	ppm	98
16) Benzyl alcohol	4.809	108	493200	46.21	ppm	92
17) 1,2-Dichlorobenzene	4.809	146	683857	36.95	ppm	99
18) Acetophenone	5.007	105	990252	37.19	ppm	98
19) 2-Methylphenol	4.916	108	621653	40.09	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.905	121	188833	42.11	ppm #	57
21) 3&4-Methylphenol	5.039	108	653638	41.59	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86732.D
Acq On : 19 Apr 2019 12:05 am
Operator : carolb
Sample : op19810-bs1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 19 12:31:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.018	70	584753	41.63	ppm		95
23) Hexachloroethane	5.076	201	205638	31.57	ppm		87
26) Nitrobenzene	5.141	77	863283	38.95	ppm		97
27) Quinoline	6.002	129	1281395	43.05	ppm		98
28) Isophorone	5.338	82	1647411	42.32	ppm		96
29) 2-Nitrophenol	5.403	139	356047	39.35	ppm		85
30) 2,4-Dimethylphenol	5.461	107	816827	50.95	ppm		99
31) Benzoic acid	5.617	105	693951	49.17	ppm		96
32) bis(2-Chloroethoxy)met...	5.520	93	916405	42.30	ppm		97
33) 2,4-Dichlorophenol	5.611	162	507815	40.14	ppm		98
34) 2,6-Dichlorophenol	5.788	162	450433	39.69	ppm		97
36) 1,2,4-Trichlorobenzene	5.659	180	497279	35.29	ppm		98
38) Naphthalene	5.718	128	1618677	40.20	ppm		99
39) 4-Chloroaniline	5.782	127	501265	30.34	ppm		96
40) 2,3-Dichloroaniline	6.520	161	556426	34.99	ppm		96
41) Caprolactam	6.103	113	225740	43.48	ppm		83
42) Hexachlorobutadiene	5.830	225	290112	35.90	ppm		99
43) 4-Chloro-3-methylphenol	6.210	107	755856	46.15	ppm		76
44) 2-Methylnaphthalene	6.285	141	1059026	41.35	ppm		97
45) 1-Methylnaphthalene	6.365	141	1038049	37.00	ppm		98
46) Dimethylnaphthalene	6.799	156	997037	38.52	ppm		97
48) Hexachlorocyclopentadiene	6.424	237	630036	74.06	ppm		100
49) 2,4,6-Trichlorophenol	6.537	196	351827	42.63	ppm		95
50) 2,4,5-Trichlorophenol	6.574	196	356669	41.52	ppm		98
52) 2-Chloronaphthalene	6.686	162	942015	37.26	ppm		98
53) Biphenyl	6.670	154	1380143	39.06	ppm		99
54) 2-Nitroaniline	6.783	65	510387	47.02	ppm		88
55) Dimethylphthalate	6.932	163	1285519	41.08	ppm		99
56) Acenaphthylene	7.018	152	1737334	40.28	ppm		100
57) 2,6-Dinitrotoluene	6.980	165	284825	41.51	ppm		81
58) 3-Nitroaniline	7.120	138	287316	37.10	ppm		93
59) Acenaphthene	7.168	153	1065541	42.09	ppm		97
60) 2,4-Dinitrophenol	7.210	184	298934	81.03	ppm	#	39
61) 4-Nitrophenol	7.301	109	249547	43.76	ppm	#	3
62) Dibenzofuran	7.307	168	1622640	46.48	ppm		93
63) 2,4-Dinitrotoluene	7.312	165	385108	43.64	ppm		83
64) 2,3,4,6-Tetrachlorophenol	7.424	232	303741	38.04	ppm		99
65) Diethylphthalate	7.510	149	1441389	44.33	ppm		99
66) Fluorene	7.585	166	1375380	45.94	ppm		99
67) 4-Chlorophenyl-phenyle...	7.590	204	638214	44.37	ppm		96
68) 4-Nitroaniline	7.633	138	314259	47.08	ppm		97
70) 4,6-Dinitro-2-methylph...	7.654	198	213573	42.49	ppm		85
71) n-Nitrosodiphenylamine	7.697	169	915386	40.27	ppm		99
72) 1,2-Diphenylhydrazine	7.719	77	1683722	37.99	ppm		94
74) 4-Bromophenyl-phenylether	7.997	248	406781	40.42	ppm		93
75) Hexachlorobenzene	8.056	284	440745	39.55	ppm		88
76) Pentachlorophenol	8.248	266	312880	41.28	ppm		99
77) Phenanthrene	8.425	178	1733794	41.34	ppm		100
78) Anthracene	8.473	178	1758131	41.23	ppm		100
79) Carbazole	8.644	167	1941422	44.03	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86732.D
Acq On : 19 Apr 2019 12:05 am
Operator : carolb
Sample : op19810-bs1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 19 12:31:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

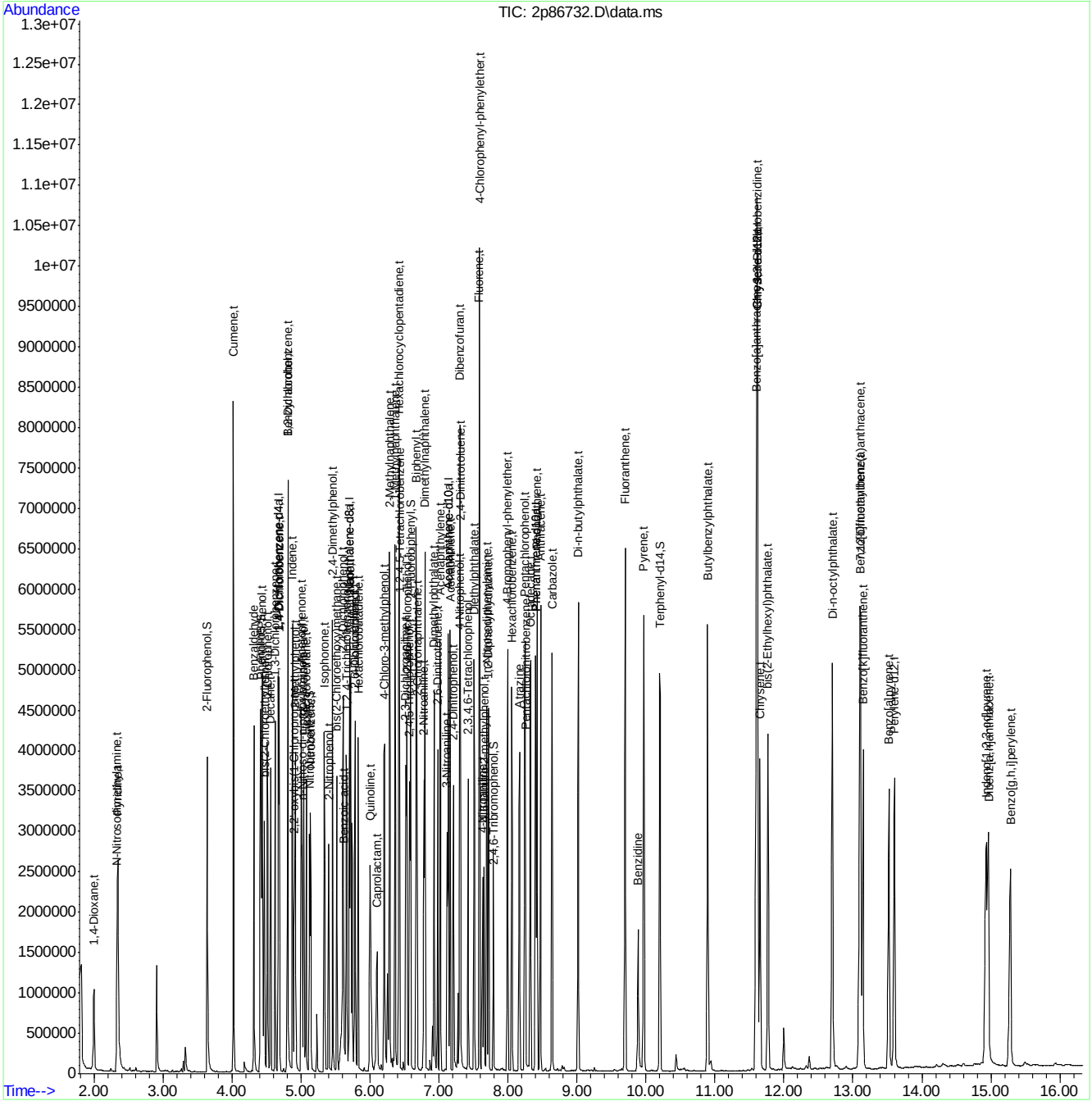
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) Di-n-butylphthalate	9.018	149	2876439	43.00	ppm	100
81) Fluoranthene	9.703	202	2650900	44.48	ppm	99
82) Octadecane	8.323	43	527765	38.06	ppm	95
84) Pyrene	9.970	202	2342067	34.20	ppm	98
86) Butylbenzylphthalate	10.896	149	1426664	37.14	ppm	90
87) Benzo[a]anthracene	11.602	228	2374506	35.91	ppm	100
88) 3,3'-Dichlorobenzidine	11.612	252	1442426	52.66	ppm	98
89) Chrysene	11.661	228	1552341	33.10	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.767	149	1486052	37.59	ppm	98
92) Di-n-octylphthalate	12.704	149	3233283	46.51	ppm	99
93) Benzo[b]fluoranthene	13.110	252	2014276	42.26	ppm	98
94) Benzo[k]fluoranthene	13.147	252	1608054	41.26	ppm	98
95) Benzo[a]pyrene	13.527	252	1673142	41.77	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.934	276	2064382	45.21	ppm	96
98) Dibenz[a,h]anthracene	14.966	278	1554870	43.72	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.105	256	911169	42.01	ppm	99
100) Benzo[g,h,i]perylene	15.287	276	1570516	43.46	ppm	98
102) Benzaldehyde	4.317	105	621008	32.52	ppm	92
106) Atrazine	8.168	215	188252	49.69	ppm	89
107) 1,2,4,5-Tetrachloroben...	6.430	216	499371	37.84	ppm	98
109) Benzidine	9.890	184	700477	30.52	ppm	92
113) Pentachloronitrobenzene	8.253	295	76712	40.48	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86732.D
Acq On : 19 Apr 2019 12:05 am
Operator : carolb
Sample : op19810-bs1
Misc : op19810,e2p3831,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 19 12:31:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/23/19 15:17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 02:35:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.543	152	196961	40.00	ppm	0.00
24) Naphthalene-d8	5.637	136	602070	40.00	ppm	0.00
47) Acenaphthene-d10	7.907	164	326332	40.00	ppm	0.00
69) Phenanthrene-d10	10.482	188	664195	40.00	ppm	0.00
83) Chrysene-d12	15.599	240	670172	40.00	ppm	0.00
91) Perylene-d12	18.189	264	657054	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.543	152	196961	40.00	ppm	0.00
103) Acenaphthene-d10a	7.907	164	326332	40.00	ppm	0.00
106) Chrysene-d12a	15.599	240	670172	40.00	ppm	0.00
108) Chrysene-d12b	15.599	240	670119	40.00	ppm	0.00
110) Phenanthrene-d10a	10.482	188	664195	40.00	ppm	0.00
113) Naphthalene-d8a	5.637	136	602070	40.00	ppm	0.00
115) Chrysene-d12c	15.599	240	670172	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.565	112	246777	32.05	ppm	0.00
Spiked Amount 50.000			Recovery =	64.10%		
8) Phenol-d5	4.286	99	302358	31.79	ppm	0.00
Spiked Amount 50.000			Recovery =	63.58%		
25) Nitrobenzene-d5	4.975	82	226960	35.34	ppm	0.00
Spiked Amount 50.000			Recovery =	70.68%		
51) 2-Fluorobiphenyl	6.930	172	479626	39.53	ppm	0.00
Spiked Amount 50.000			Recovery =	79.06%		
73) 2,4,6-Tribromophenol	9.237	330	113482	50.79	ppm	0.00
Spiked Amount 50.000			Recovery =	101.58%		
85) Terphenyl-d14	13.638	244	680007	37.63	ppm	0.00
Spiked Amount 50.000			Recovery =	75.26%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.080	88	62287	15.98	ppm	99
3) Pyridine	2.411	79	183419m	19.55	ppm	
4) N-Nitrosodimethylamine	2.369	42	102116	30.59	ppm	93
6) Indene	4.740	116	410101	39.38	ppm	97
7) Cumene	3.950	105	519118	28.21	ppm	99
9) Phenol	4.291	94	321861	32.21	ppm	99
10) Aniline	4.297	93	236891	23.66	ppm	78
11) bis(2-Chloroethyl)ether	4.345	93	222593	32.20	ppm	98
12) 2-Chlorophenol	4.388	128	249477	36.34	ppm	96
13) Decane	4.430	43	159981	30.51	ppm	96
14) 1,3-Dichlorobenzene	4.500	146	268929	33.72	ppm	98
15) 1,4-Dichlorobenzene	4.553	146	270374	37.33	ppm	98
16) Benzyl alcohol	4.649	108	164481	40.66	ppm	97
17) 1,2-Dichlorobenzene	4.671	146	250730	34.99	ppm	98
18) Acetophenone	4.852	105	309267	34.13	ppm	98
19) 2-Methylphenol	4.745	108	204447	35.37	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.751	121	67794	37.94	ppm	92
21) 3&4-Methylphenol	4.863	108	212677	36.59	ppm	99
22) n-Nitroso-di-n-propyla...	4.858	70	159803	35.35	ppm	98
23) Hexachloroethane	4.943	201	104619	34.20	ppm	99
26) Nitrobenzene	4.991	77	226730	36.35	ppm	99
27) Quinoline	6.011	129	434517	38.10	ppm	99
28) Isophorone	5.199	82	440040	37.82	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 02:35:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) 2-Nitrophenol	5.269	139	127457	44.18	ppm		97
30) 2,4-Dimethylphenol	5.317	107	214979	45.00	ppm		98
31) Benzoic acid	5.424	105	144754m	38.12	ppm		
32) bis(2-Chloroethoxy)met...	5.397	93	259265	36.73	ppm		99
33) 2,4-Dichlorophenol	5.499	162	202953	40.52	ppm		95
34) 2,6-Dichlorophenol	5.728	162	187692	41.34	ppm		97
36) 1,2,4-Trichlorobenzene	5.579	180	232714	38.01	ppm		97
38) Naphthalene	5.659	128	619914	42.05	ppm		99
39) 4-Chloroaniline	5.712	127	140300	21.48	ppm		95
40) 2,3-Dichloroaniline	6.802	161	220729	34.57	ppm		96
41) Caprolactam	6.102	55	84950	36.66	ppm		96
42) Hexachlorobutadiene	5.798	225	148324	40.65	ppm		97
43) 4-Chloro-3-methylphenol	6.273	107	186585	36.00	ppm		99
44) 2-Methylnaphthalene	6.439	141	392993	42.04	ppm		97
45) 1-Methylnaphthalene	6.561	142	437367	36.80	ppm		97
46) Dimethylnaphthalene	7.282	156	392801	37.97	ppm		99
48) Hexachlorocyclopentadiene	6.652	237	342649	107.98	ppm		99
49) 2,4,6-Trichlorophenol	6.812	196	153871	43.55	ppm		98
50) 2,4,5-Trichlorophenol	6.866	196	162654	42.90	ppm		99
52) 2-Chloronaphthalene	7.080	162	405337	40.38	ppm		99
53) Biphenyl	7.064	154	541664	41.32	ppm		99
54) 2-Nitroaniline	7.234	65	116873	43.17	ppm		91
55) Dimethylphthalate	7.534	163	471566	38.45	ppm		99
56) Acenaphthylene	7.683	152	650715	41.28	ppm		100
57) 2,6-Dinitrotoluene	7.608	165	109447	47.65	ppm		95
58) 3-Nitroaniline	7.859	138	89278	31.52	ppm		95
59) Acenaphthene	7.961	153	408529	42.80	ppm		96
60) 2,4-Dinitrophenol	8.030	184	109826	83.02	ppm		97
61) 4-Nitrophenol	8.190	109	53934	34.30	ppm	#	85
62) Dibenzofuran	8.244	168	612608	42.93	ppm		88
63) 2,4-Dinitrotoluene	8.249	165	138791	43.00	ppm		97
64) 2,3,4,6-Tetrachlorophenol	8.468	232	145691	42.91	ppm		98
65) Diethylphthalate	8.709	149	463600	39.12	ppm		98
66) Fluorene	8.815	166	493174	41.64	ppm		98
67) 4-Chlorophenyl-phenyle...	8.853	204	244070	39.68	ppm		99
68) 4-Nitroaniline	8.879	138	113021	44.78	ppm		89
70) 4,6-Dinitro-2-methylph...	8.938	198	87423	42.11	ppm		96
71) n-Nitrosodiphenylamine	9.066	169	347803	39.39	ppm		96
72) 1,2-Diphenylhydrazine	9.125	77	461410	38.11	ppm		99
74) 4-Bromophenyl-phenylether	9.713	248	183170	40.39	ppm		97
75) Hexachlorobenzene	9.793	284	210971	41.89	ppm		96
76) Pentachlorophenol	10.177	266	142165	50.68	ppm		97
77) Phenanthrene	10.525	178	689794	41.89	ppm		99
78) Anthracene	10.621	178	692256	39.91	ppm		99
79) Carbazole	10.962	167	694066	41.62	ppm		98
80) Di-n-butylphthalate	11.790	149	814661	40.55	ppm		99
81) Fluoranthene	12.789	202	854499	39.25	ppm		98
82) Octadecane	10.514	57	223538	41.93	ppm		95
84) Pyrene	13.211	202	854273	34.81	ppm		99
86) Butylbenzylphthalate	14.701	149	348241	34.55	ppm		99
87) Benzo[a]anthracene	15.583	228	793384	34.58	ppm		99
88) 3,3'-Dichlorobenzidine	15.625	252	434461	56.06	ppm		99
89) Chrysene	15.647	228	680963	33.39	ppm		100
90) bis(2-Ethylhexyl)phtha...	15.924	149	445956	33.32	ppm		98
92) Di-n-octylphthalate	17.142	149	750168	34.37	ppm		98
93) Benzo[b]fluoranthene	17.559	252	813703	39.31	ppm		98
94) Benzo[k]fluoranthene	17.612	252	705178	35.79	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 02:35:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

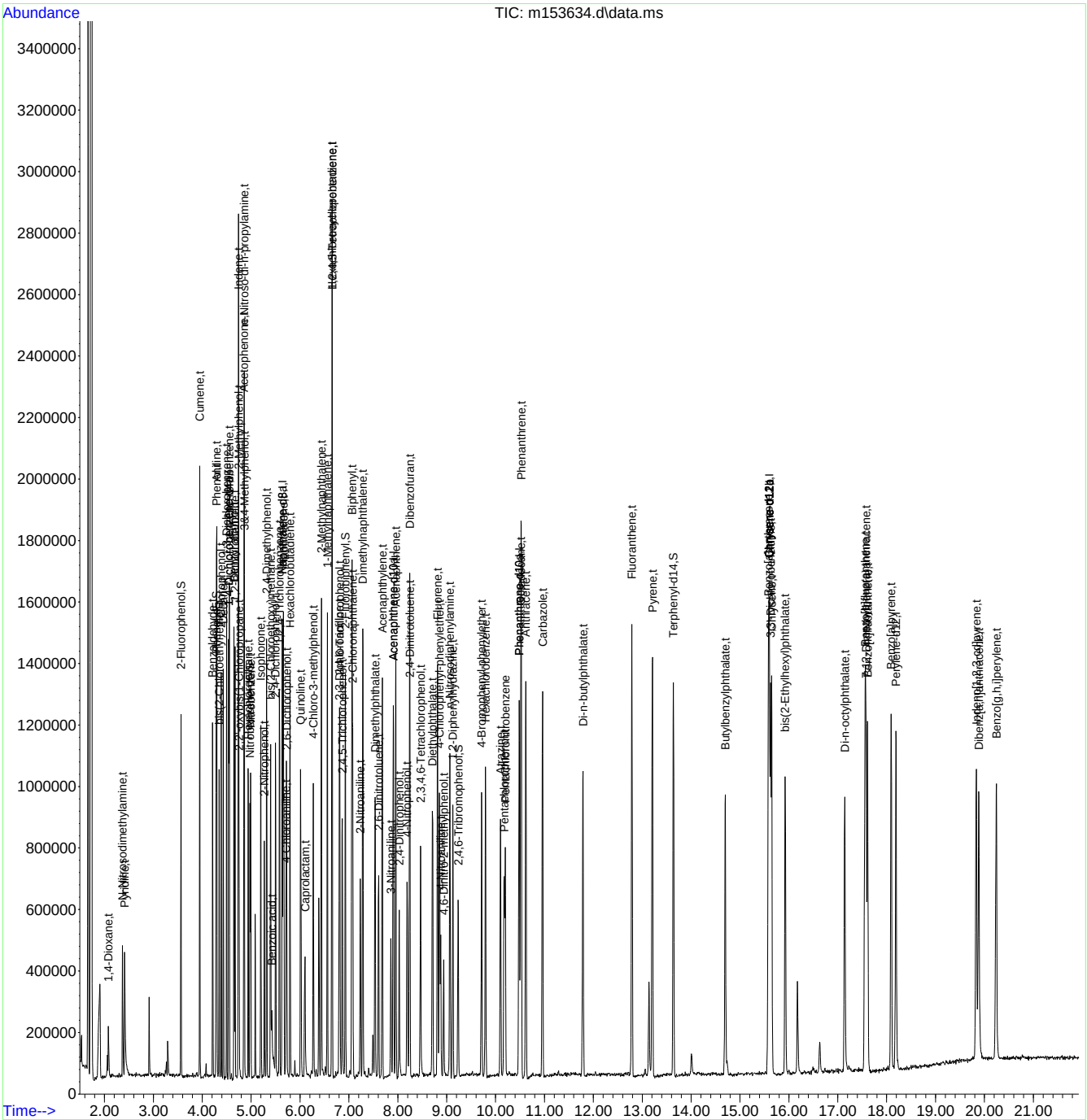
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	18.093	252	720605	39.66	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.834	276	666918	36.90	ppm	98
98) Dibenz[a,h]anthracene	19.887	278	641865	38.33	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.580	256	349309	44.01	ppm	97
100) Benzo[g,h,i]perylene	20.245	276	700565	40.65	ppm	98
102) Benzaldehyde	4.211	105	159307	28.82	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.658	216	246438	44.21	ppm	97
105) Atrazine	10.103	215	79281	51.87	ppm	95
112) Pentachloronitrobenzene	10.199	295	35503	45.33	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 02:35:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



Manual Integration Approval Summary

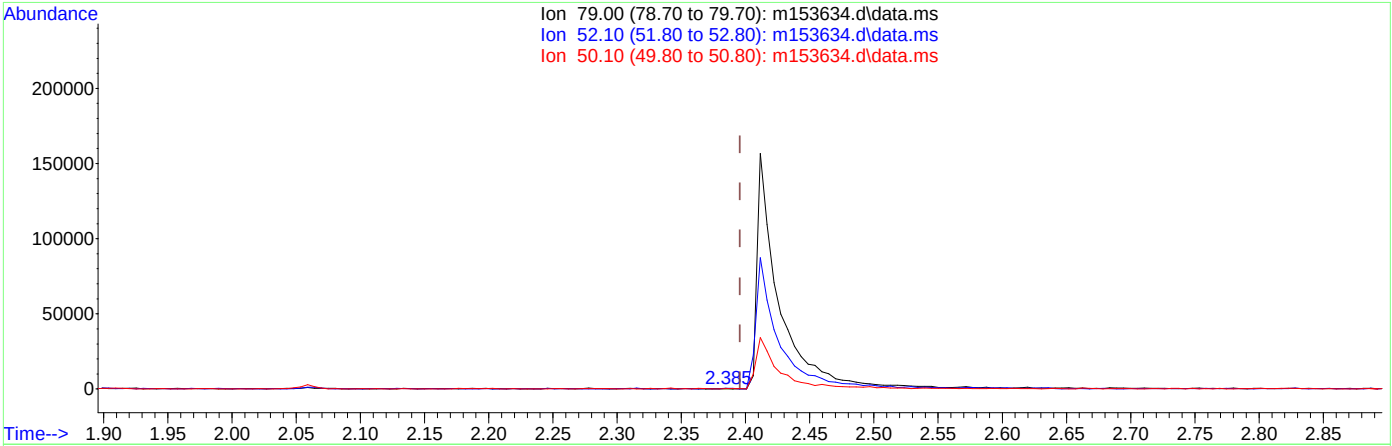
Sample Number:	OP19854-BS1	**Method:**	SW846 8270D
Lab FileID:	M153634.D	**Analyst approved:**	04/22/19 04:28 Michelle Co
Injection Time:	04/21/19 00:49	**Supervisor approved:**	04/23/19 15:17 Kristi Schollenberger

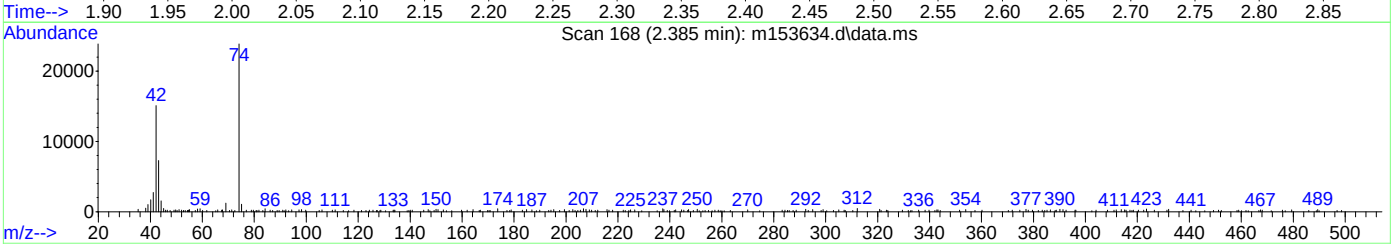
Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyridine	110-86-1		2.41	Poor instrument integration
Benzoic acid	65-85-0		5.42	Poor instrument integration

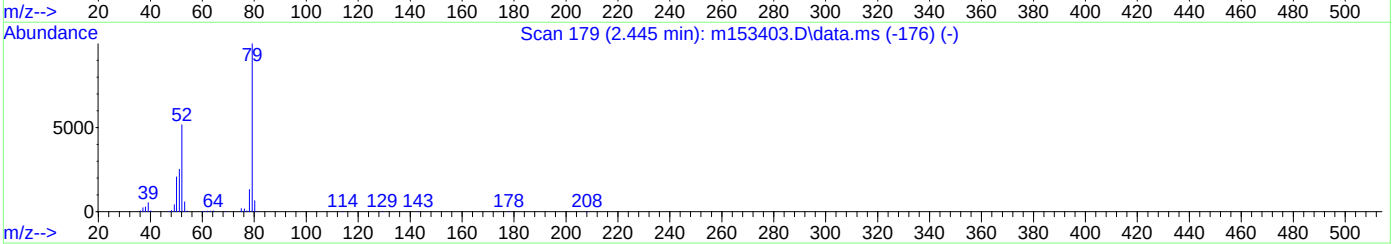
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:47:12 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration







TIC: m153634.d\data.ms

(3) Pyridine (t)

2.385min (-0.011) 0.03ppm

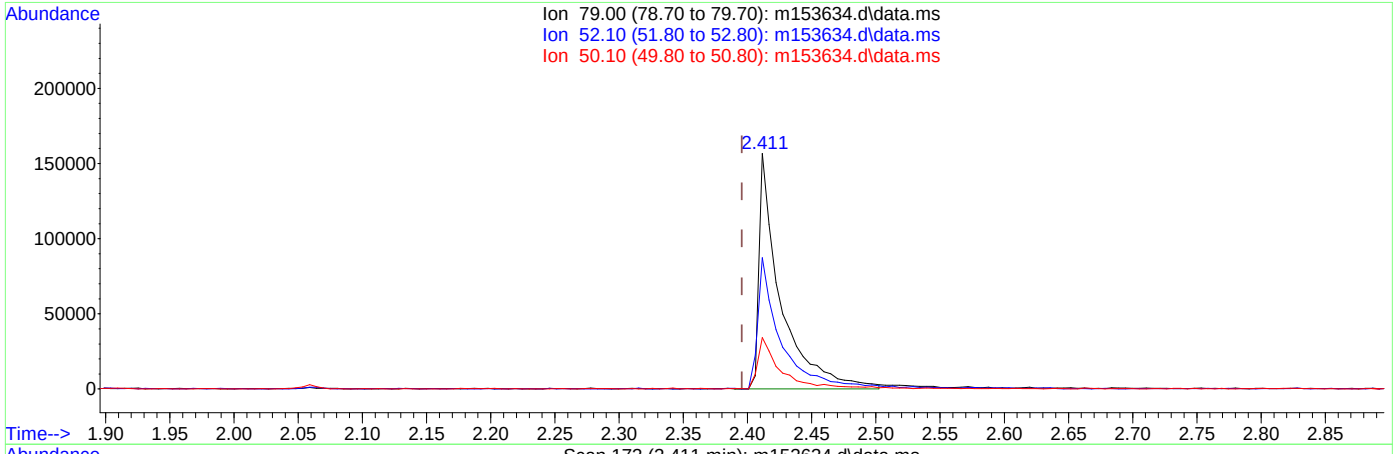
response 299

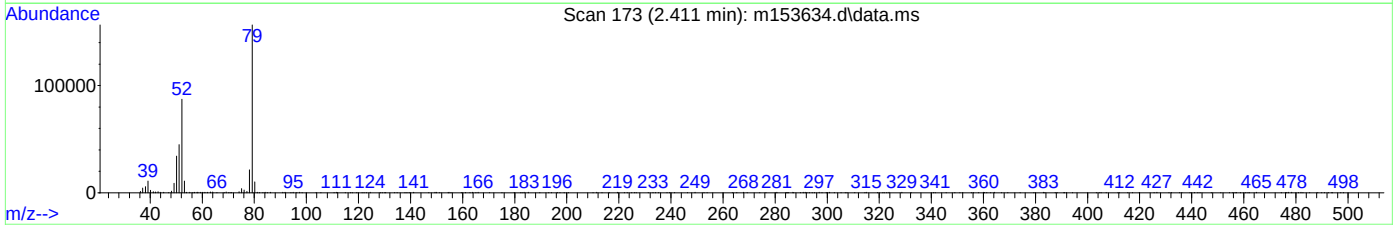
Ion	Exp%	Act%
79.00	100	100
52.10	53.60	24.08
50.10	21.20	0.00
0.00	0.00	0.00

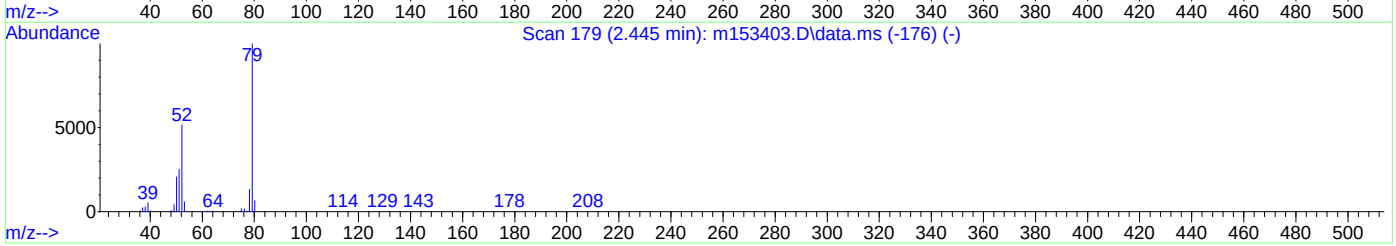
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:47:12 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration







TIC: m153634.d\data.ms

(3) Pyridine (t)

2.411min (+0.016) 19.55ppm m

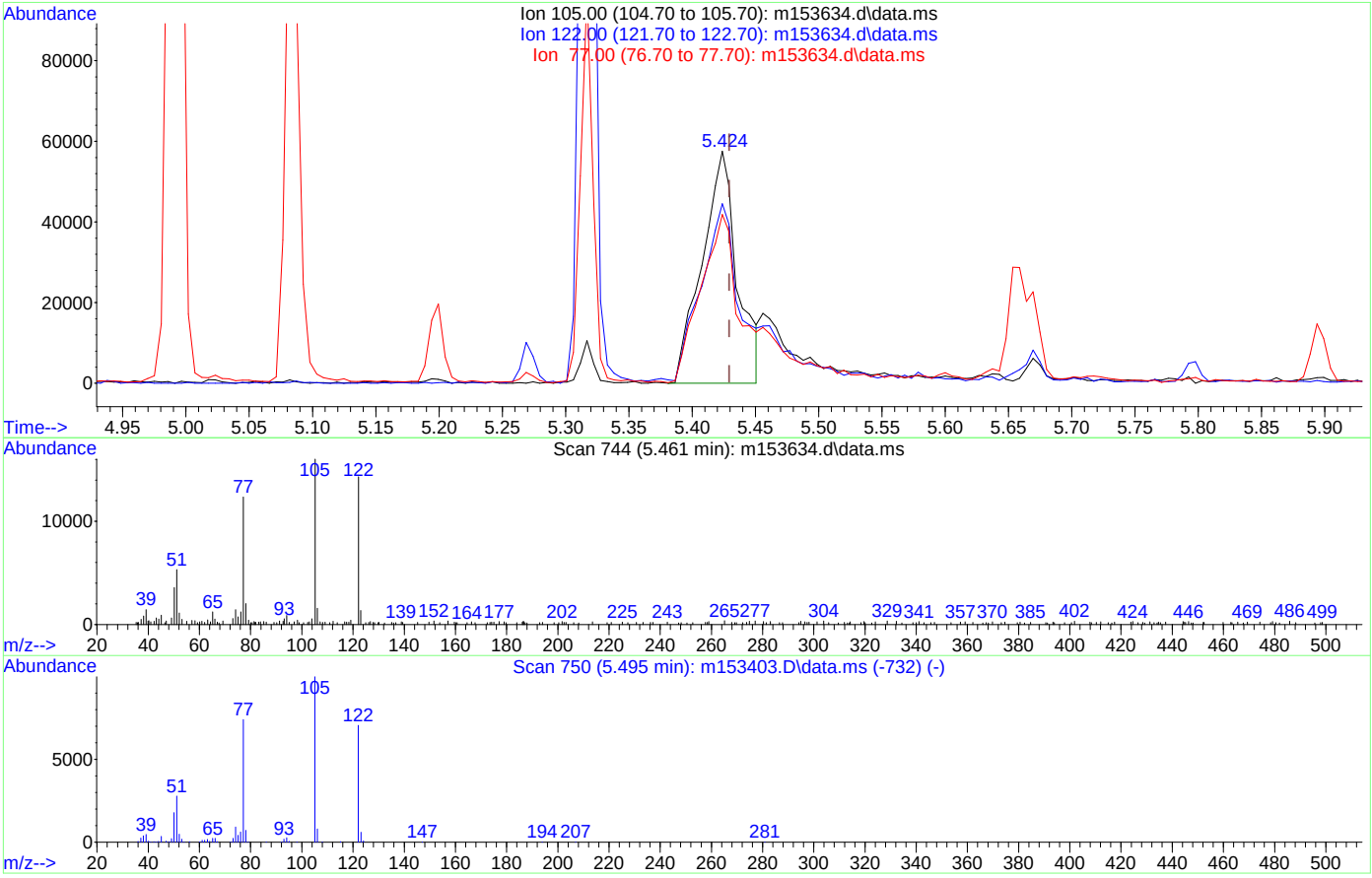
response 183419

Ion	Exp%	Act%
79.00	100	100
52.10	53.60	55.72
50.10	21.20	21.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:47:12 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



TIC: m153634.d\data.ms

(31) Benzoic acid (t)

5.424min (-0.006) 29.27ppm

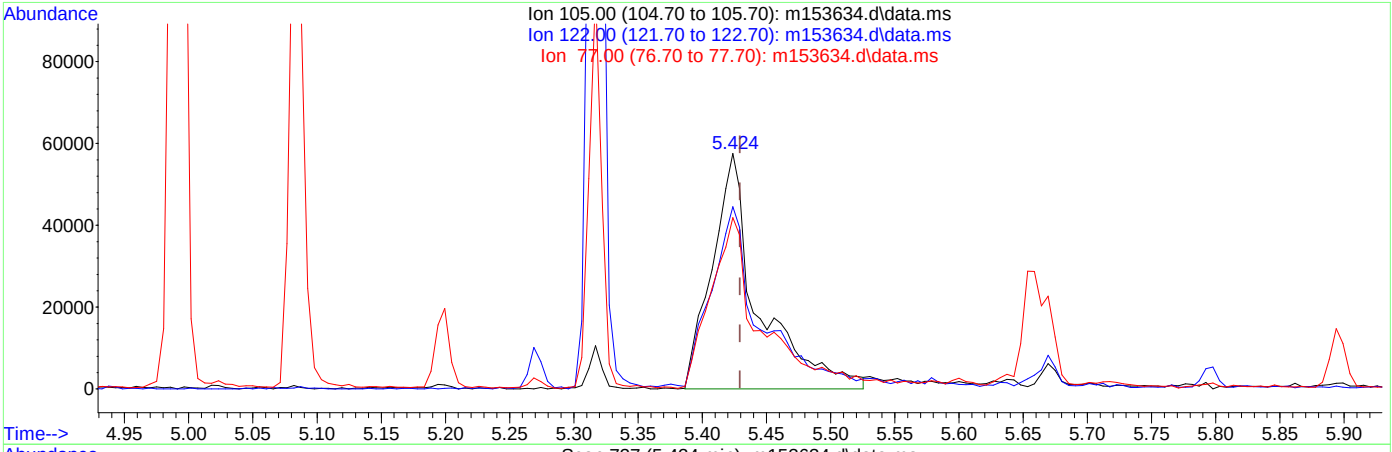
response 111134

Ion	Exp%	Act%
105.00	100	100
122.00	82.60	74.04
77.00	72.70	70.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153634.d
Acq On : 21 Apr 2019 12:49 am
Operator : carolb
Sample : op19854-bs1 Inst : MSM
Misc : op19854,em6566,30,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:47:12 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



TIC: m153634.d\data.ms

(31) Benzoic acid (t)

5.424min (-0.006) 38.12ppm m

response 144754

Ion	Exp%	Act%
105.00	100	100
122.00	82.60	77.39
77.00	72.70	72.77
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/24/19 10:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:28:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	621245	40.00	ppm	-0.16
24) Naphthalene-d8	5.707	136	1866246	40.00	ppm	-0.17
47) Acenaphthene-d10	7.141	164	893058	40.00	ppm	-0.17
69) Phenanthrene-d10	8.409	188	1528955	40.00	ppm	-0.20
83) Chrysene-d12	11.677	240	1464651	40.00	ppm	-0.22
91) Perylene-d12	13.677	264	1386652	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4a	4.675	152	621245	40.00	ppm	-0.16
103) Naphthalene-d8a	5.707	136	1866246	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.141	164	893058	40.00	ppm	-0.17
108) Chrysene-d12a	11.677	240	1465032	40.00	ppm	0.06
110) Phenanthrene-d10a	8.409	188	1528955	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	1012552	32.39	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 64.78%#			
8) Phenol-d5	4.435	99	1170945	34.18	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 68.36%#			
25) Nitrobenzene-d5	5.130	82	816247	32.54	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 65.08%#			
51) 2-Fluorobiphenyl	6.595	172	1250572	40.45	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 80.90%#			
73) 2,4,6-Tribromophenol	7.793	330	199441	37.19	ppm	-0.18
Spiked Amount 50.000	Range 12 - 68		Recovery = 74.38%#			
85) Terphenyl-d14	10.222	244	1238918	33.99	ppm	-0.24
Spiked Amount 50.000	Range 16 - 65		Recovery = 67.98%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.012	88	381713	22.28	ppm	97
3) Pyridine	2.365	79	999093	23.40	ppm	97
4) N-Nitrosodimethylamine	2.343	74	703767	26.32	ppm	96
6) Indene	4.878	116	1264558	37.86	ppm	99
7) Cumene	4.023	105	1980755	25.10	ppm	97
9) Phenol	4.445	94	1077575	30.14	ppm	93
10) Aniline	4.418	93	501626	12.63	ppm	82
11) bis(2-Chloroethyl)ether	4.472	93	702532	27.49	ppm	98
12) 2-Chlorophenol	4.520	128	631043	27.49	ppm	96
13) Decane	4.563	57	535483	24.62	ppm	97
14) 1,3-Dichlorobenzene	4.627	146	643709	25.41	ppm	99
15) 1,4-Dichlorobenzene	4.686	146	628008	27.73	ppm	98
16) Benzyl alcohol	4.809	108	490528	39.07	ppm	83
17) 1,2-Dichlorobenzene	4.809	146	629505	28.92	ppm	98
18) Acetophenone	5.007	105	905581	28.91	ppm	98
19) 2-Methylphenol	4.921	108	547180	30.00	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.905	121	175211	33.22	ppm #	63
21) 3&4-Methylphenol	5.044	108	643124	34.79	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:28:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22)	n-Nitroso-di-n-propyla...	5.023	70	498671	30.18	ppm		98
23)	Hexachloroethane	5.076	201	172320	22.49	ppm		87
26)	Nitrobenzene	5.146	77	699683	28.48	ppm		92
27)	Quinoline	6.002	129	1152172	34.91	ppm		99
28)	Isophorone	5.344	82	1453940	33.69	ppm		99
29)	2-Nitrophenol	5.403	139	307930	30.70	ppm		86
30)	2,4-Dimethylphenol	5.467	107	695819	39.14	ppm		96
31)	Benzoic acid	5.601	105	367410m	23.48	ppm		
32)	bis(2-Chloroethoxy)met...	5.526	93	850936	35.42	ppm		100
33)	2,4-Dichlorophenol	5.617	162	460500	32.83	ppm		99
34)	2,6-Dichlorophenol	5.788	162	413286	32.84	ppm		98
36)	1,2,4-Trichlorobenzene	5.665	180	492120	31.50	ppm		98
38)	Naphthalene	5.724	128	2888553	64.70	ppm		99
39)	4-Chloroaniline	5.782	127	281749	15.38	ppm		95
40)	2,3-Dichloroaniline	6.526	161	520645	29.53	ppm		100
41)	Caprolactam	6.098	113	197945	34.39	ppm		94
42)	Hexachlorobutadiene	5.831	225	280760	31.34	ppm		100
43)	4-Chloro-3-methylphenol	6.210	107	616888	33.97	ppm	#	50
44)	2-Methylnaphthalene	6.291	141	1294684	45.60	ppm		97
45)	1-Methylnaphthalene	6.371	141	1155405	37.14	ppm		99
46)	Dimethylnaphthalene	6.804	156	1058872	36.90	ppm		98
48)	Hexachlorocyclopentadiene	6.424	237	132304	18.46	ppm		99
49)	2,4,6-Trichlorophenol	6.542	196	312016	37.32	ppm		97
50)	2,4,5-Trichlorophenol	6.579	196	312854	35.96	ppm		98
52)	2-Chloronaphthalene	6.686	162	895928	34.99	ppm		98
53)	Biphenyl	6.676	154	1427216	39.88	ppm		100
54)	2-Nitroaniline	6.788	65	470020	42.75	ppm		94
55)	Dimethylphthalate	6.938	163	1131621	35.70	ppm		99
56)	Acenaphthylene	7.029	152	3780045	86.53	ppm		99
57)	2,6-Dinitrotoluene	6.986	165	241232	34.71	ppm		93
58)	3-Nitroaniline	7.125	138	204793	26.11	ppm		96
59)	Acenaphthene	7.168	153	1032290	40.26	ppm		95
60)	2,4-Dinitrophenol	7.216	184	17674	9.84	ppm	#	48
61)	4-Nitrophenol	7.307	109	186245	32.24	ppm	#	1
62)	Dibenzofuran	7.312	168	1937816	54.80	ppm		96
63)	2,4-Dinitrotoluene	7.317	165	303510	33.96	ppm		83
64)	2,3,4,6-Tetrachlorophenol	7.424	232	234247	28.97	ppm		90
65)	Diethylphthalate	7.515	149	1241110	37.69	ppm		99
66)	Fluorene	7.590	166	1511911	49.86	ppm		100
67)	4-Chlorophenyl-phenyle...	7.590	204	590108	40.50	ppm		92
68)	4-Nitroaniline	7.628	138	216086	31.96	ppm		93
70)	4,6-Dinitro-2-methylph...	7.660	198	18526	4.06	ppm		73
71)	n-Nitrosodiphenylamine	7.697	169	819286	39.68	ppm		100
72)	1,2-Diphenylhydrazine	7.724	77	1458319	36.23	ppm		90
74)	4-Bromophenyl-phenylether	8.002	248	317373	34.72	ppm		98
75)	Hexachlorobenzene	8.066	284	340344	33.63	ppm		99
76)	Pentachlorophenol	8.259	266	151646	23.98	ppm		95
77)	Phenanthrene	8.435	178	5159565	135.47	ppm		99
78)	Anthracene	8.483	178	3277356	84.62	ppm		99
79)	Carbazole	8.649	167	1941129	48.47	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:28:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

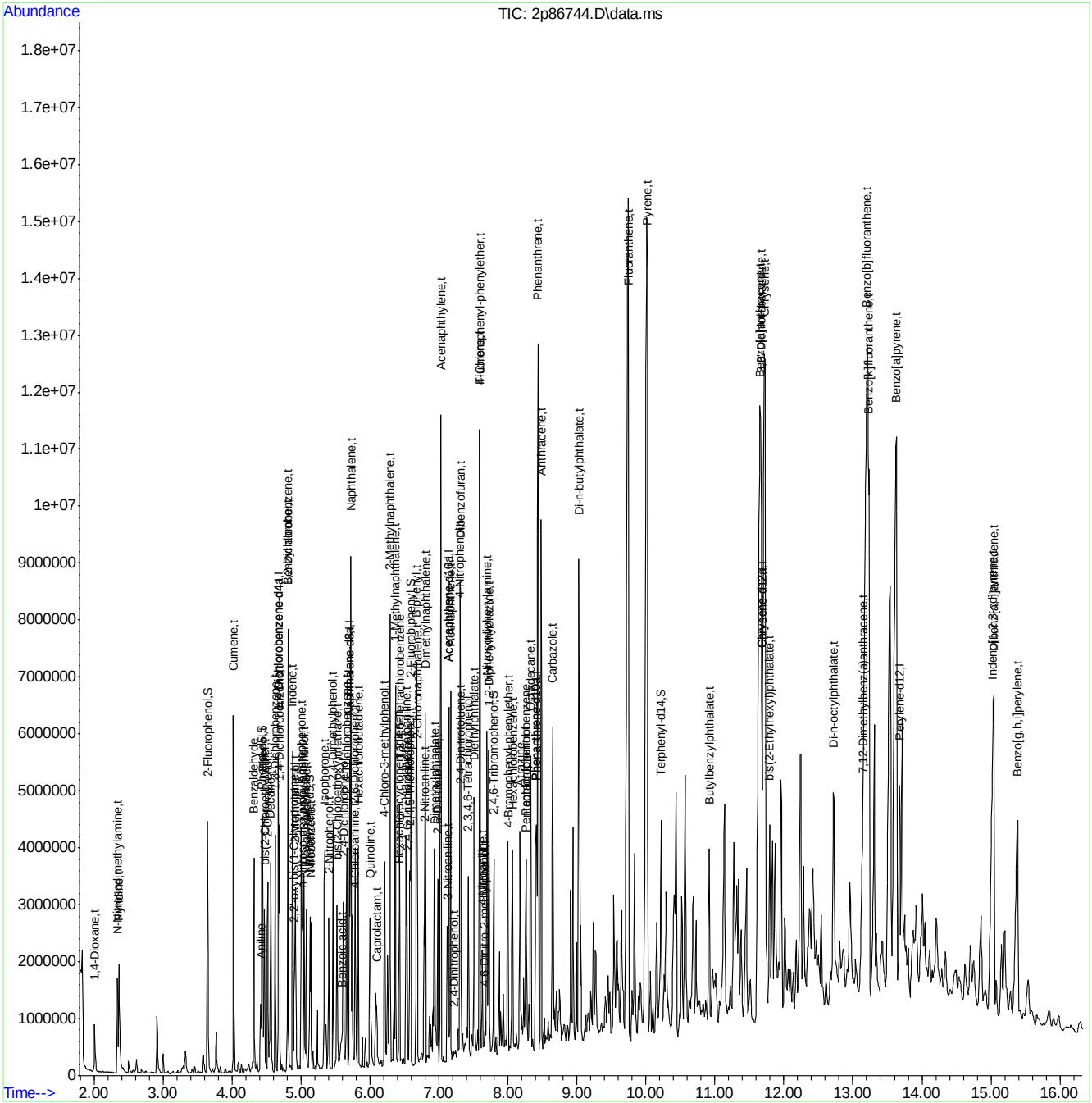
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80)	Di-n-butylphthalate	9.029	149	1917504	31.56	ppm	98
81)	Fluoranthene	9.746	202	12398221	229.05	ppm	99
82)	Octadecane	8.328	43	505763	40.16	ppm	98
84)	Pyrene	10.024	202	11440860	200.75	ppm	96
86)	Butylbenzylphthalate	10.917	149	828231	25.92	ppm	94
87)	Benzo[a]anthracene	11.650	228	10283464	186.93	ppm	89
88)	3,3'-Dichlorobenzidine	11.666	252	440405	20.45	ppm	97
89)	Chrysene	11.725	228	8600867	220.39	ppm	95
90)	bis(2-Ethylhexyl)phtha...	11.794	149	995747	30.27	ppm	99
92)	Di-n-octylphthalate	12.720	149	1908966	28.81	ppm	100
93)	Benzo[b]fluoranthene	13.206	252	14771958	325.11	ppm	99
94)	Benzo[k]fluoranthene	13.233	252	3282546	88.35	ppm	97
95)	Benzo[a]pyrene	13.623	252	8531928	223.44	ppm	97
96)	Indeno[1,2,3-cd]pyrene	15.030	276	4072726	93.58	ppm	97
98)	Dibenz[a,h]anthracene	15.041	278	2025837	59.76	ppm	95
99)	7,12-Dimethylbenz(a)an...	13.142	256	543176	26.28	ppm	100
100)	Benzo[g,h,i]perylene	15.383	276	2949151	85.61	ppm	98
102)	Benzaldehyde	4.317	105	585816	26.08	ppm	93
106)	Atrazine	8.173	215	134447	35.13	ppm	94
107)	1,2,4,5-Tetrachloroben...	6.430	216	481475m	36.02	ppm	
113)	Pentachloronitrobenzene	8.264	295	57229m	33.67	ppm	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:28:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Manual Integration Approval Summary

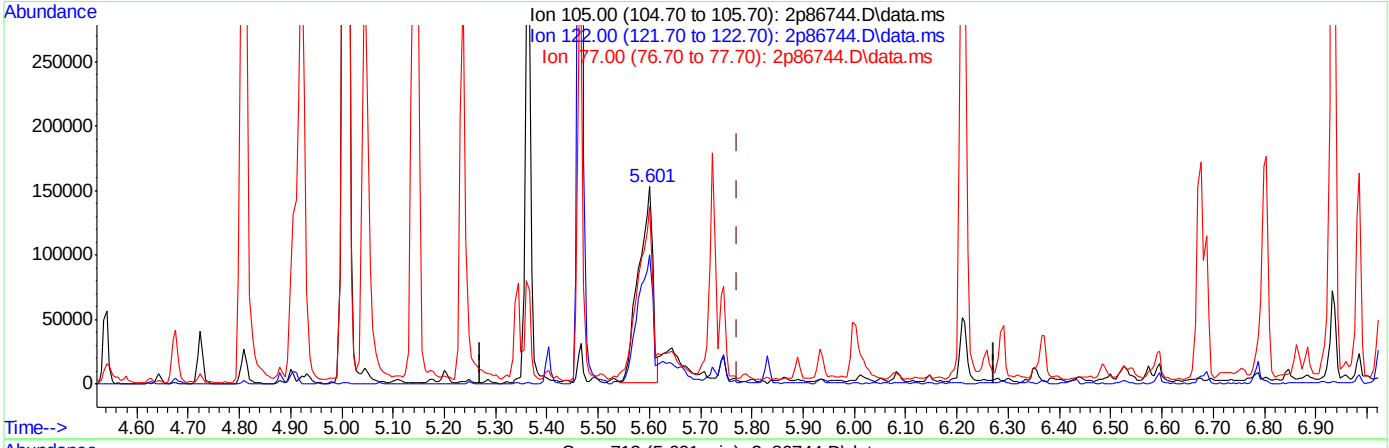
Sample Number: OP19810-MS
Lab FileID: 2P86744.D
Injection Time: 04/19/19 04:27
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/24/19 10:53 Kristi Schollenberger

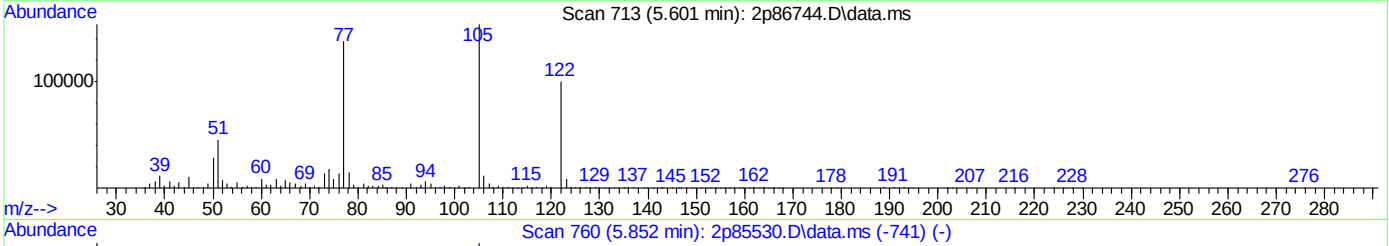
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.60	Poor instrument integration
1,2,4,5-Tetrachlorobenzene	95-94-3		6.43	Missed peak
Pentachloronitrobenzene	82-68-8		8.26	Missed peak

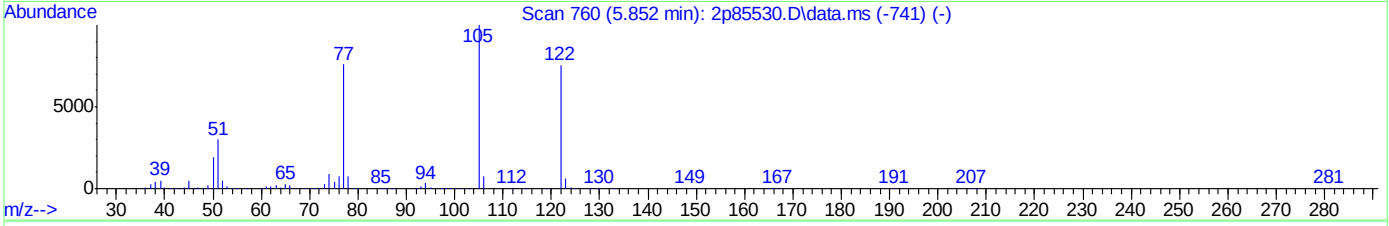
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:22:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(31) Benzoic acid (t)

5.601min (-0.171) 18.50ppm

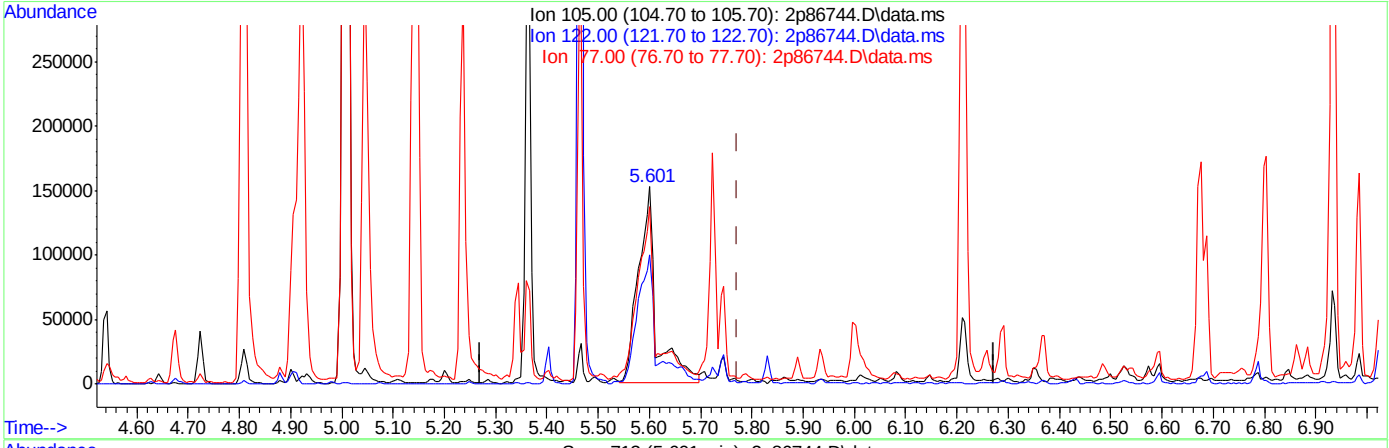
response 289558

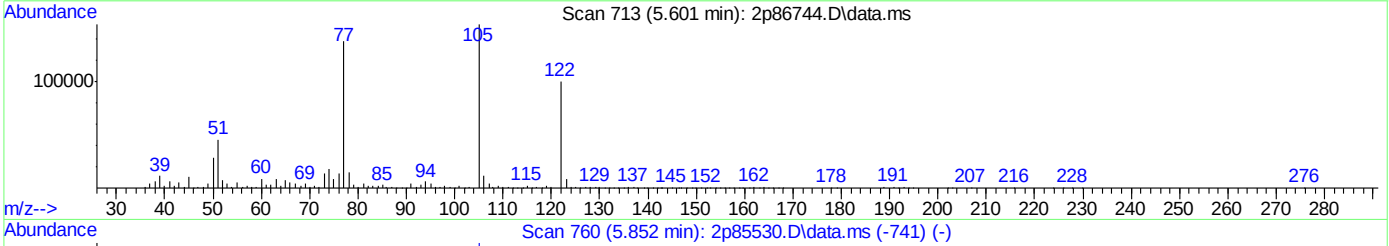
Ion	Exp%	Act%
105.00	100	100
122.00	68.60	64.92
77.00	83.90	86.36
0.00	0.00	0.00

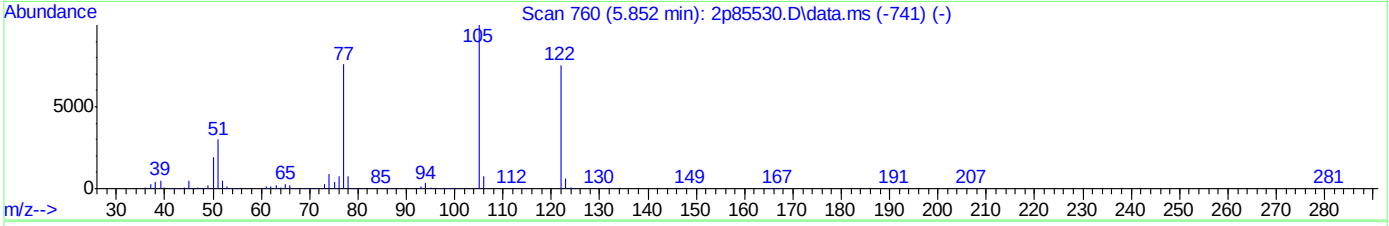
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:22:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(31) Benzoic acid (t)

5.601min (-0.171) 23.48ppm m

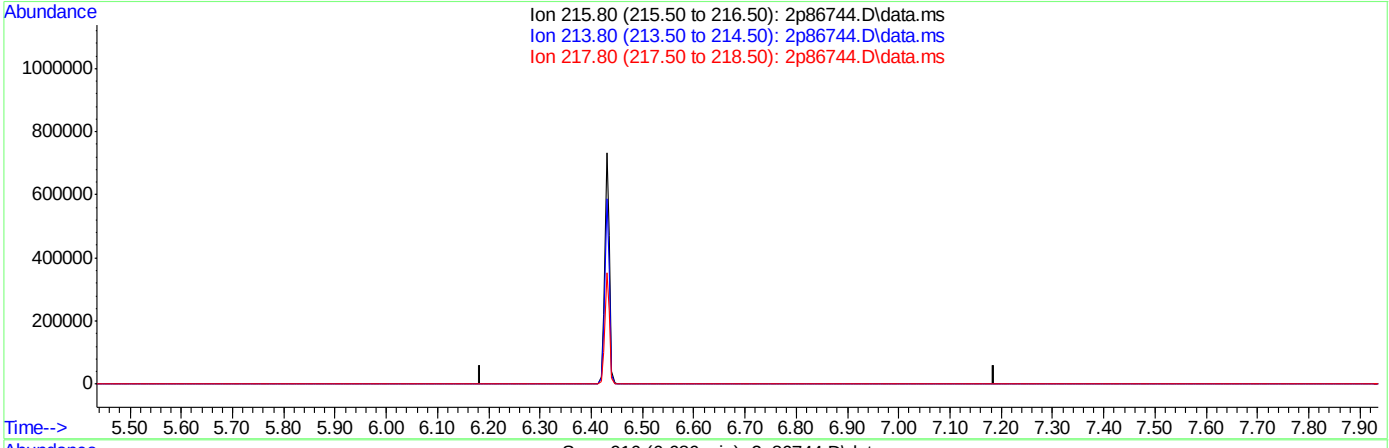
response 367410

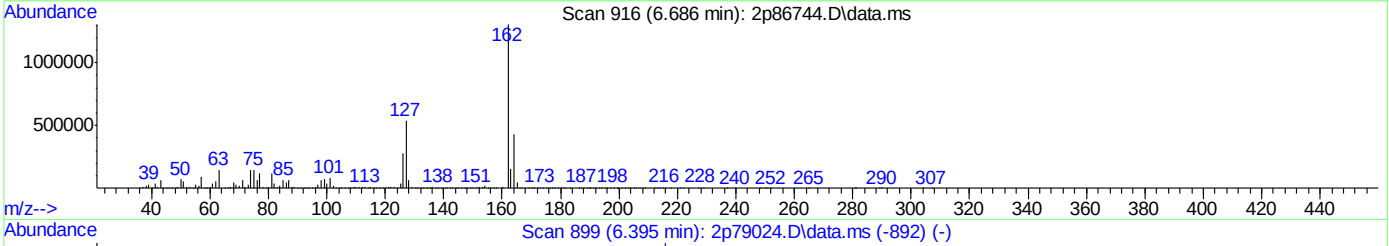
Ion	Exp%	Act%
105.00	100	100
122.00	68.60	65.40
77.00	83.90	90.05
0.00	0.00	0.00

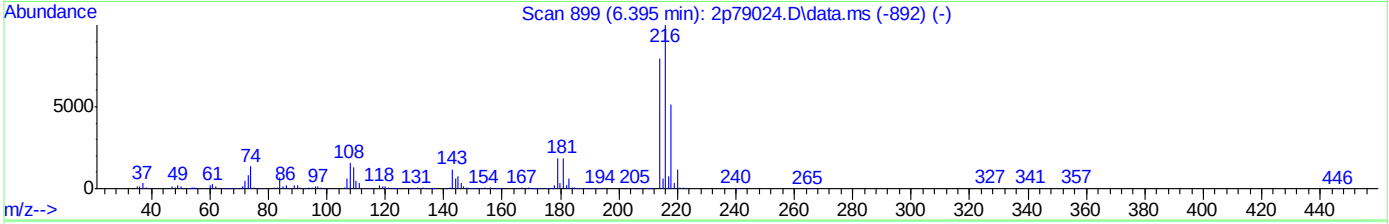
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:22:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(107) 1,2,4,5-Tetrachlorobenzene

6.685min (-6.685) 0.00ppm

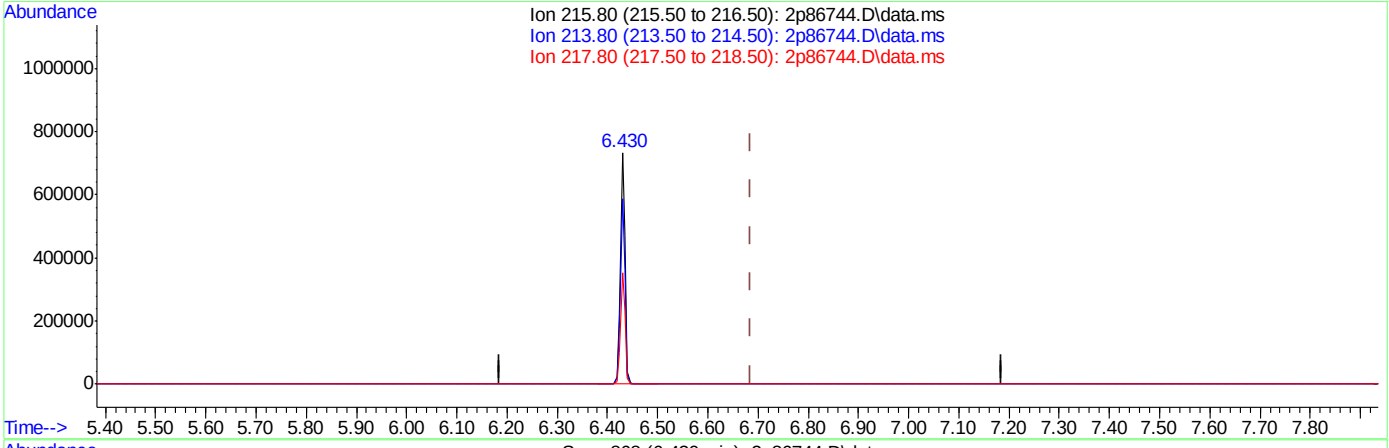
response 0

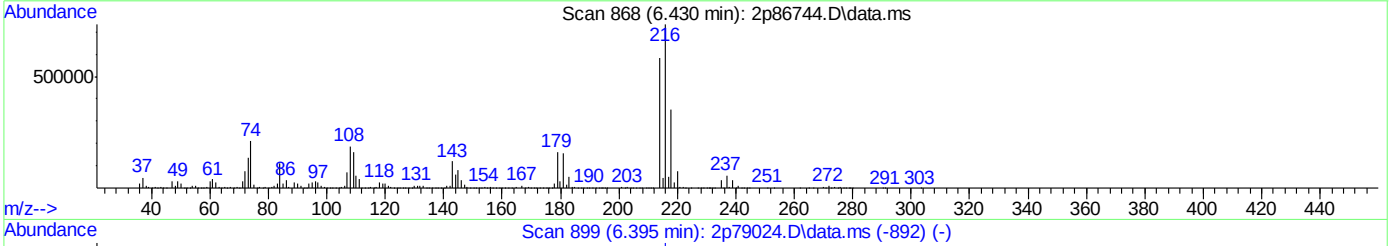
Ion	Exp%	Act%
215.80	100	0.00
213.80	76.00	0.00#
217.80	47.20	0.00#
0.00	0.00	0.00

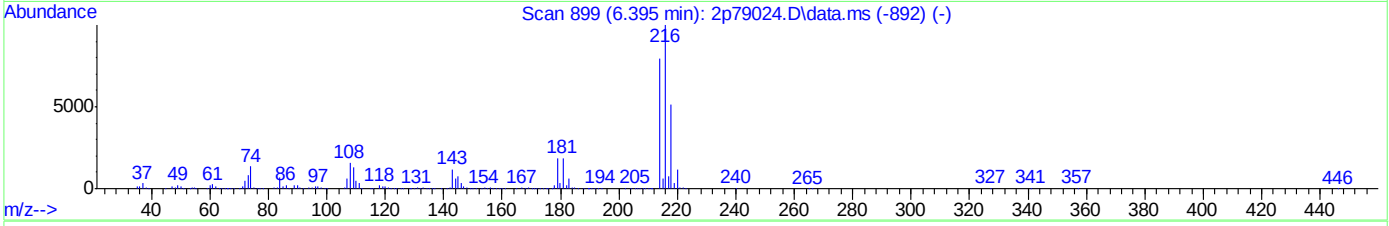
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:22:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(107) 1,2,4,5-Tetrachlorobenzene

6.430min (-0.256) 36.02ppm m

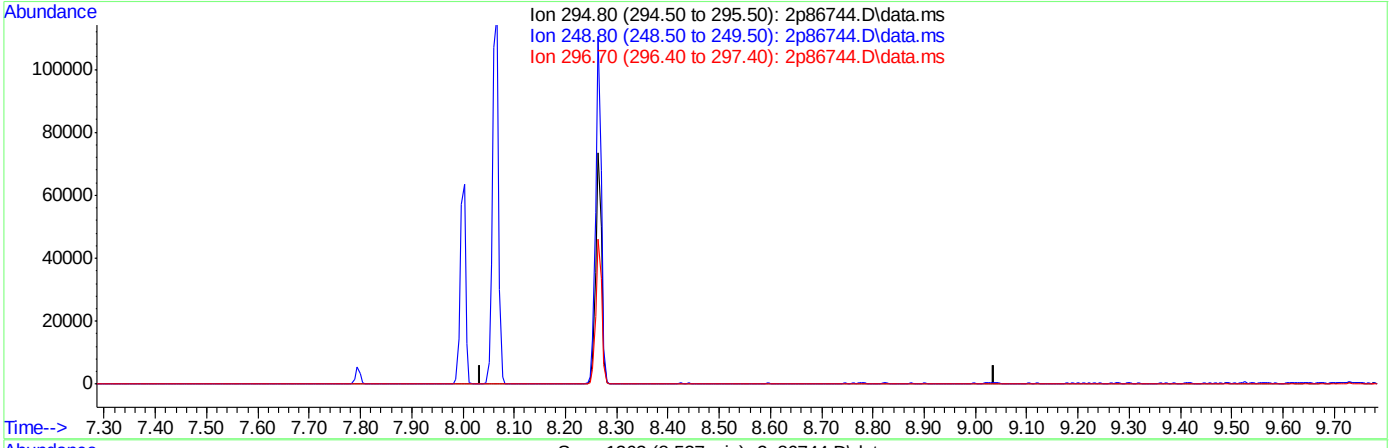
response 481475

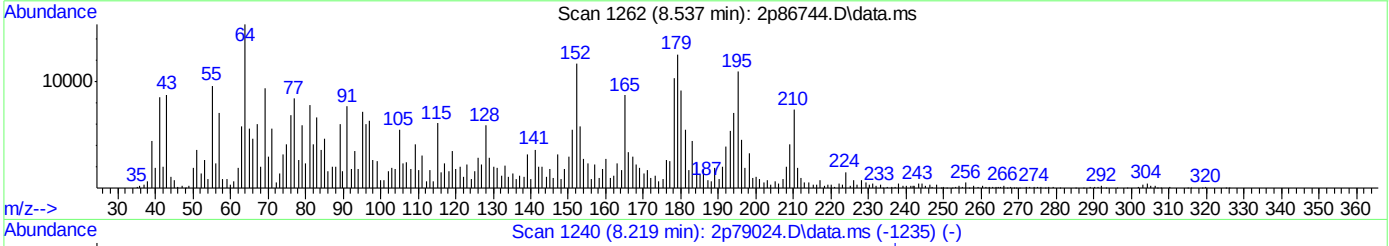
Ion	Exp%	Act%
215.80	100	100
213.80	76.00	79.79
217.80	47.20	47.93
0.00	0.00	0.00

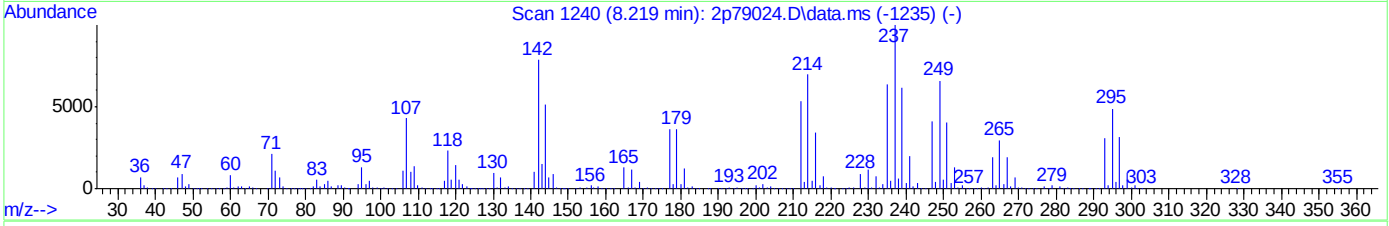
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:26:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(113) Pentachloronitrobenzene

8.536min (-8.536) 0.00ppm

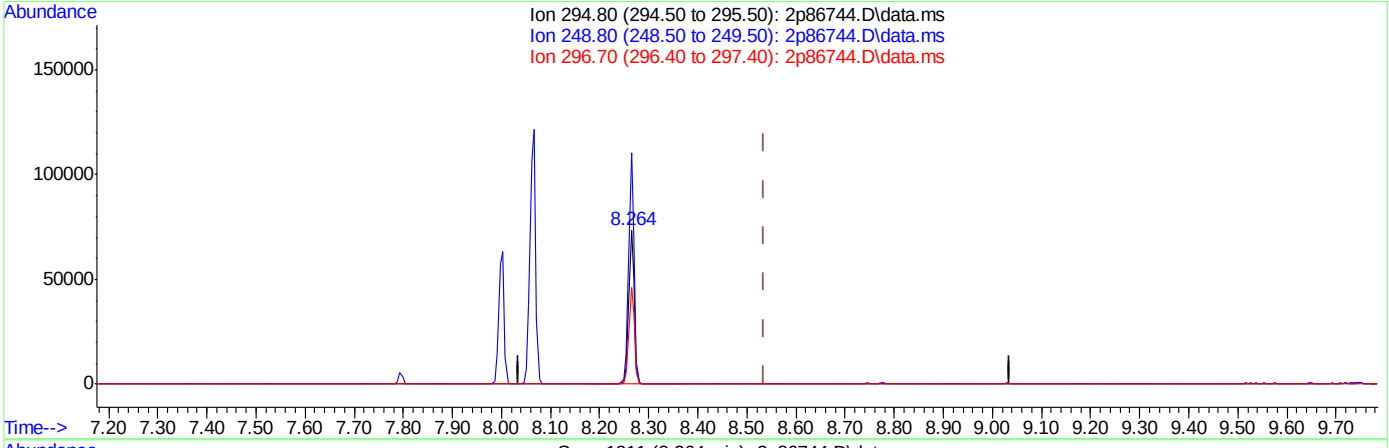
response 0

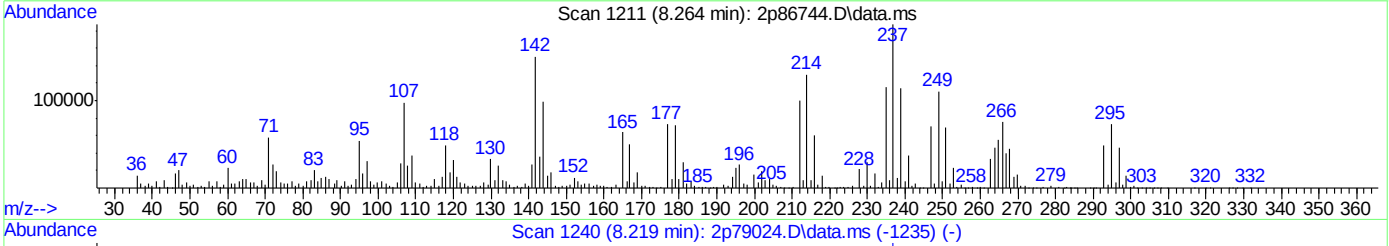
Ion	Exp%	Act%
294.80	100	0.00
248.80	147.90	0.00#
296.70	62.80	0.00#
0.00	0.00	0.00

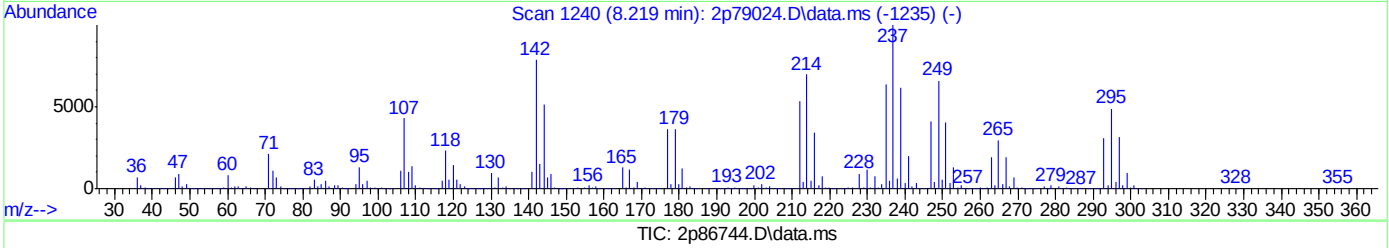
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86744.D
Acq On : 19 Apr 2019 4:27 am
Operator : carolb
Sample : op19810-ms
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 19 11:26:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86744.D\data.ms

(113) Pentachloronitrobenzene

8.264min (-0.272) 33.67ppm m

response 57229

Ion	Exp%	Act%
294.80	100	100
248.80	147.90	0.00#
296.70	62.80	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/24/19 10:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:28:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.675	152	632811	40.00	ppm	-0.16
24) Naphthalene-d8	5.707	136	1911925	40.00	ppm	-0.17
47) Acenaphthene-d10	7.141	164	896988	40.00	ppm	-0.17
69) Phenanthrene-d10	8.408	188	1540683	40.00	ppm	-0.20
83) Chrysene-d12	11.666	240	1526948	40.00	ppm	-0.23
91) Perylene-d12	13.666	264	1473938	40.00	ppm	-0.23
101) 1,4-Dichlorobenzene-d4a	4.675	152	632811	40.00	ppm	-0.16
103) Naphthalene-d8a	5.707	136	1911925	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.141	164	896988	40.00	ppm	-0.17
108) Chrysene-d12a	11.666	240	1526948	40.00	ppm	0.05
110) Phenanthrene-d10a	8.408	188	1540683	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	3.648	112	877603	27.56	ppm	-0.14
Spiked Amount 50.000	Range 11 - 58		Recovery = 55.12%			
8) Phenol-d5	4.434	99	1057276	30.29	ppm	-0.14
Spiked Amount 50.000	Range 10 - 59		Recovery = 60.58%#			
25) Nitrobenzene-d5	5.130	82	734401	28.58	ppm	-0.16
Spiked Amount 50.000	Range 19 - 61		Recovery = 57.16%			
51) 2-Fluorobiphenyl	6.595	172	1134180	36.53	ppm	-0.17
Spiked Amount 50.000	Range 21 - 58		Recovery = 73.06%#			
73) 2,4,6-Tribromophenol	7.793	330	186901	34.59	ppm	-0.18
Spiked Amount 50.000	Range 12 - 68		Recovery = 69.18%#			
85) Terphenyl-d14	10.216	244	1204201	31.69	ppm	-0.24
Spiked Amount 50.000	Range 16 - 65		Recovery = 63.38%			
111) 1-Chlorooctadecane	9.671	57	106564	9.20	ppm	-0.03
Spiked Amount 50.000	Range 20 - 70		Recovery = 18.40%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.001	88	345319	20.12	ppm	98
3) Pyridine	2.354	79	867122	19.93	ppm	97
4) N-Nitrosodimethylamine	2.338	74	578979	21.25	ppm	97
6) Indene	4.878	116	1085470	31.90	ppm	100
7) Cumene	4.023	105	1756995	21.86	ppm	98
9) Phenol	4.445	94	988123	27.13	ppm	94
10) Aniline	4.413	93	566424	14.00	ppm	87
11) bis(2-Chloroethyl)ether	4.472	93	617051	23.71	ppm	99
12) 2-Chlorophenol	4.520	128	559393	23.92	ppm	97
13) Decane	4.563	57	479566	21.65	ppm	96
14) 1,3-Dichlorobenzene	4.627	146	551247	21.36	ppm	98
15) 1,4-Dichlorobenzene	4.686	146	527413	22.87	ppm	98
16) Benzyl alcohol	4.809	108	426092	33.32	ppm	87
17) 1,2-Dichlorobenzene	4.809	146	530576	23.93	ppm	99
18) Acetophenone	5.007	105	782635	24.53	ppm	99
19) 2-Methylphenol	4.921	108	505597	27.21	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.905	121	142442	26.51	ppm #	61
21) 3&4-Methylphenol	5.044	108	584221	31.03	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:28:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.023	70	418103	24.84	ppm		98
23) Hexachloroethane	5.076	201	150173	19.24	ppm		88
26) Nitrobenzene	5.146	77	605887	24.07	ppm		93
27) Quinoline	6.002	129	1050595	31.07	ppm		99
28) Isophorone	5.344	82	1251415	28.30	ppm		99
29) 2-Nitrophenol	5.402	139	276519	26.91	ppm		85
30) 2,4-Dimethylphenol	5.467	107	632610	34.74	ppm		96
31) Benzoic acid	5.600	105	367946m	22.95	ppm		
32) bis(2-Chloroethoxy)met...	5.520	93	727341	29.55	ppm		99
33) 2,4-Dichlorophenol	5.616	162	437397	30.44	ppm		97
34) 2,6-Dichlorophenol	5.788	162	375192	29.10	ppm		96
36) 1,2,4-Trichlorobenzene	5.665	180	411649	25.72	ppm		99
38) Naphthalene	5.723	128	2545467	55.66	ppm		99
39) 4-Chloroaniline	5.782	127	329493	17.56	ppm		92
40) 2,3-Dichloroaniline	6.526	161	497633	27.55	ppm		99
41) Caprolactam	6.098	113	179639	30.46	ppm		90
42) Hexachlorobutadiene	5.830	225	228013	24.84	ppm		99
43) 4-Chloro-3-methylphenol	6.210	107	592838	31.87	ppm		78
44) 2-Methylnaphthalene	6.290	141	1132569	38.94	ppm		97
45) 1-Methylnaphthalene	6.371	141	1037507	32.56	ppm		98
46) Dimethylnaphthalene	6.804	156	965386	32.84	ppm		99
48) Hexachlorocyclopentadiene	6.424	237	92453	13.94	ppm		98
49) 2,4,6-Trichlorophenol	6.542	196	292276	34.81	ppm		97
50) 2,4,5-Trichlorophenol	6.579	196	296745	33.96	ppm		95
52) 2-Chloronaphthalene	6.686	162	790325	30.73	ppm		99
53) Biphenyl	6.675	154	1268138	35.28	ppm		100
54) 2-Nitroaniline	6.788	65	432283	39.14	ppm		93
55) Dimethylphthalate	6.932	163	1026543	32.25	ppm		99
56) Acenaphthylene	7.028	152	3265391	74.42	ppm		99
57) 2,6-Dinitrotoluene	6.986	165	217199	31.12	ppm		94
58) 3-Nitroaniline	7.125	138	203034	25.77	ppm		98
59) Acenaphthene	7.168	153	915437	35.55	ppm		97
60) 2,4-Dinitrophenol	7.216	184	15880	9.34	ppm	#	47
61) 4-Nitrophenol	7.307	109	168181	28.99	ppm	#	1
62) Dibenzofuran	7.312	168	1718494	48.39	ppm		94
63) 2,4-Dinitrotoluene	7.317	165	272771	30.39	ppm		81
64) 2,3,4,6-Tetrachlorophenol	7.424	232	207908	25.60	ppm		89
65) Diethylphthalate	7.510	149	1121200	33.90	ppm		97
66) Fluorene	7.590	166	1290121	42.36	ppm		98
67) 4-Chlorophenyl-phenyle...	7.590	204	518592	35.44	ppm		90
68) 4-Nitroaniline	7.628	138	209529	30.86	ppm		93
70) 4,6-Dinitro-2-methylph...	7.660	198	13198	2.87	ppm		84
71) n-Nitrosodiphenylamine	7.697	169	744524	35.79	ppm		99
72) 1,2-Diphenylhydrazine	7.724	77	1346990	33.21	ppm		91
74) 4-Bromophenyl-phenylether	8.002	248	284787	30.92	ppm		96
75) Hexachlorobenzene	8.066	284	311051	30.50	ppm		98
76) Pentachlorophenol	8.259	266	122663	19.98	ppm		95
77) Phenanthrene	8.435	178	4293228	111.86	ppm		99
78) Anthracene	8.483	178	2633701	67.49	ppm		99
79) Carbazole	8.649	167	1777860	44.06	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:28:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

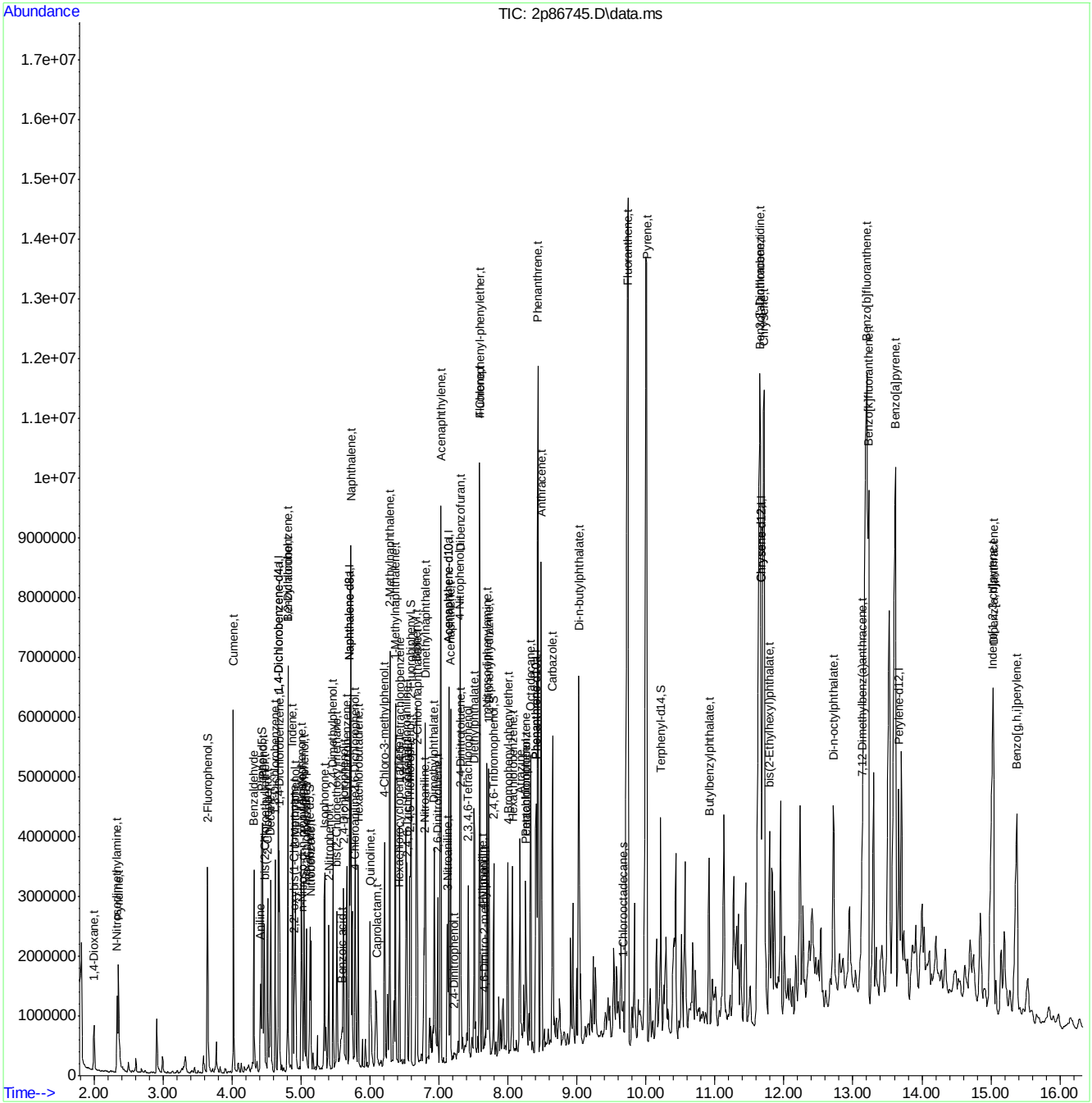
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80)	Di-n-butylphthalate	9.029	149	1810069	29.56	ppm	99
81)	Fluoranthene	9.740	202	10331926	189.42	ppm	99
82)	Octadecane	8.328	43	488829	38.52	ppm	98
84)	Pyrene	10.013	202	9126341	153.61	ppm	96
86)	Butylbenzylphthalate	10.917	149	789089	23.68	ppm	96
87)	Benzo[a]anthracene	11.650	228	8189430	142.79	ppm	96
88)	3,3'-Dichlorobenzidine	11.655	252	550398	24.12	ppm	98
89)	Chrysene	11.714	228	7103326	174.59	ppm	96
90)	bis(2-Ethylhexyl)phtha...	11.789	149	948892	27.67	ppm	100
92)	Di-n-octylphthalate	12.719	149	1828557	25.96	ppm	100
93)	Benzo[b]fluoranthene	13.195	252	12423841	257.24	ppm	99
94)	Benzo[k]fluoranthene	13.228	252	3015887	76.37	ppm	91
95)	Benzo[a]pyrene	13.613	252	7161395	176.44	ppm	97
96)	Indeno[1,2,3-cd]pyrene	15.025	276	3874906	83.76	ppm	97
98)	Dibenz[a,h]anthracene	15.035	278	1939268	53.82	ppm	95
99)	7,12-Dimethylbenz(a)an...	13.137	256	543126	24.72	ppm	97
100)	Benzo[g,h,i]perylene	15.378	276	2759121	75.35	ppm	98
102)	Benzaldehyde	4.317	105	524169	22.91	ppm	92
106)	Atrazine	8.173	215	126452	32.95	ppm	95
107)	1,2,4,5-Tetrachloroben...	6.429	216	414944m	30.90	ppm	
113)	Pentachloronitrobenzene	8.264	295	49820m	29.43	ppm	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:28:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Manual Integration Approval Summary

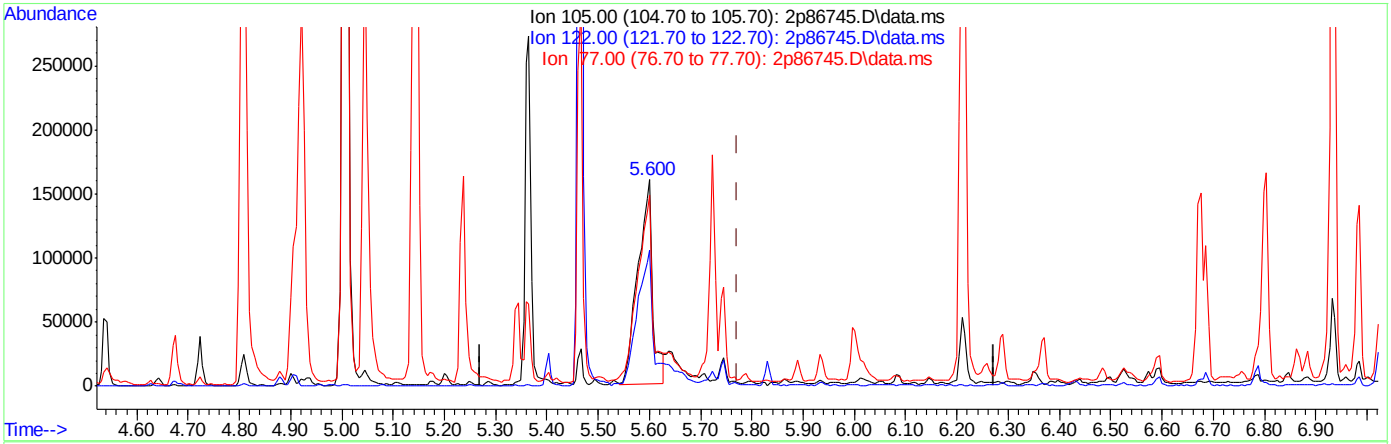
Sample Number: OP19810-MSD
Lab FileID: 2P86745.D
Injection Time: 04/19/19 04:49
Method: SW846 8270D
Analyst approved: 04/19/19 12:30 Dipa Patel
Supervisor approved: 04/24/19 10:53 Kristi Schollenberger

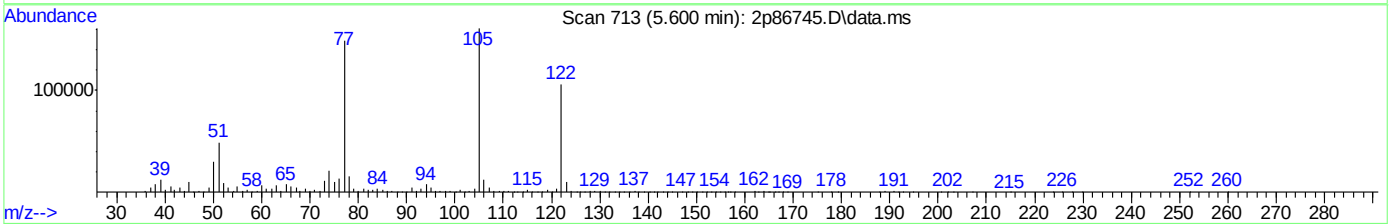
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.60	Poor instrument integration
1,2,4,5-Tetrachlorobenzene	95-94-3		6.43	Missed peak
Pentachloronitrobenzene	82-68-8		8.26	Missed peak

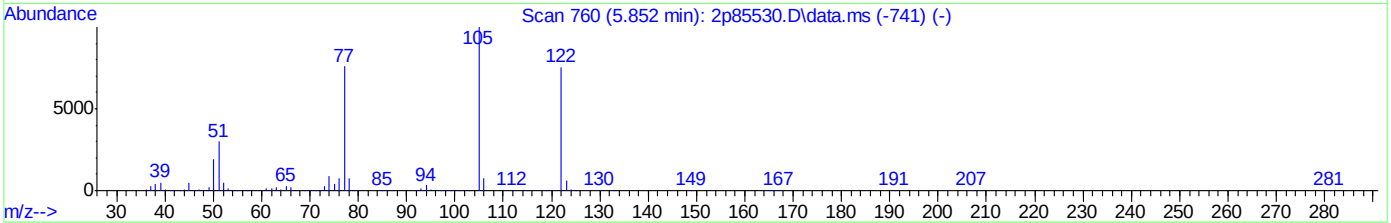
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(31) Benzoic acid (t)

5.600min (-0.172) 19.74ppm

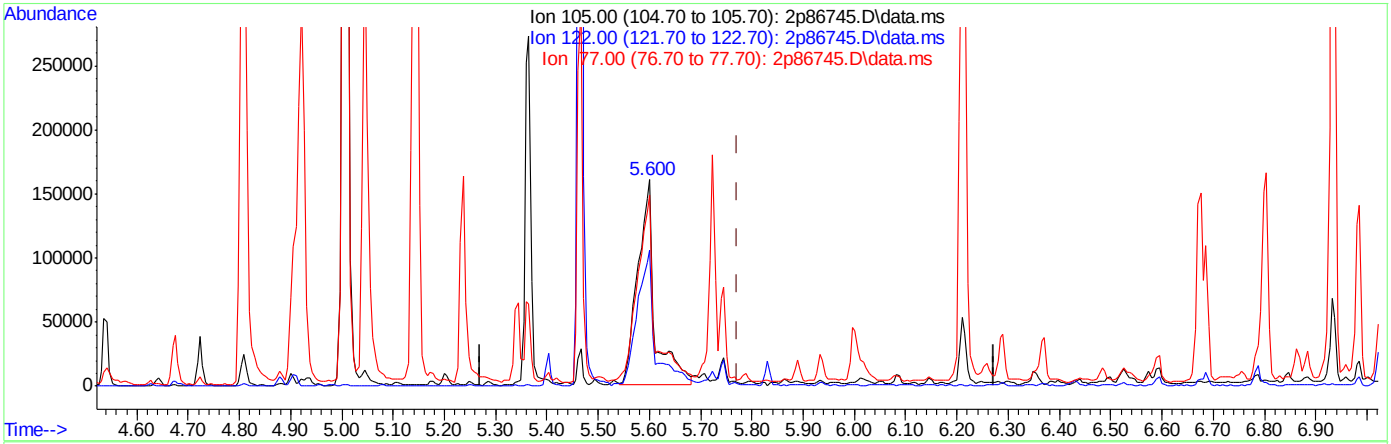
response 316519

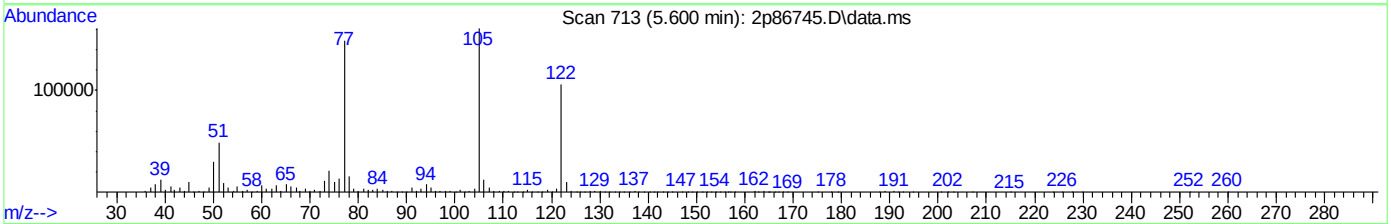
Ion	Exp%	Act%
105.00	100	100
122.00	68.60	65.02
77.00	83.90	89.54
0.00	0.00	0.00

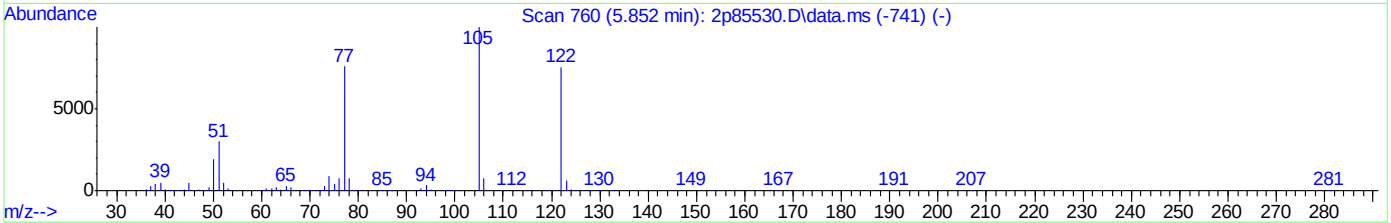
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(31) Benzoic acid (t)

5.600min (-0.172) 22.95ppm m

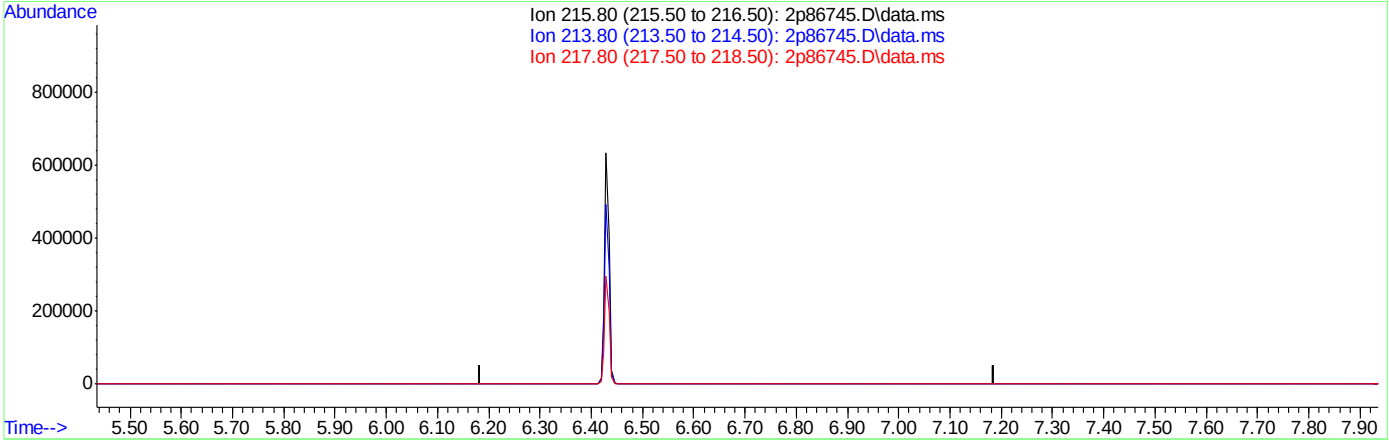
response 367946

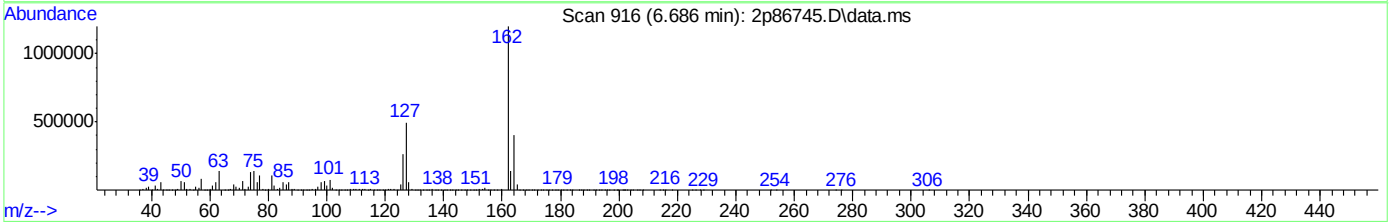
Ion	Exp%	Act%
105.00	100	100
122.00	68.60	65.86
77.00	83.90	92.45
0.00	0.00	0.00

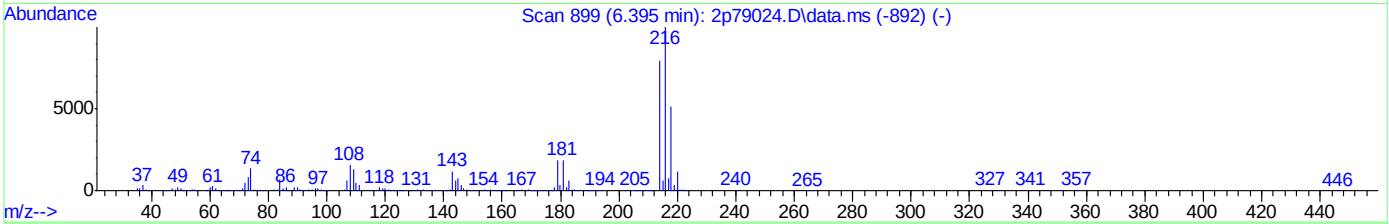
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(107) 1,2,4,5-Tetrachlorobenzene

6.685min (-6.685) 0.00ppm

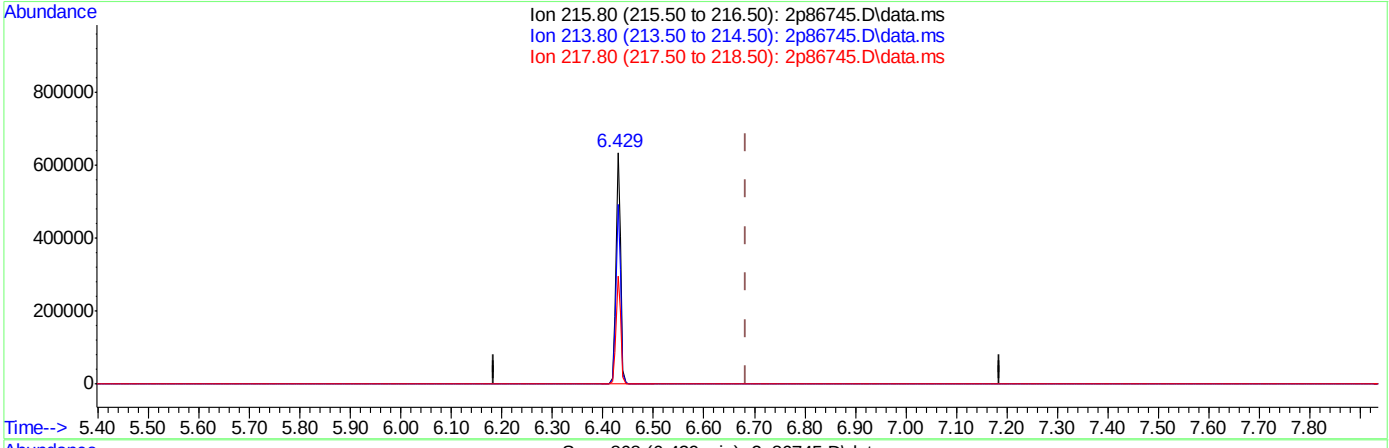
response 0

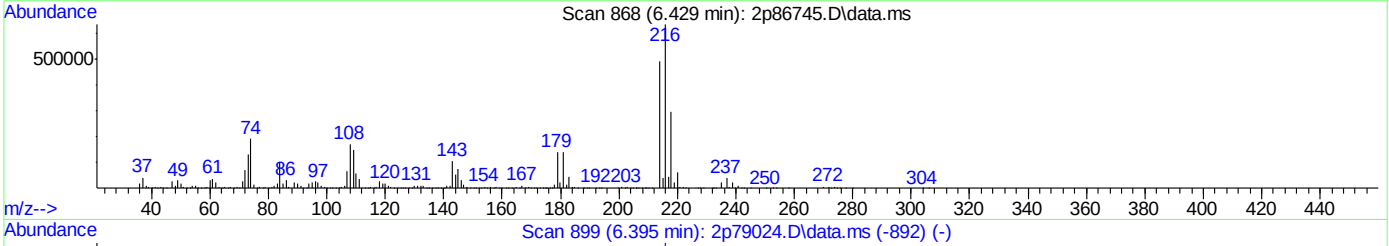
Ion	Exp%	Act%
215.80	100	0.00
213.80	76.00	0.00#
217.80	47.20	0.00#
0.00	0.00	0.00

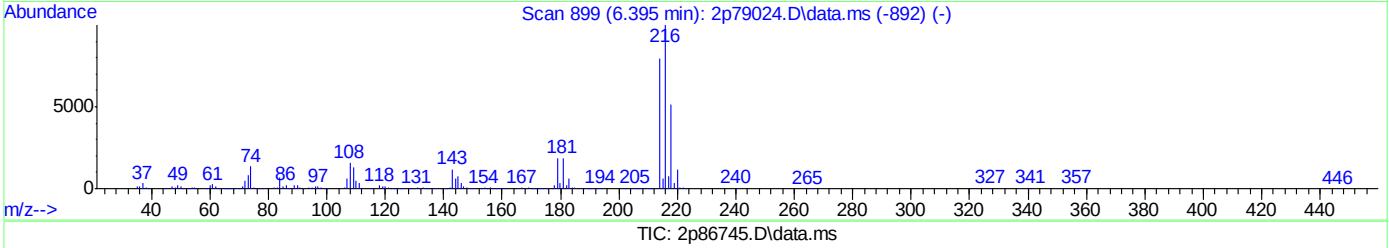
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(107) 1,2,4,5-Tetrachlorobenzene

6.429min (-0.256) 30.90ppm m

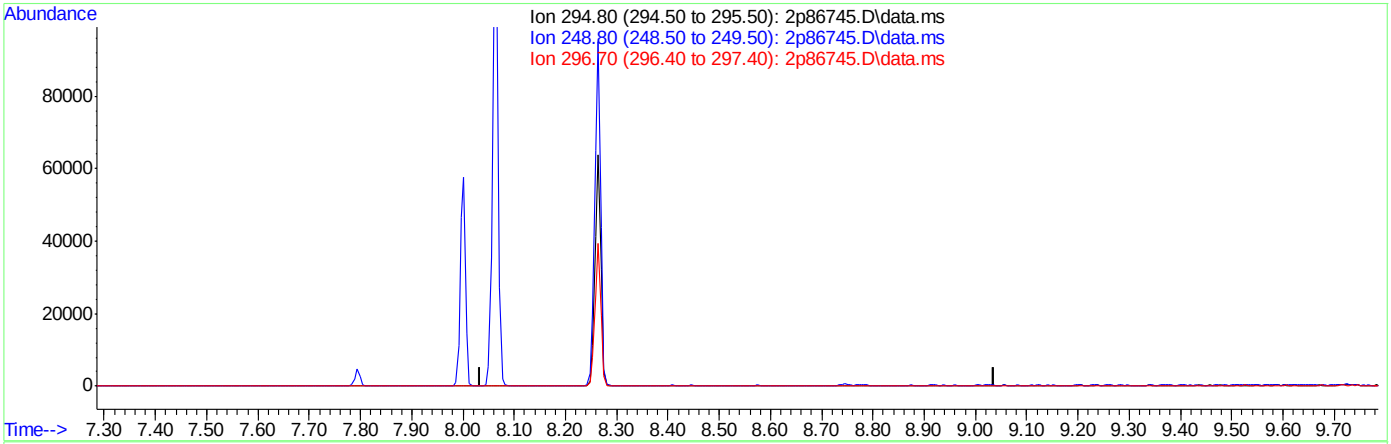
response 414944

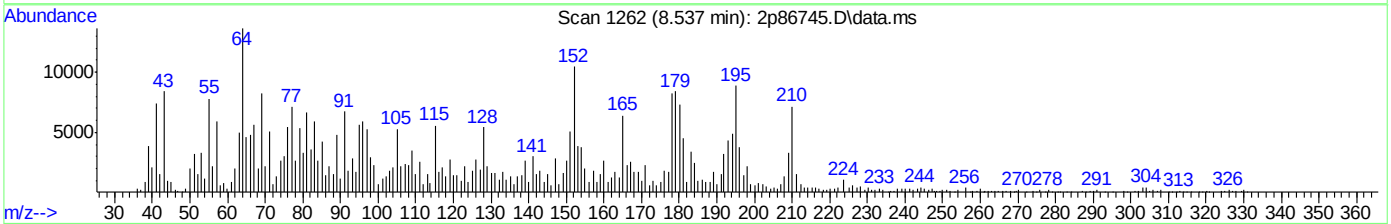
Ion	Exp%	Act%
215.80	100	100
213.80	76.00	77.75
217.80	47.20	46.62
0.00	0.00	0.00

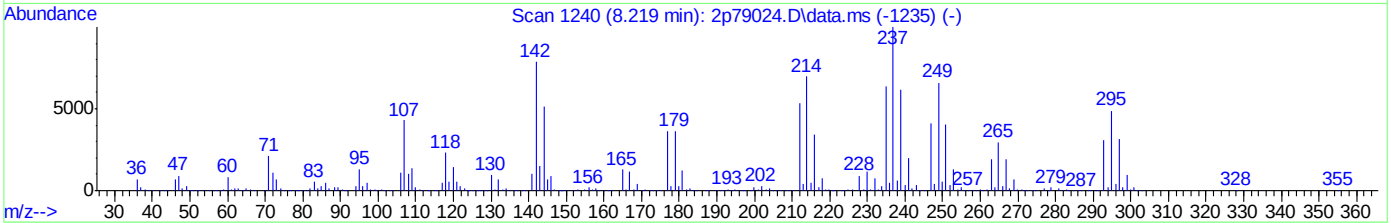
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(113) Pentachloronitrobenzene

8.536min (-8.536) 0.00ppm

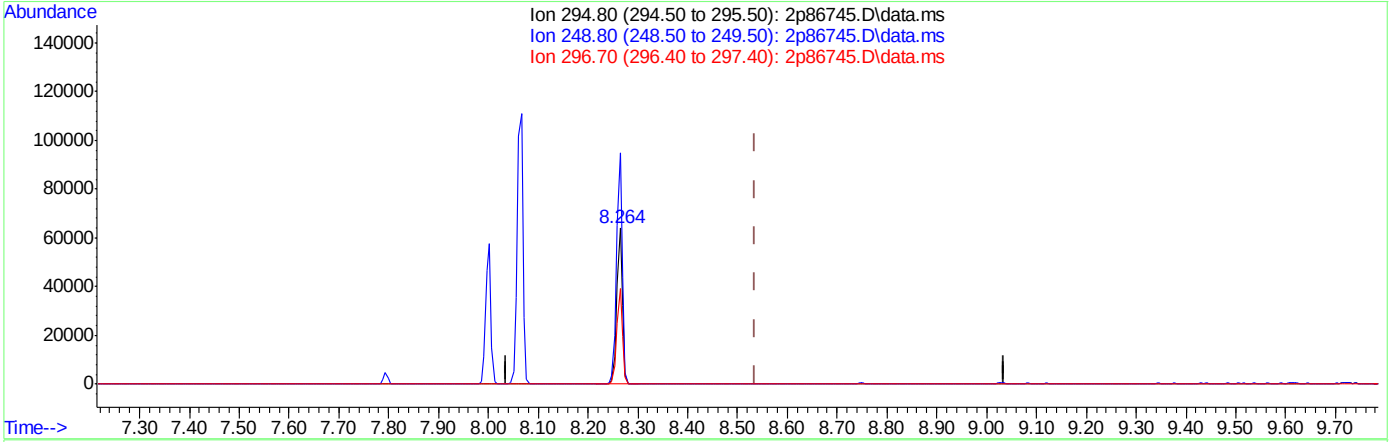
response 0

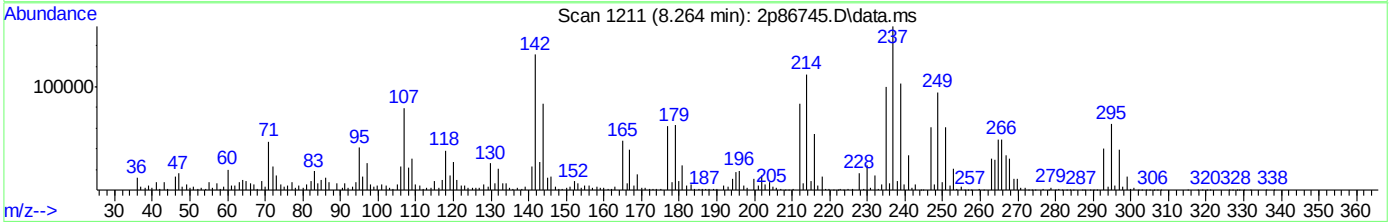
Ion	Exp%	Act%
294.80	100	0.00
248.80	147.90	0.00#
296.70	62.80	0.00#
0.00	0.00	0.00

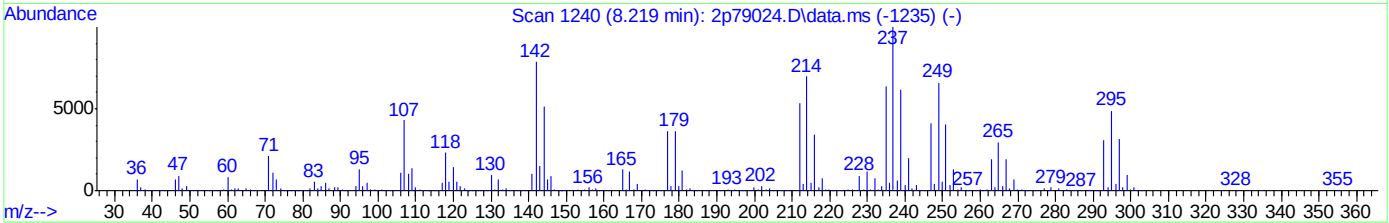
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86745.D
Acq On : 19 Apr 2019 4:49 am
Operator : carolb
Sample : op19810-msd
Misc : op19810,e2p3831,30.1,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 19 11:23:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration







TIC: 2p86745.D\data.ms

(113) Pentachloronitrobenzene

8.264min (-0.272) 29.43ppm m

response 49820

Ion	Exp%	Act%
294.80	100	100
248.80	147.90	0.00#
296.70	62.80	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 14:30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:12:32 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.539	152	182385	40.00	ppm	0.00
24) Naphthalene-d8	5.634	136	560694	40.00	ppm	0.00
47) Acenaphthene-d10	7.909	164	302596	40.00	ppm	0.00
69) Phenanthrene-d10	10.484	188	617370	40.00	ppm	0.00
83) Chrysene-d12	15.606	240	581202	40.00	ppm	0.01
91) Perylene-d12	18.202	264	570075	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4a	4.539	152	182385	40.00	ppm	0.00
103) Acenaphthene-d10a	7.909	164	302596	40.00	ppm	0.00
106) Chrysene-d12a	15.606	240	581202	40.00	ppm	0.01
108) Chrysene-d12b	15.606	240	580601	40.00	ppm	0.01
110) Phenanthrene-d10a	10.484	188	617370	40.00	ppm	0.00
113) Naphthalene-d8a	5.634	136	560694	40.00	ppm	0.00
115) Chrysene-d12c	15.606	240	581202	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.567	112	135707	19.03	ppm	0.00
Spiked Amount 50.000			Recovery =	38.06%		
8) Phenol-d5	4.283	99	163480	18.56	ppm	0.00
Spiked Amount 50.000			Recovery =	37.12%		
25) Nitrobenzene-d5	4.977	82	134374	22.47	ppm	0.00
Spiked Amount 50.000			Recovery =	44.94%		
51) 2-Fluorobiphenyl	6.927	172	285324	25.36	ppm	0.00
Spiked Amount 50.000			Recovery =	50.72%		
73) 2,4,6-Tribromophenol	9.234	330	65786	31.67	ppm	0.00
Spiked Amount 50.000			Recovery =	63.34%		
85) Terphenyl-d14	13.640	244	390699	24.93	ppm	0.00
Spiked Amount 50.000			Recovery =	49.86%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.082	88	48018	13.31	ppm	95
3) Pyridine	2.414	79	147004	16.92	ppm	93
4) N-Nitrosodimethylamine	2.371	42	77105	24.95	ppm	97
6) Indene	4.737	116	301778	31.29	ppm	96
7) Cumene	3.952	105	382420	22.45	ppm	98
9) Phenol	4.294	94	229045	24.75	ppm	94
10) Aniline	4.299	93	215617	23.26	ppm	96
11) bis(2-Chloroethyl)ether	4.347	93	170095	26.57	ppm	98
12) 2-Chlorophenol	4.390	128	167933	26.42	ppm	97
13) Decane	4.432	43	127742	26.31	ppm	95
14) 1,3-Dichlorobenzene	4.497	146	208007	28.17	ppm	96
15) 1,4-Dichlorobenzene	4.555	146	206756	30.83	ppm	97
16) Benzyl alcohol	4.646	108	125692	33.56	ppm	85
17) 1,2-Dichlorobenzene	4.667	146	190988	28.78	ppm	96
18) Acetophenone	4.854	105	232913	27.76	ppm	99
19) 2-Methylphenol	4.742	108	146182	27.31	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.753	121	53185	32.14	ppm	97
21) 3&4-Methylphenol	4.860	108	150399	27.95	ppm	89
22) n-Nitroso-di-n-propyla...	4.854	70	131035	31.31	ppm	90
23) Hexachloroethane	4.940	201	80365	28.37	ppm	90
26) Nitrobenzene	4.993	77	180606	31.10	ppm	95
27) Quinoline	6.008	129	345122	32.49	ppm	96
28) Isophorone	5.196	82	352692	32.55	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:12:32 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) 2-Nitrophenol	5.271	139	90702	33.76	ppm		93
30) 2,4-Dimethylphenol	5.319	107	163472	36.75	ppm		98
31) Benzoic acid	5.394	105	46686m	13.20	ppm		
32) bis(2-Chloroethoxy)met...	5.399	93	208001	31.64	ppm		98
33) 2,4-Dichlorophenol	5.501	162	148074	31.74	ppm		98
34) 2,6-Dichlorophenol	5.725	162	136032	32.17	ppm		98
36) 1,2,4-Trichlorobenzene	5.581	180	185505	32.54	ppm		99
38) Naphthalene	5.656	128	506000	36.86	ppm		99
39) 4-Chloroaniline	5.714	127	171333	28.16	ppm		95
40) 2,3-Dichloroaniline	6.804	161	184564	31.03	ppm		94
41) Caprolactam	6.088	55	64974	30.11	ppm		90
42) Hexachlorobutadiene	5.794	225	114429	33.68	ppm		95
43) 4-Chloro-3-methylphenol	6.270	107	141396	29.29	ppm		97
44) 2-Methylnaphthalene	6.435	141	320796	36.85	ppm		96
45) 1-Methylnaphthalene	6.558	142	340970	30.81	ppm		97
46) Dimethylnaphthalene	7.285	156	296262	30.75	ppm		97
48) Hexachlorocyclopentadiene	6.654	237	185907	63.18	ppm		99
49) 2,4,6-Trichlorophenol	6.815	196	118253	36.10	ppm		99
50) 2,4,5-Trichlorophenol	6.863	196	120478	34.27	ppm		98
52) 2-Chloronaphthalene	7.076	162	327262	35.16	ppm		97
53) Biphenyl	7.060	154	424090	34.89	ppm		99
54) 2-Nitroaniline	7.237	65	104055	41.45	ppm		93
55) Dimethylphthalate	7.536	163	397084	34.91	ppm		99
56) Acenaphthylene	7.680	152	560405	38.34	ppm		99
57) 2,6-Dinitrotoluene	7.610	165	88482	41.54	ppm		96
58) 3-Nitroaniline	7.861	138	93446	35.58	ppm		96
59) Acenaphthene	7.963	153	351295	39.69	ppm		96
60) 2,4-Dinitrophenol	8.032	184	33713	31.71	ppm		97
61) 4-Nitrophenol	8.193	109	43588	29.89	ppm	#	66
62) Dibenzofuran	8.241	168	528685	39.95	ppm		89
63) 2,4-Dinitrotoluene	8.251	165	114895	38.30	ppm		99
64) 2,3,4,6-Tetrachlorophenol	8.465	232	109153	34.67	ppm		93
65) Diethylphthalate	8.711	149	393119	35.77	ppm		98
66) Fluorene	8.817	166	432369	39.37	ppm		97
67) 4-Chlorophenyl-phenyle...	8.855	204	199961	35.06	ppm		99
68) 4-Nitroaniline	8.876	138	95199	40.68	ppm		92
70) 4,6-Dinitro-2-methylph...	8.940	198	40043	21.74	ppm		90
71) n-Nitrosodiphenylamine	9.063	169	299146	36.45	ppm		94
72) 1,2-Diphenylhydrazine	9.127	77	396736	35.25	ppm		98
74) 4-Bromophenyl-phenylether	9.715	248	146030	34.64	ppm		94
75) Hexachlorobenzene	9.795	284	164048	35.04	ppm		92
76) Pentachlorophenol	10.174	266	98802	37.89	ppm		92
77) Phenanthrene	10.527	178	945740	61.78	ppm		99
78) Anthracene	10.623	178	651855	40.43	ppm		99
79) Carbazole	10.965	167	608783	39.27	ppm		98
80) Di-n-butylphthalate	11.787	149	661323	35.42	ppm		99
81) Fluoranthene	12.797	202	1295554	64.03	ppm		98
82) Octadecane	10.516	57	182306	36.79	ppm		97
84) Pyrene	13.213	202	1237270	58.14	ppm		99
86) Butylbenzylphthalate	14.703	149	283101	32.39	ppm		99
87) Benzo[a]anthracene	15.590	228	898698	45.16	ppm		99
88) 3,3'-Dichlorobenzidine	15.627	252	428466	63.75	ppm		97
89) Chrysene	15.654	228	774879	43.81	ppm		100
90) bis(2-Ethylhexyl)phtha...	15.926	149	361830	31.29	ppm		97
92) Di-n-octylphthalate	17.144	149	618478	32.70	ppm		97
93) Benzo[b]fluoranthene	17.571	252	919700	51.21	ppm		98
94) Benzo[k]fluoranthene	17.614	252	658236	38.50	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:12:32 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

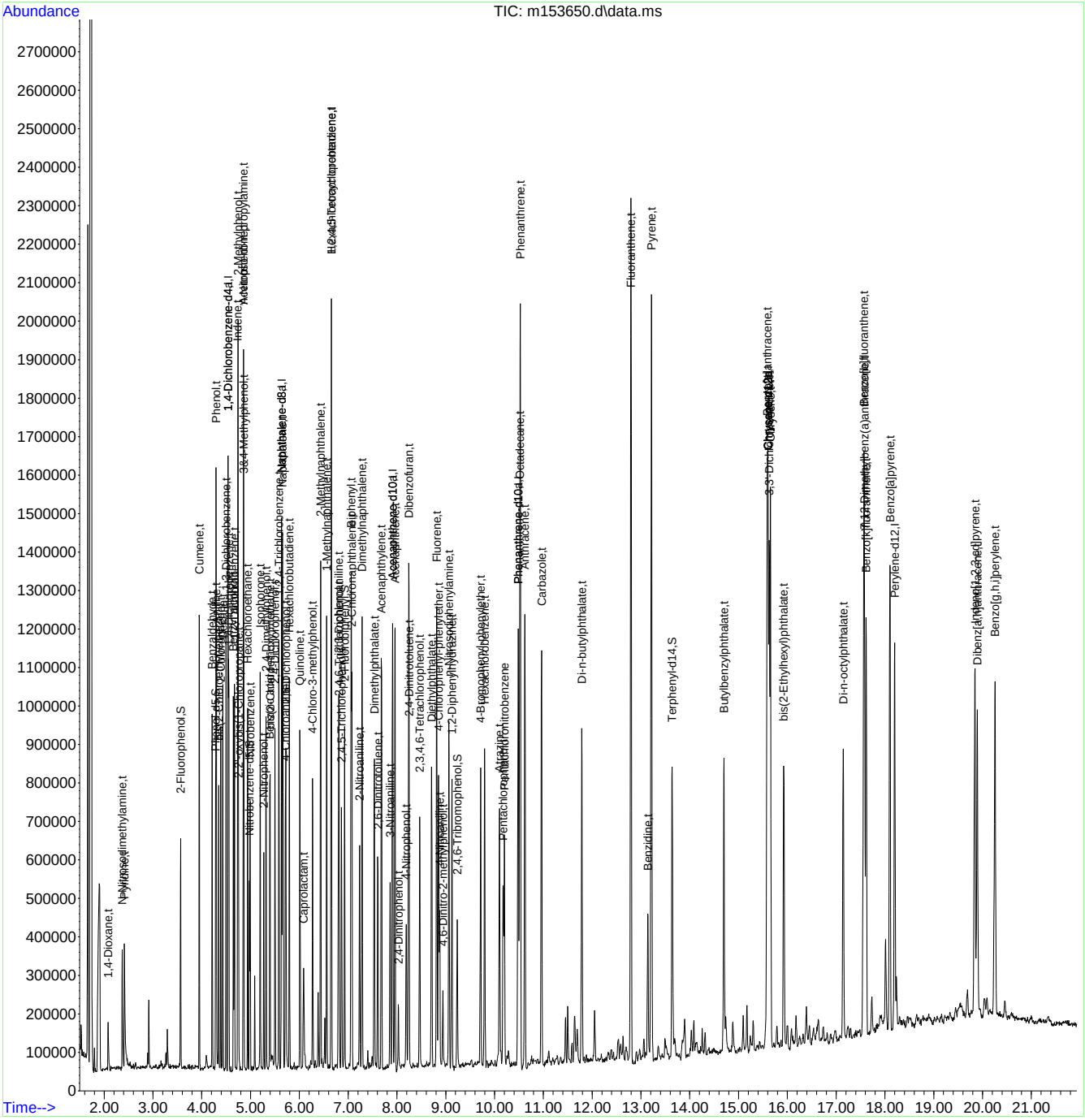
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	18.106	252	788524	50.02	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.847	276	662138	42.29	ppm	95
98) Dibenz[a,h]anthracene	19.895	278	531145	36.55	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.582	256	222190	32.26	ppm	96
100) Benzo[g,h,i]perylene	20.258	276	680458	45.51	ppm	99
102) Benzaldehyde	4.213	105	115845	22.63	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.654	216	190657	36.89	ppm	96
105) Atrazine	10.099	215	61828	43.62	ppm	95
107) Benzidine	13.144	184	253537	23.10	ppm	96
112) Pentachloronitrobenzene	10.201	295	29275	40.22	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:12:32 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



Manual Integration Approval Summary

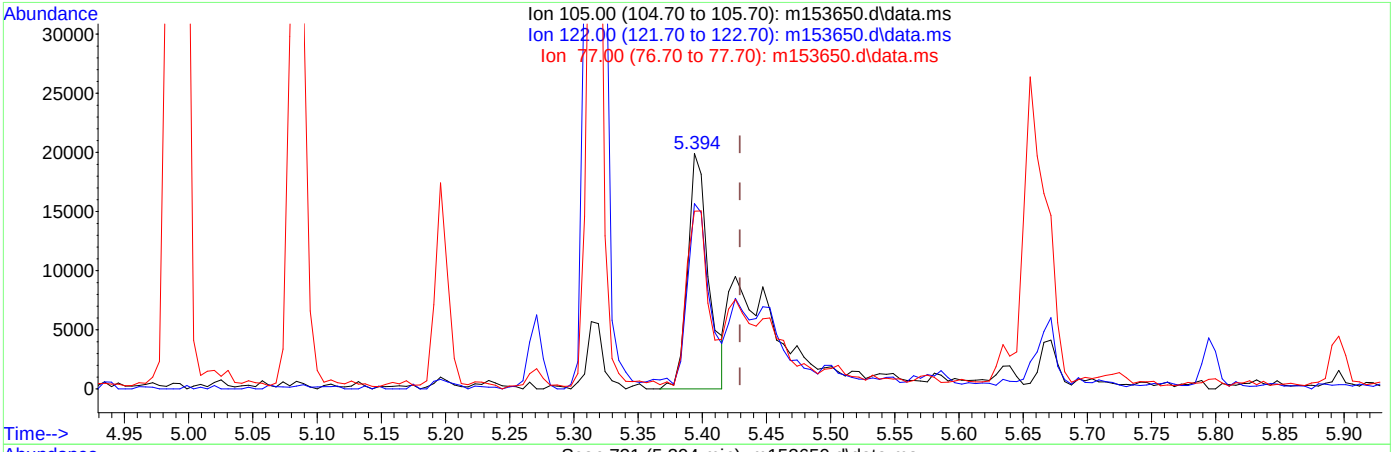
Sample Number:	OP19854-MS	**Method:**	SW846 8270D
Lab FileID:	M153650.D	**Analyst approved:**	04/22/19 04:28 Michelle Co
Injection Time:	04/21/19 08:44	**Supervisor approved:**	04/26/19 14:30 Kristi Schollenberger

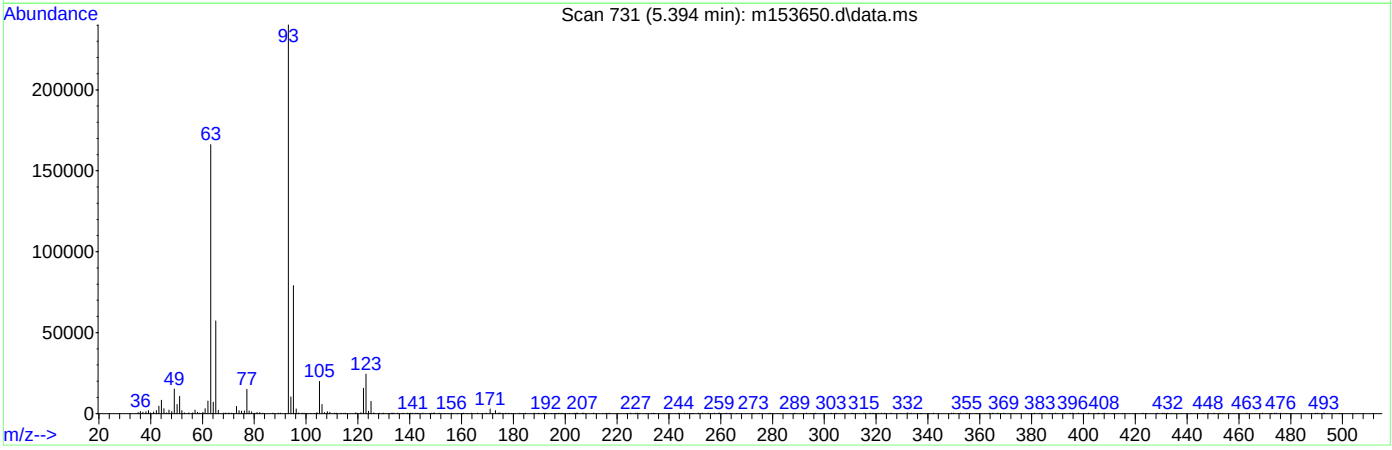
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.39	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:10:07 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration





TIC: m153650.d\data.ms

(31) Benzoic acid (t)

5.394min (-0.035) 6.39ppm

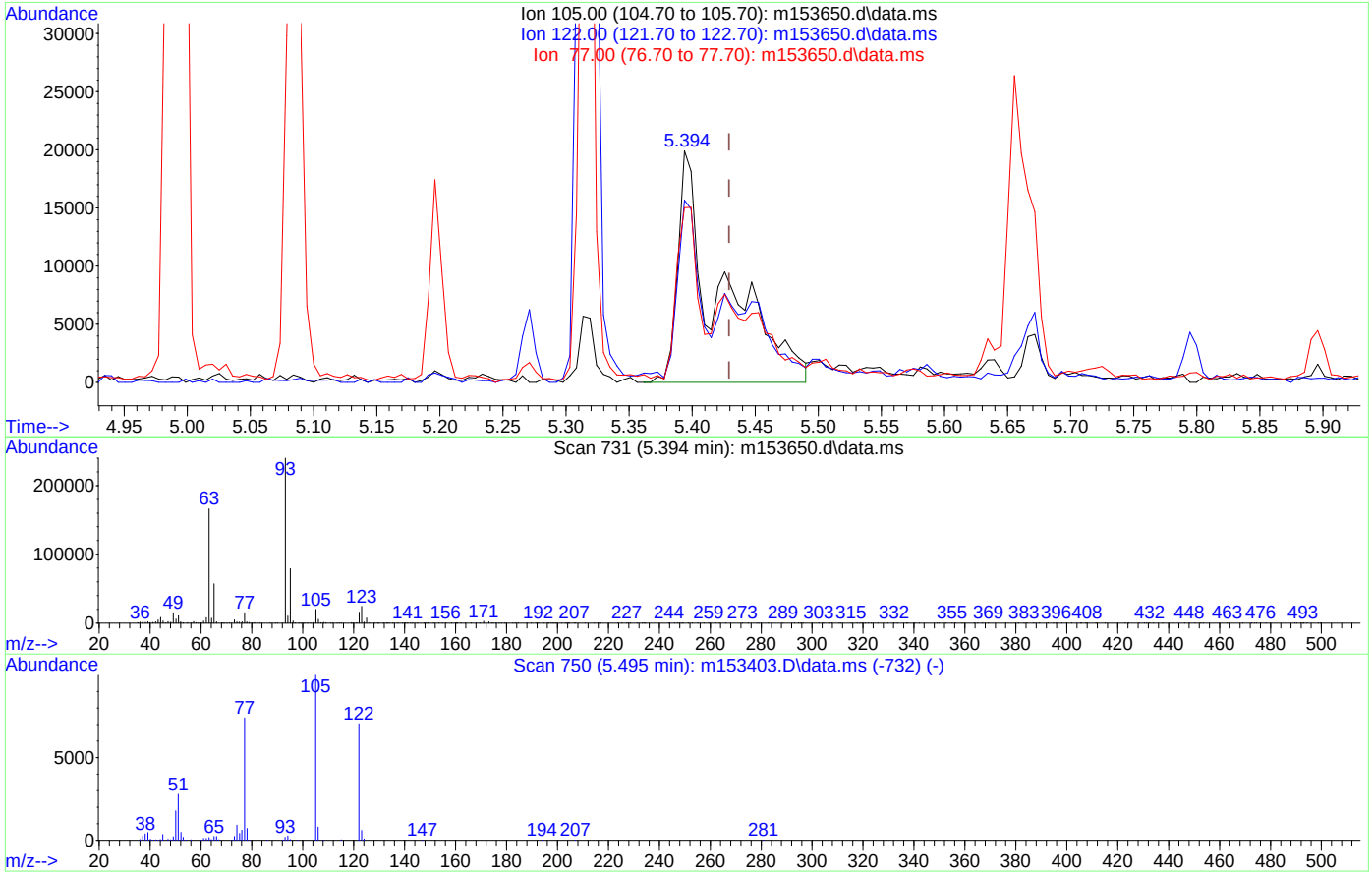
response 22607

Ion	Exp%	Act%
105.00	100	100
122.00	82.60	75.71
77.00	72.70	72.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153650.d
Acq On : 21 Apr 2019 8:44 am
Operator : carolb
Sample : op19854-ms Inst : MSM
Misc : op19854,em6566,30.8,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:10:07 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



TIC: m153650.d\data.ms

(31) Benzoic acid (t)

5.394min (-0.035) 13.20ppm m

response 46686

Ion	Exp%	Act%
105.00	100	100
122.00	82.60	78.70
77.00	72.70	75.47
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 14:30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:14:31 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.540	152	179046	40.00	ppm	0.00
24) Naphthalene-d8	5.635	136	556607	40.00	ppm	0.00
47) Acenaphthene-d10	7.910	164	295193	40.00	ppm	0.00
69) Phenanthrene-d10	10.485	188	604106	40.00	ppm	0.00
83) Chrysene-d12	15.607	240	574151	40.00	ppm	0.01
91) Perylene-d12	18.197	264	564616	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.540	152	179046	40.00	ppm	0.00
103) Acenaphthene-d10a	7.910	164	295193	40.00	ppm	0.00
106) Chrysene-d12a	15.607	240	574151	40.00	ppm	0.01
108) Chrysene-d12b	15.607	240	574151	40.00	ppm	0.01
110) Phenanthrene-d10a	10.485	188	604106	40.00	ppm	0.00
113) Naphthalene-d8a	5.635	136	556607	40.00	ppm	0.00
115) Chrysene-d12c	15.607	240	574151	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.568	112	150175	21.45	ppm	0.00
Spiked Amount 50.000			Recovery =	42.90%		
8) Phenol-d5	4.284	99	182425	21.10	ppm	0.00
Spiked Amount 50.000			Recovery =	42.20%		
25) Nitrobenzene-d5	4.973	82	150565	25.36	ppm	0.00
Spiked Amount 50.000			Recovery =	50.72%		
51) 2-Fluorobiphenyl	6.928	172	312219	28.45	ppm	0.00
Spiked Amount 50.000			Recovery =	56.90%		
73) 2,4,6-Tribromophenol	9.235	330	72471	35.66	ppm	0.00
Spiked Amount 50.000			Recovery =	71.32%		
85) Terphenyl-d14	13.641	244	436171	28.17	ppm	0.00
Spiked Amount 50.000			Recovery =	56.34%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.083	88	51009	14.40	ppm	90
3) Pyridine	2.415	79	168185	19.72	ppm	95
4) N-Nitrosodimethylamine	2.372	42	84733	27.93	ppm	93
6) Indene	4.738	116	332546	35.13	ppm	96
7) Cumene	3.947	105	424739	25.39	ppm	97
9) Phenol	4.295	94	254675	28.03	ppm	87
10) Aniline	4.295	93	219514m	24.12	ppm	
11) bis(2-Chloroethyl)ether	4.343	93	182613	29.06	ppm	96
12) 2-Chlorophenol	4.391	128	191151	30.63	ppm	99
13) Decane	4.428	43	138391	29.03	ppm	92
14) 1,3-Dichlorobenzene	4.498	146	216057	29.80	ppm	97
15) 1,4-Dichlorobenzene	4.551	146	217017	32.96	ppm	96
16) Benzyl alcohol	4.647	108	130965	35.61	ppm	87
17) 1,2-Dichlorobenzene	4.668	146	198522	30.47	ppm	95
18) Acetophenone	4.850	105	256975	31.20	ppm	97
19) 2-Methylphenol	4.743	108	165844	31.57	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.754	121	54952	33.83	ppm	95
21) 3&4-Methylphenol	4.861	108	172809	32.71	ppm	95
22) n-Nitroso-di-n-propyla...	4.855	70	135791	33.05	ppm	92
23) Hexachloroethane	4.941	201	84364	30.33	ppm	93
26) Nitrobenzene	4.989	77	191656	33.24	ppm	97
27) Quinoline	6.009	129	368620	34.96	ppm	97
28) Isophorone	5.197	82	360496	33.51	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:14:31 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) 2-Nitrophenol	5.272	139	102820	38.55	ppm		98
30) 2,4-Dimethylphenol	5.315	107	181658	41.13	ppm		97
31) Benzoic acid	5.406	105	77367m	22.04	ppm		
32) bis(2-Chloroethoxy)met...	5.395	93	217863	33.38	ppm		98
33) 2,4-Dichlorophenol	5.502	162	165801	35.81	ppm		96
34) 2,6-Dichlorophenol	5.726	162	154407	36.79	ppm		100
36) 1,2,4-Trichlorobenzene	5.582	180	190391	33.64	ppm		99
38) Naphthalene	5.657	128	516073	37.87	ppm		99
39) 4-Chloroaniline	5.715	127	166469	27.57	ppm		97
40) 2,3-Dichloroaniline	6.805	161	199221	33.75	ppm		99
41) Caprolactam	6.095	55	74056	34.57	ppm		95
42) Hexachlorobutadiene	5.795	225	117057	34.70	ppm		96
43) 4-Chloro-3-methylphenol	6.271	107	162490	33.91	ppm		92
44) 2-Methylnaphthalene	6.436	141	338930	39.22	ppm		95
45) 1-Methylnaphthalene	6.559	142	370348	33.71	ppm		97
46) Dimethylnaphthalene	7.286	156	329323	34.43	ppm		93
48) Hexachlorocyclopentadiene	6.655	237	194024	67.59	ppm		98
49) 2,4,6-Trichlorophenol	6.816	196	130580	40.86	ppm		96
50) 2,4,5-Trichlorophenol	6.864	196	135761	39.58	ppm		99
52) 2-Chloronaphthalene	7.077	162	333770	36.75	ppm		97
53) Biphenyl	7.061	154	459628	38.76	ppm		98
54) 2-Nitroaniline	7.238	65	106871	43.64	ppm		93
55) Dimethylphthalate	7.537	163	407782	36.75	ppm		99
56) Acenaphthylene	7.681	152	571779	40.10	ppm		99
57) 2,6-Dinitrotoluene	7.606	165	92239	44.39	ppm		89
58) 3-Nitroaniline	7.862	138	95100	37.12	ppm		97
59) Acenaphthene	7.959	153	363874	42.15	ppm		99
60) 2,4-Dinitrophenol	8.033	184	43772	40.00	ppm		94
61) 4-Nitrophenol	8.194	109	46400	32.62	ppm	#	74
62) Dibenzofuran	8.242	168	546191	42.31	ppm		91
63) 2,4-Dinitrotoluene	8.252	165	116574	39.86	ppm		97
64) 2,3,4,6-Tetrachlorophenol	8.466	232	120144	39.12	ppm		98
65) Diethylphthalate	8.712	149	412745	38.50	ppm		98
66) Fluorene	8.813	166	438014	40.89	ppm		96
67) 4-Chlorophenyl-phenyle...	8.851	204	212817	38.25	ppm		97
68) 4-Nitroaniline	8.877	138	95119	41.66	ppm		92
70) 4,6-Dinitro-2-methylph...	8.941	198	45583	24.90	ppm		91
71) n-Nitrosodiphenylamine	9.064	169	309573	38.55	ppm		96
72) 1,2-Diphenylhydrazine	9.128	77	409577	37.19	ppm		98
74) 4-Bromophenyl-phenylether	9.716	248	152126	36.88	ppm		95
75) Hexachlorobenzene	9.796	284	171975	37.54	ppm		96
76) Pentachlorophenol	10.180	266	106136	41.60	ppm		98
77) Phenanthrene	10.528	178	924725	61.74	ppm		99
78) Anthracene	10.624	178	672507	42.62	ppm		99
79) Carbazole	10.966	167	621033	40.94	ppm		98
80) Di-n-butylphthalate	11.788	149	687817	37.64	ppm		99
81) Fluoranthene	12.798	202	1228459	62.04	ppm		98
82) Octadecane	10.517	57	202188	41.70	ppm		98
84) Pyrene	13.214	202	1167053	55.51	ppm		99
86) Butylbenzylphthalate	14.699	149	307057	35.56	ppm		97
87) Benzo[a]anthracene	15.591	228	867647	44.14	ppm		98
88) 3,3'-Dichlorobenzidine	15.628	252	434691	65.47	ppm		98
89) Chrysene	15.655	228	750526	42.95	ppm		99
90) bis(2-Ethylhexyl)phtha...	15.927	149	383968	33.48	ppm		100
92) Di-n-octylphthalate	17.145	149	645961	34.44	ppm		97
93) Benzo[b]fluoranthene	17.567	252	916878	51.54	ppm		99
94) Benzo[k]fluoranthene	17.615	252	678032	40.04	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:14:31 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration

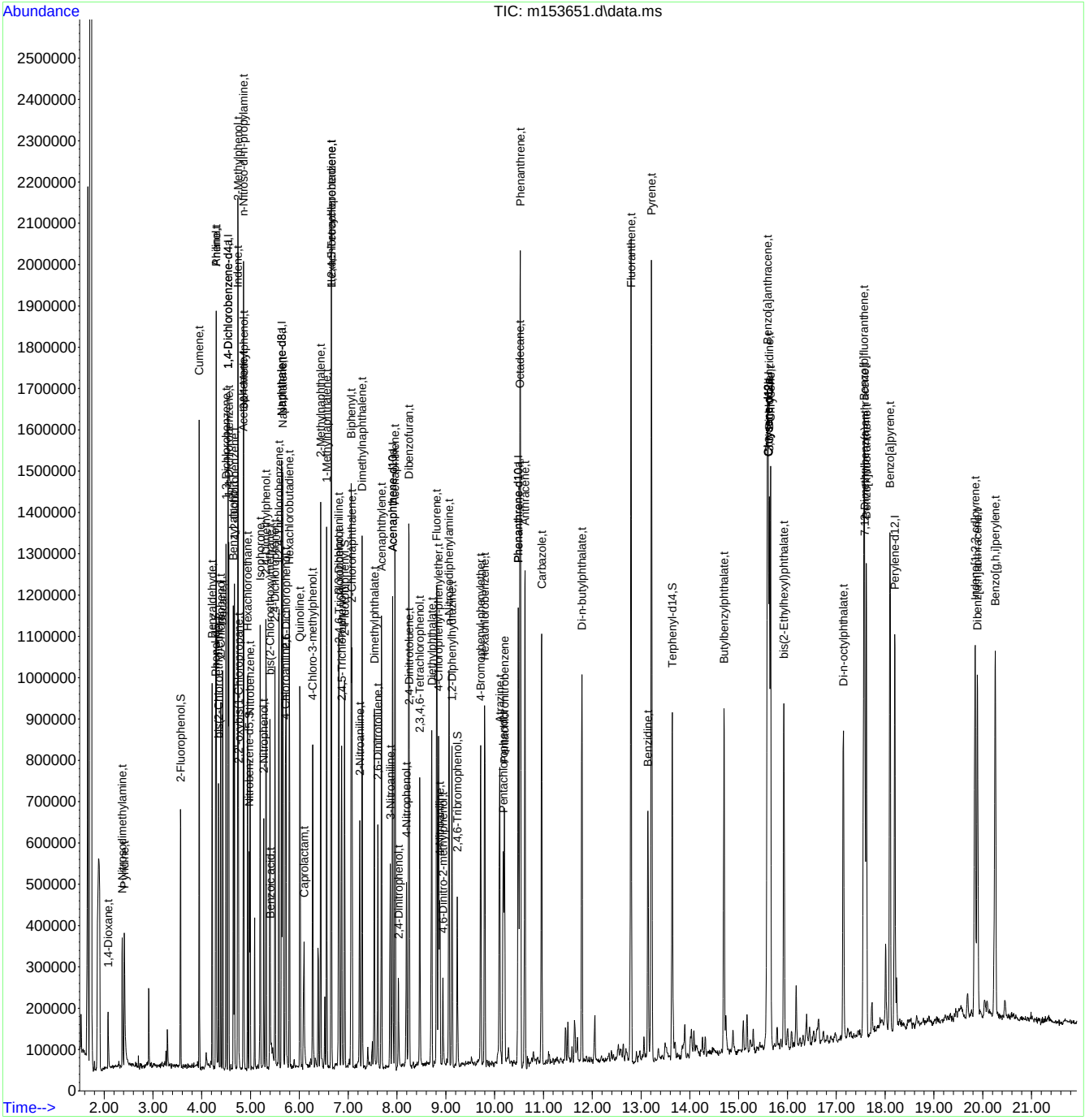
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	18.101	252	783095	50.15	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.848	276	679333	43.82	ppm	97
98) Dibenz[a,h]anthracene	19.891	278	573405	39.84	ppm	98
99) 7,12-Dimethylbenz(a)an...	17.583	256	248458	36.43	ppm	99
100) Benzo[g,h,i]perylene	20.259	276	696178	47.01	ppm	97
102) Benzaldehyde	4.214	105	130818	26.04	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.655	216	198753	39.42	ppm	96
105) Atrazine	10.106	215	68888	49.82	ppm	94
107) Benzidine	13.145	184	377171	34.79	ppm	96
112) Pentachloronitrobenzene	10.202	295	29762	41.78	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 03:14:31 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration



Manual Integration Approval Summary

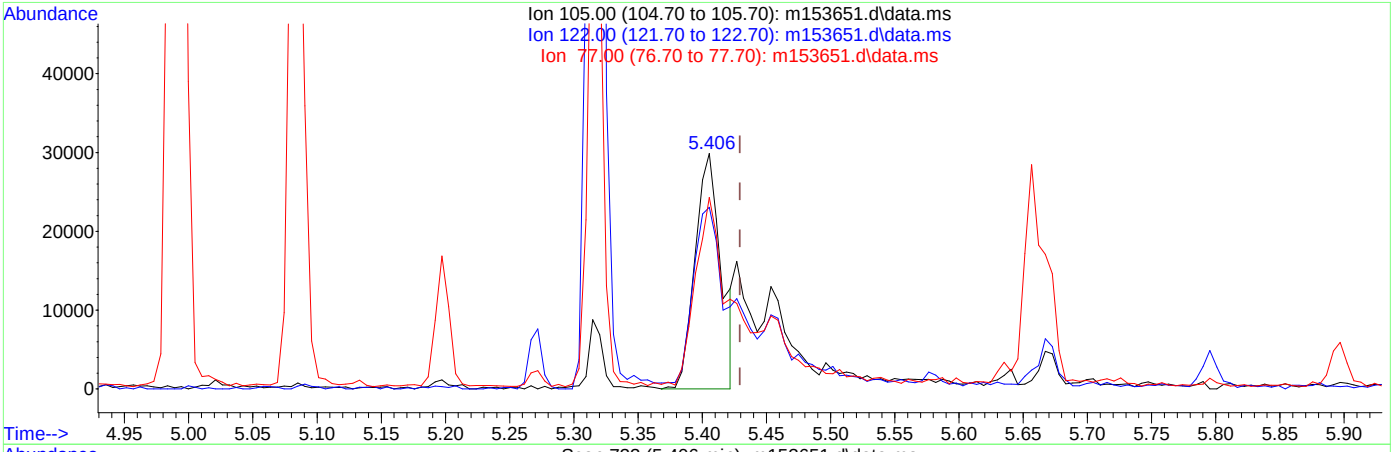
Sample Number:	OP19854-MSD	**Method:**	SW846 8270D
Lab FileID:	M153651.D	**Analyst approved:**	04/22/19 04:28 Michelle Co
Injection Time:	04/21/19 09:12	**Supervisor approved:**	04/26/19 14:30 Kristi Schollenberger

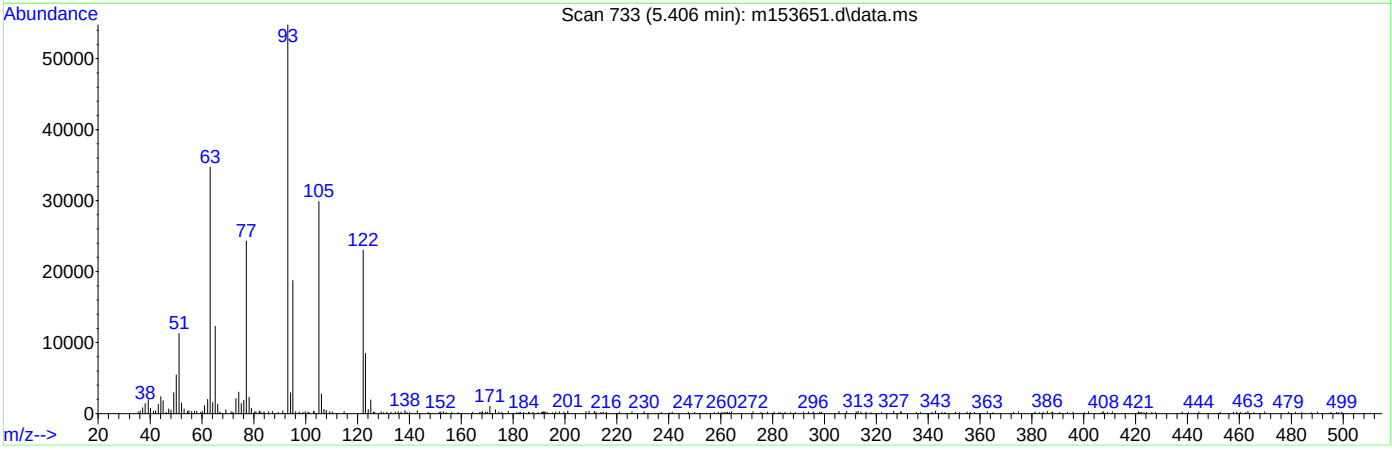
Parameter	CAS	Sig#	R.T. (min.)	Reason
Aniline	62-53-3		4.29	Poor instrument integration
Benzoic acid	65-85-0		5.41	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:51:18 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration





TIC: m153651.d\data.ms

(31) Benzoic acid (t)

5.406min (-0.024) 11.97ppm

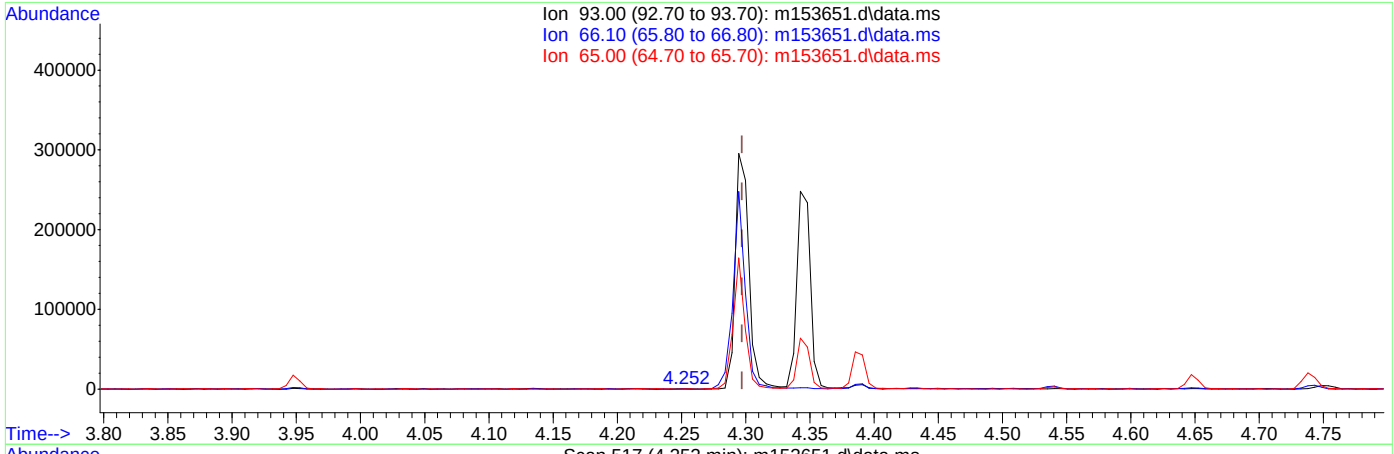
response 42015

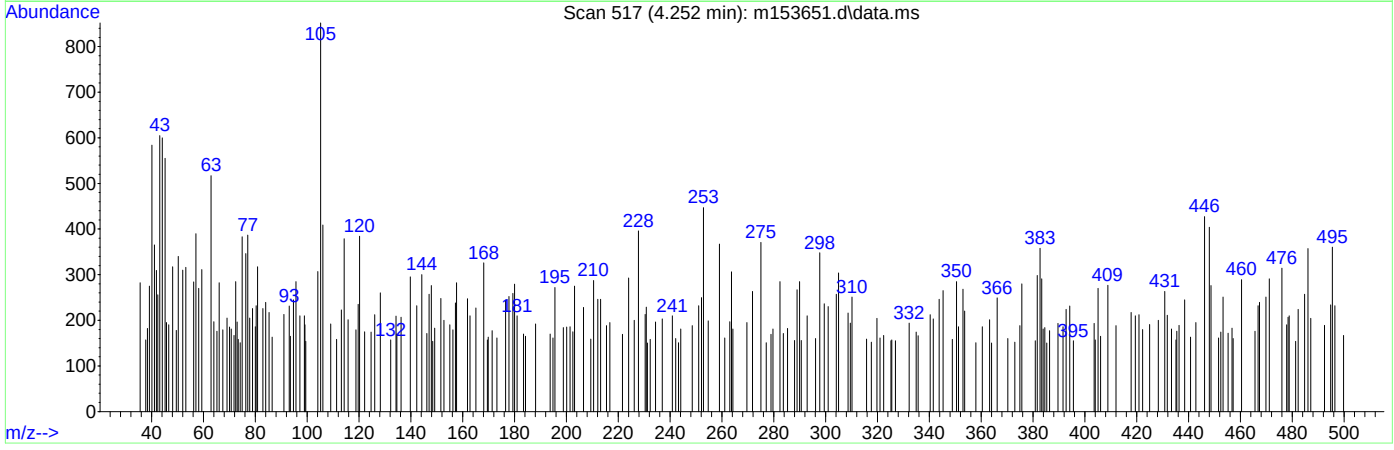
Ion	Exp%	Act%
105.00	100	100
122.00	82.60	74.20
77.00	72.70	77.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:51:18 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration





TIC: m153651.d\data.ms

(10) Aniline (t)

4.252min (-0.045) 0.03ppm

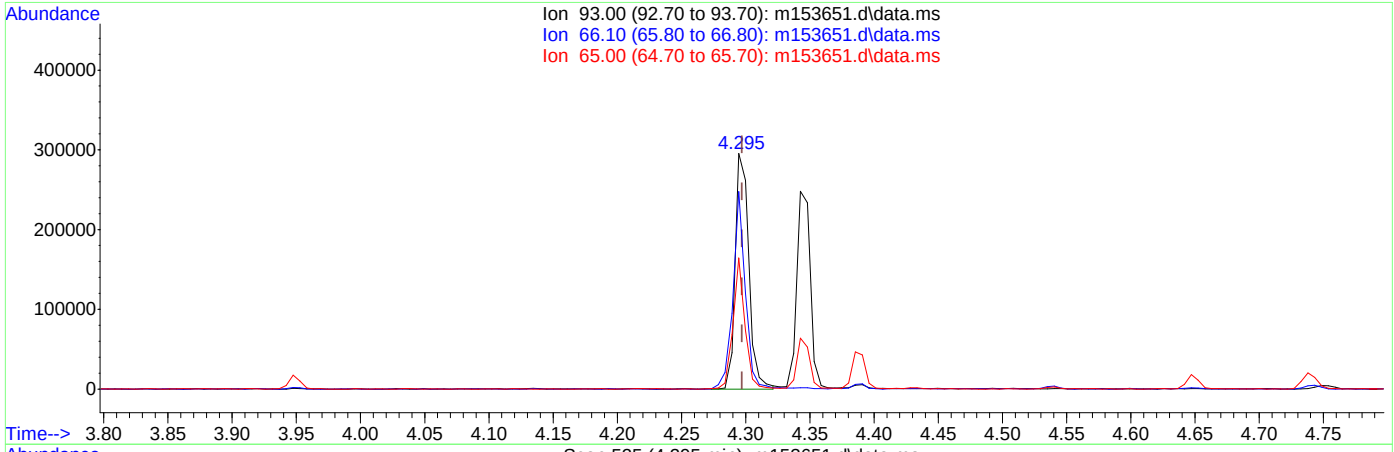
response 230

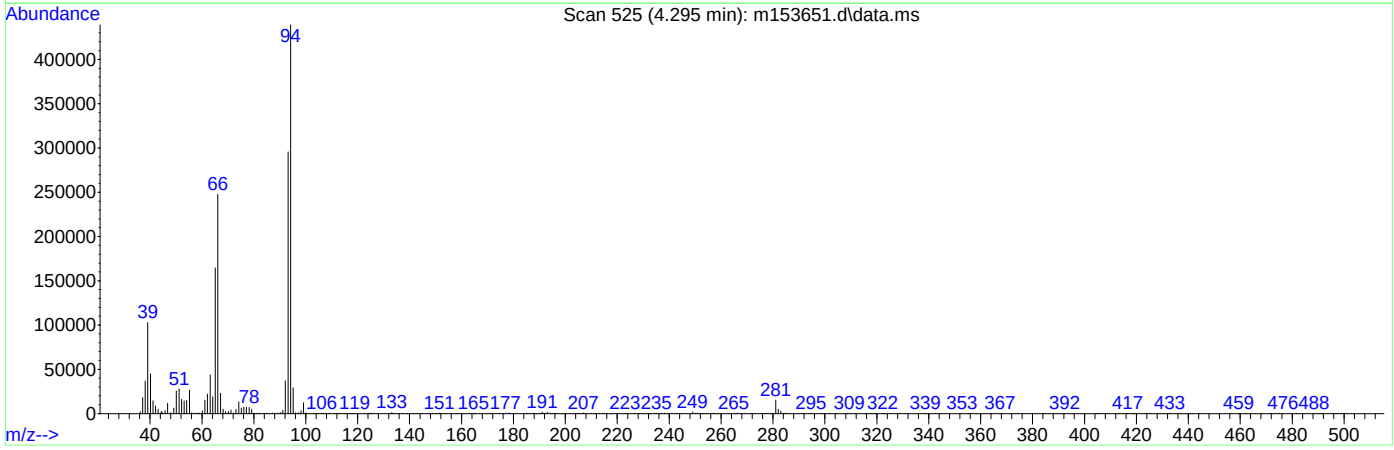
Ion	Exp%	Act%
93.00	100	100
66.10	48.50	71.21
65.00	30.10	15.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:51:18 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration





TIC: m153651.d\data.ms

(10) Aniline (t)

4.295min (-0.002) 24.12ppm m

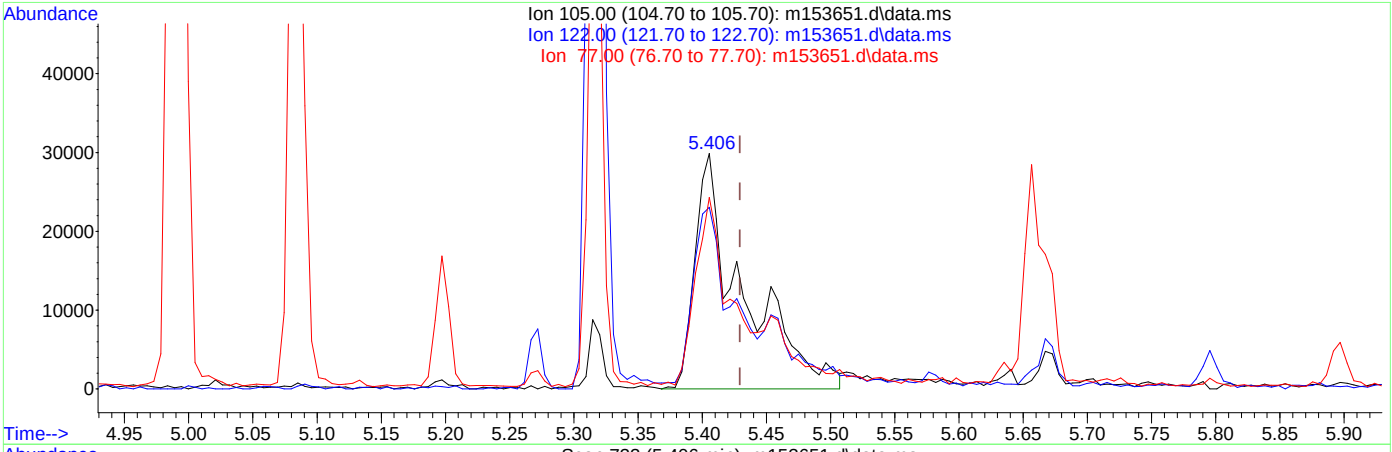
response 219514

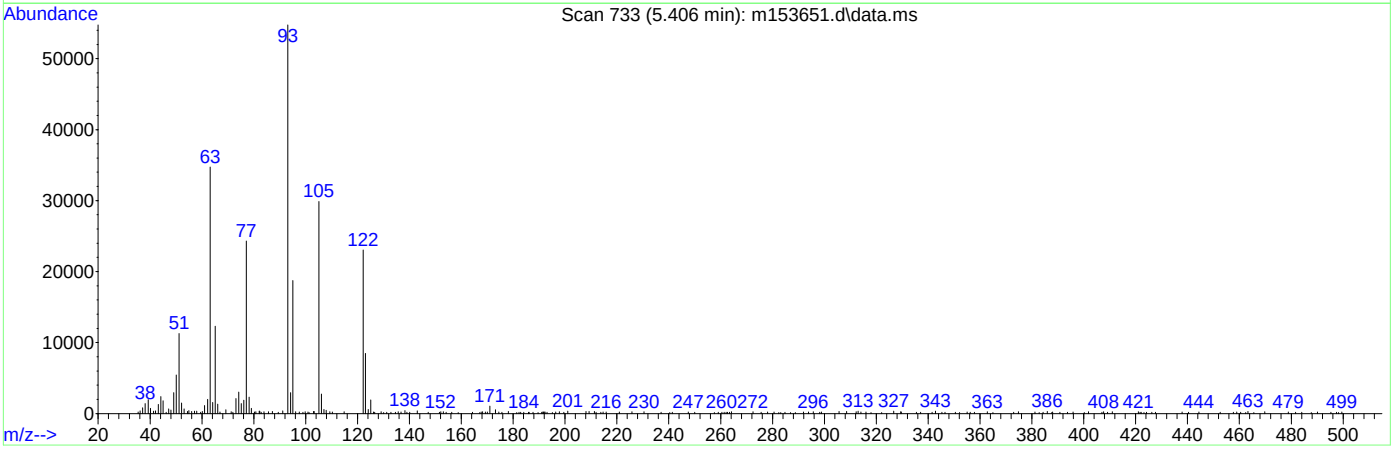
Ion	Exp%	Act%
93.00	100	100
66.10	48.50	83.86#
65.00	30.10	55.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153651.d
Acq On : 21 Apr 2019 9:12 am
Operator : carolb
Sample : op19854-msd Inst : MSM
Misc : op19854,em6566,31.5,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:51:18 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:46:22 2019
Response via : Initial Calibration





TIC: m153651.d\data.ms

(31) Benzoic acid (t)

5.406min (-0.024) 22.04ppm m

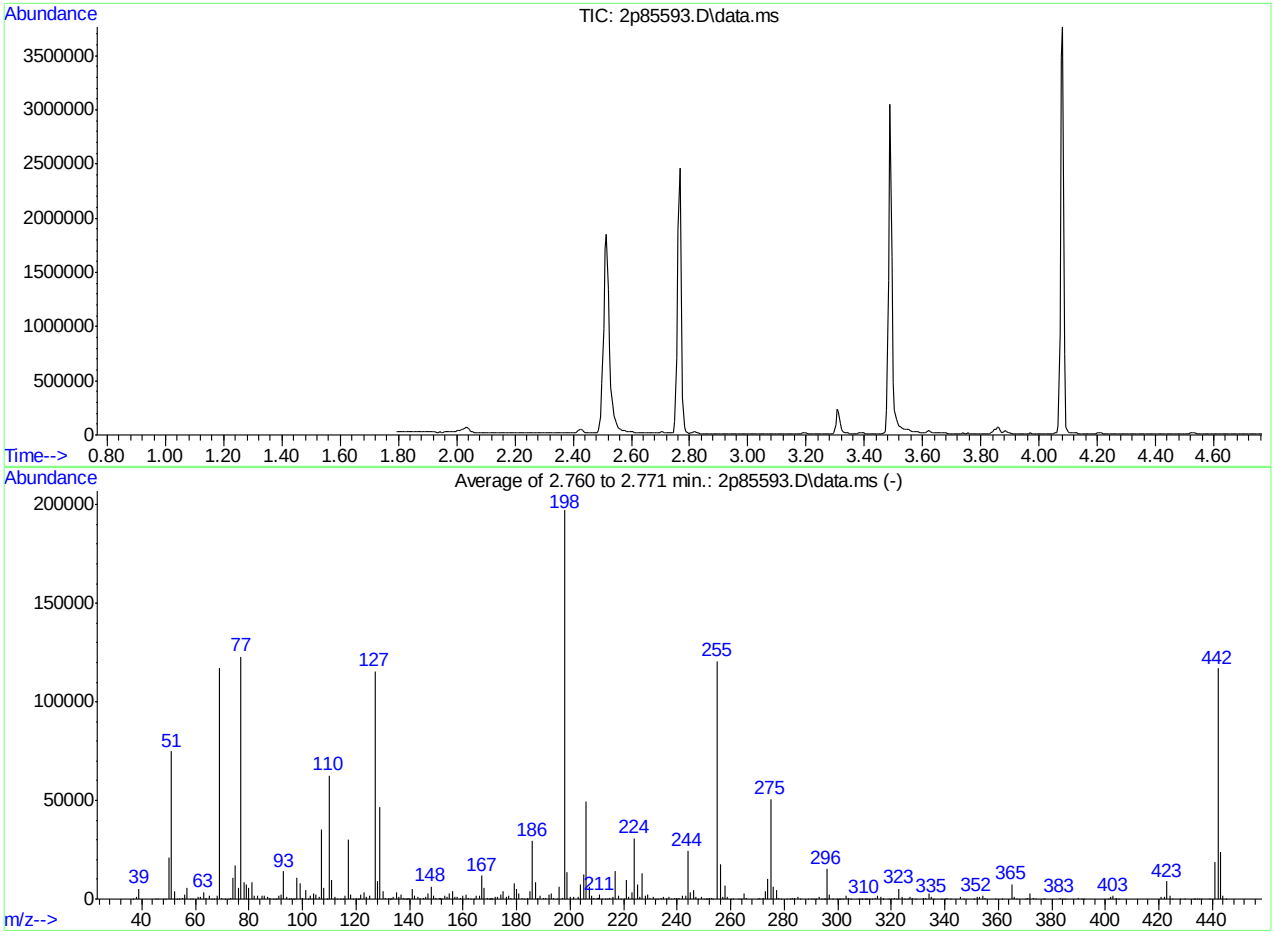
response 77367

Ion	Exp%	Act%
105.00	100	100
122.00	82.60	77.14
77.00	72.70	81.34
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\2P3783\2p85593.D Vial: 1
Acq On : 8 Mar 2019 2:56 am Operator: chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3783,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 182, 183, 184; Background Corrected with Scan 176

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.0	74894	PASS
68	69	0.00	2	1.7	2003	PASS
69	198	0.00	100	59.4	117104	PASS
70	69	0.00	2	0.5	533	PASS
127	198	40	60	58.6	115552	PASS
197	198	0.00	1	0.3	606	PASS
198	198	100	100	100.0	197099	PASS
199	198	5	9	7.0	13778	PASS
275	198	10	30	25.7	50693	PASS
365	198	1	100	3.9	7602	PASS
441	443	0.10	100	79.8	18867	PASS
442	198	40	100	59.4	116992	PASS
443	442	17	23	20.2	23640	PASS

2p85593.D DFTPP2P.M Fri Mar 08 17:25:14 2019 RPT1

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.90	173	53.95	45	65.90	96	76.95	122813
38.00	991	54.95	365	66.85	199	78.00	8425
38.95	5418	55.95	2315	67.95	2003	79.00	7662
44.90	105	56.95	5956	69.00	117104	80.00	5984
46.00	21	57.90	153	69.90	533	81.00	8800
47.90	41	58.95	81	71.00	193	81.95	1641
49.00	148	61.00	953	72.20	25	83.00	1698
49.95	20854	62.00	1405	73.05	801	84.95	1469
50.95	74894	63.00	3514	74.00	10855	85.90	1911
52.00	4044	63.90	482	75.00	16963	87.00	1234
53.00	119	65.00	1877	76.00	5898	87.90	433

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.90	119	98.00	10687	109.00	233	119.95	463
89.80	24	99.00	7868	110.00	62576	120.90	63
90.15	69	99.95	668	111.00	9704	121.10	69
91.00	1689	101.00	4604	111.95	1136	121.90	2047
92.00	2209	101.90	291	112.95	295	123.00	3437
93.00	14092	103.00	1485	114.00	41	123.95	1369
93.95	1034	104.00	2855	114.95	137	124.90	1613
94.90	263	105.00	2470	115.95	1755	127.00	115552
95.95	576	106.05	926	116.95	30052	128.00	8909
96.80	70	107.00	35336	117.95	2128	129.00	46613
97.00	107	108.00	5637	118.95	194	129.95	3787

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.95	720	139.00	137	149.95	412	158.95	786
132.05	456	139.95	425	151.00	540	159.95	1638
132.60	73	141.00	5244	151.40	115	161.00	2133
132.90	33	142.00	1669	151.65	355	162.00	798
133.90	1211	142.95	1276	152.00	61	162.90	180
135.00	3261	143.90	440	153.00	1620	163.85	261
135.95	1240	145.00	349	154.00	1226	164.90	1812
137.00	2063	145.95	965	155.00	2937	166.00	1520
137.80	388	147.00	2585	156.00	4183	167.00	11720
138.10	177	148.00	6435	157.00	999	168.00	5954
138.80	66	148.95	1489	157.95	977	168.95	829

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.80	51	179.00	8192	189.90	368	201.45	1156
170.10	286	180.00	5125	191.05	871	202.95	1429
170.70	80	181.00	2712	191.95	2401	204.00	7591
170.95	321	182.05	370	193.00	3076	205.00	12595
171.95	903	182.90	224	193.90	621	206.00	49613
173.00	1245	183.95	811	194.90	236	207.00	6370
174.00	2185	185.00	4148	196.00	6373	208.00	1738
175.00	3995	186.00	29397	197.10	606	209.00	555
176.00	1420	187.00	8286	198.00	197099	210.00	834
177.00	1891	187.95	866	199.00	13778	210.50	338
178.00	691	188.95	1832	199.95	1028	211.00	2026

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.70	131	222.95	3648	233.90	801	245.00	3417
212.85	150	224.00	30744	234.95	995	246.00	4497
214.00	71	225.00	7505	235.90	768	246.95	975
214.90	592	226.00	1000	236.95	910	247.95	224

216.05	1229	227.00	13080	237.95	201	248.95	880
217.00	14065	227.95	1745	239.00	495	249.95	189
218.00	1710	229.00	2401	239.95	317	250.80	85
218.90	127	229.95	411	240.90	762	251.10	105
220.15	254	231.00	978	242.00	1971	251.85	331
221.00	9830	231.90	230	243.05	1881	252.90	476
221.95	1292	232.90	214	244.00	24275	253.30	195

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
255.00	120579	269.90	209	282.00	88	294.85	214
256.00	17482	270.95	366	282.95	510	295.20	125
257.00	1332	271.95	531	284.00	423	296.00	15313
258.00	6955	273.00	4119	285.05	876	297.00	2294
258.90	1110	274.00	10352	286.00	209	297.95	155
259.90	201	275.00	50693	288.95	165	299.90	29
261.00	227	276.00	6508	289.95	154	300.80	22
262.90	45	277.00	4775	290.95	136	300.95	105
263.90	294	277.90	614	292.00	241	302.00	230
264.95	2846	278.95	235	293.00	974	303.00	1664
265.90	735	281.05	98	293.90	222	303.95	448

Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
304.90	120	315.00	1693	326.00	128	341.00	552
307.90	164	316.05	1108	326.90	916	341.95	109
308.10	126	316.90	56	327.95	484	346.00	1239
308.85	156	317.05	146	329.00	108	346.95	193
309.10	57	319.00	18	332.00	386	350.90	74
310.05	195	320.05	123	332.95	574	352.00	1435
310.80	26	321.00	559	334.05	3126	353.00	972
311.20	17	322.00	248	335.00	933	354.05	1453
311.90	50	323.00	5208	335.90	84	355.05	323
312.85	154	324.05	999	338.90	79	358.85	87
314.00	602	325.00	61	340.10	104	361.30	43

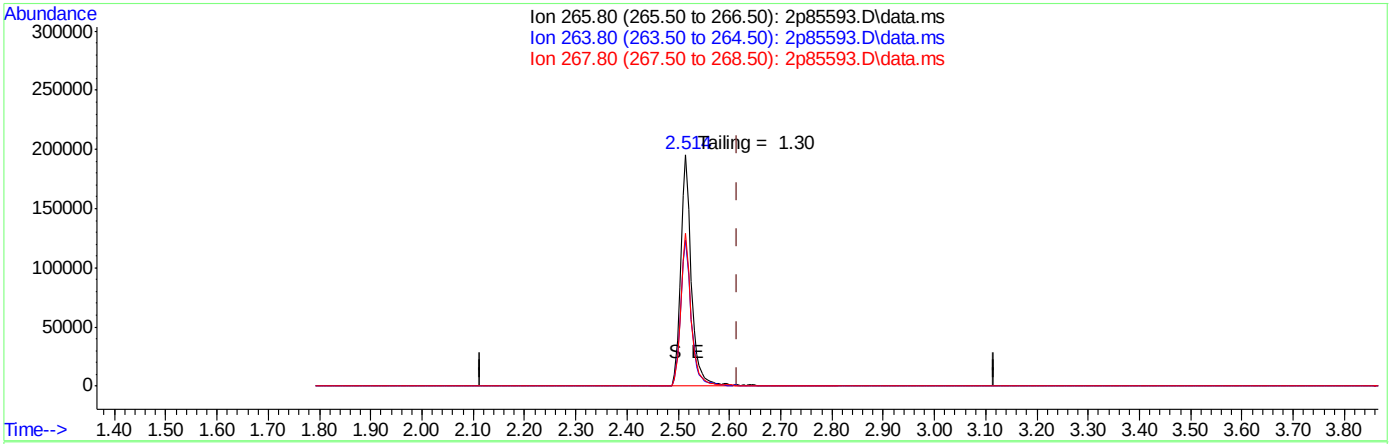
Average of 2.760 to 2.771 min.: 2p85593.D\data.ms
dftpp
Modified:subtracted

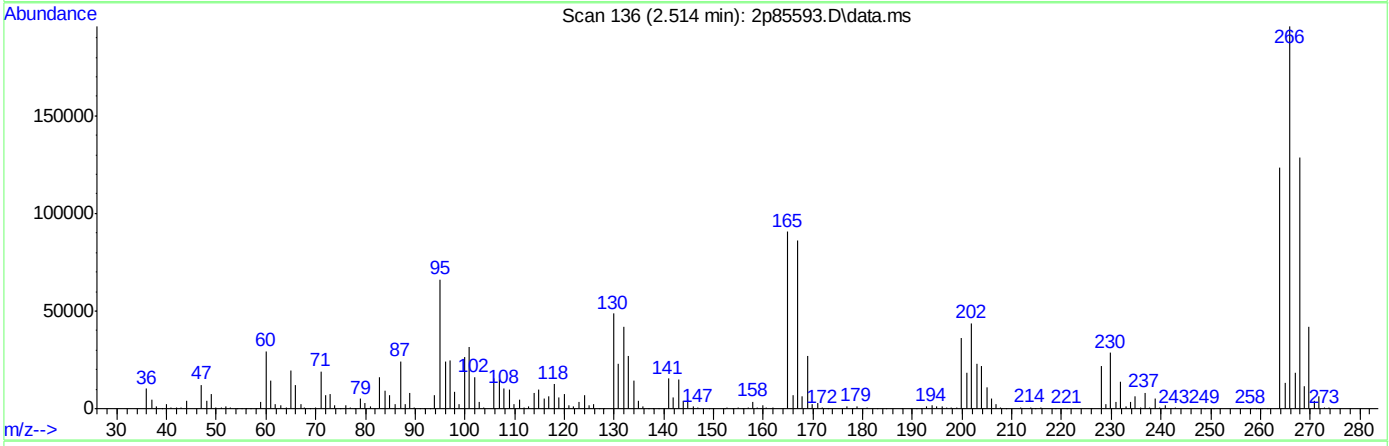
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
365.00	7602	383.90	211	422.05	1253	439.00	59
365.95	940	385.00	17	423.05	8971	441.10	18867
366.95	47	389.95	451	424.00	1635	442.00	116992
369.95	212	391.00	236	425.00	208	443.05	23640
370.95	388	391.95	193	428.10	18	444.05	1973
372.00	3050	400.95	224	429.45	39	444.95	158
373.05	670	401.95	1057	432.90	18		
373.90	45	403.00	1494	433.45	66		
376.95	56	404.05	653	434.40	57		
377.20	20	405.05	86	434.95	49		
383.00	756	421.00	1247	435.90	72		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85593.D
Acq On : 8 Mar 2019 2:56 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 08 02:59:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Dec 07 15:30:33 2018
Response via : Initial Calibration





TIC: 2p85593.D\data.ms

(1) Pentachlorophenol (t)

2.514min (-0.101) 21.71ng

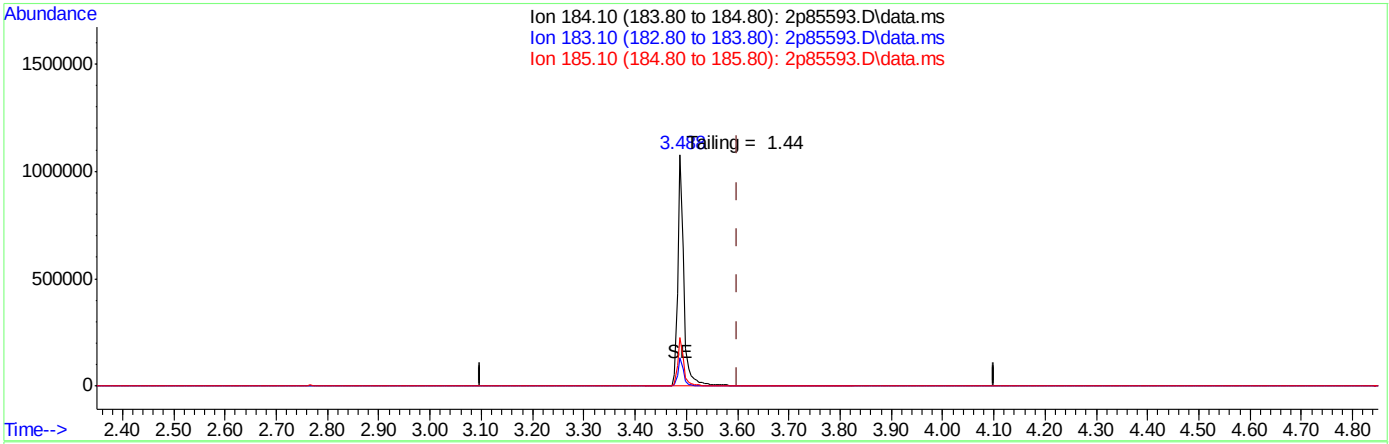
response 275982

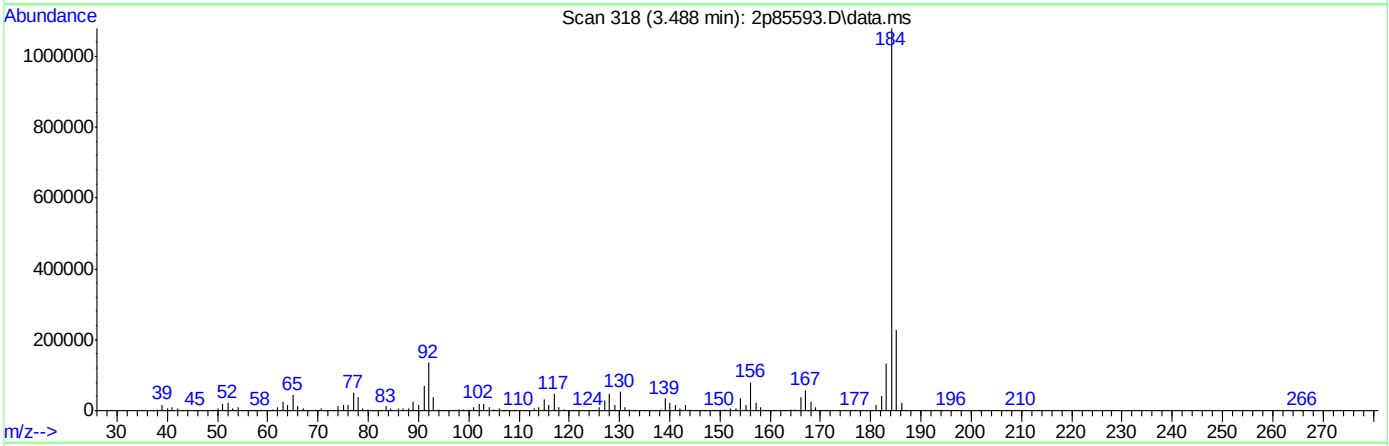
Ion	Exp%	Act%
265.80	100	100
263.80	63.70	63.11
267.80	65.40	65.73
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85593.D
Acq On : 8 Mar 2019 2:56 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 08 02:59:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Dec 07 15:30:33 2018
Response via : Initial Calibration





TIC: 2p85593.D\data.ms

(2) Benzidine

3.488min (-0.112) 13.41ng

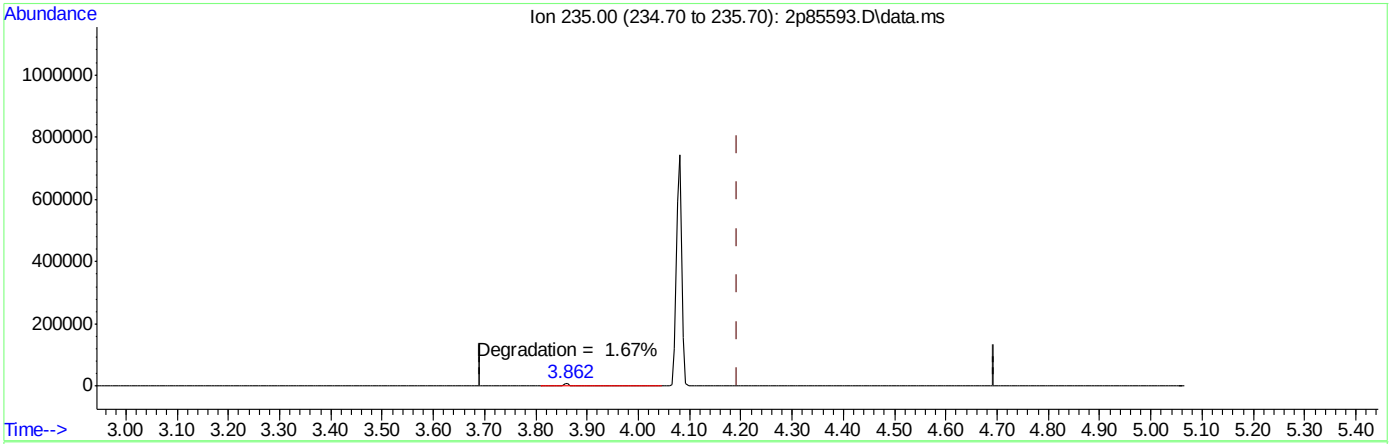
response 873642

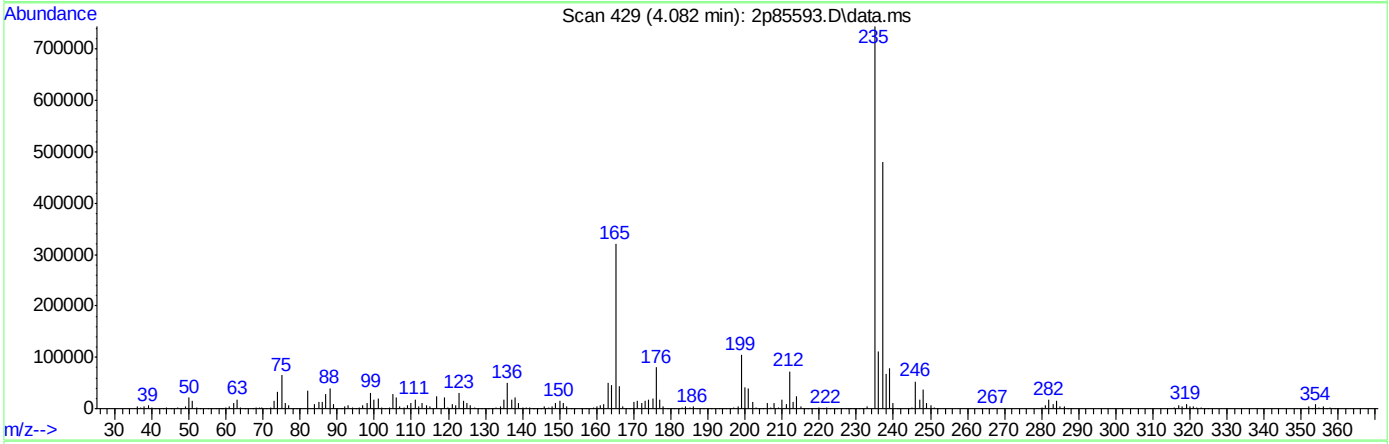
Ion	Exp%	Act%
184.10	100	100
183.10	12.50	12.27
185.10	14.50	21.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85593.D
Acq On : 8 Mar 2019 2:56 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 08 02:59:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Dec 07 15:30:33 2018
Response via : Initial Calibration





TIC: 2p85593.D\data.ms

(3) PP-DDT

4.082min (-0.112) 20.52ng

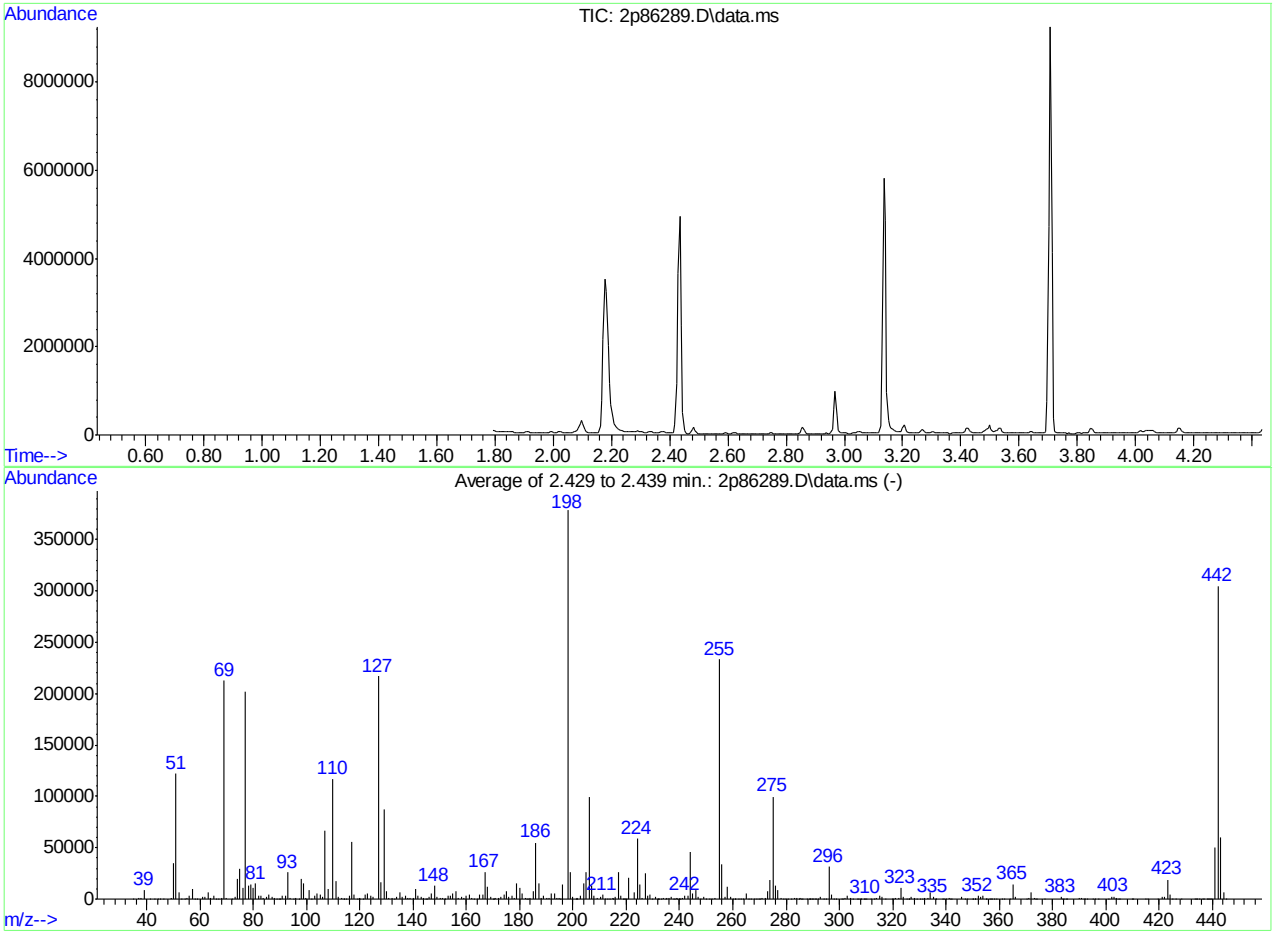
response 523511

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\2P3816\2p86289.D Vial: 1
Acq On : 5 Apr 2019 6:10 am Operator: chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3816,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 120, 121, 122; Background Corrected with Scan 114

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.2	121770	PASS
68	69	0.00	2	0.3	662	PASS
69	198	0.00	100	56.1	212325	PASS
70	69	0.00	2	0.6	1258	PASS
127	198	40	60	57.3	216651	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	378176	PASS
199	198	5	9	7.0	26421	PASS
275	198	10	30	26.4	99683	PASS
365	198	1	100	3.8	14403	PASS
441	443	0.10	100	84.1	50053	PASS
442	198	40	100	80.6	304725	PASS
443	442	17	23	19.5	59507	PASS

2p86289.D DFTPP2P.M Fri Apr 05 13:23:06 2019 RPT1

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	204	51.05	121770	63.05	6810	75.00	29796
37.10	876	52.10	6430	64.00	758	76.05	10984
38.00	1475	53.00	231	65.00	3123	77.05	201859
39.00	9075	54.25	101	66.20	83	78.05	13592
41.05	173	54.95	777	66.90	132	78.95	14093
43.05	298	56.00	3788	68.10	662	80.00	10664
44.00	283	57.00	9411	69.00	212325	80.95	15163
44.95	172	57.95	434	69.95	1258	82.00	3381
46.20	43	59.00	44	71.85	108	83.00	3552
49.00	723	61.05	2172	73.05	1727	83.80	1010
50.00	34738	62.00	2234	74.00	19223	85.00	2387

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.00	4101	96.00	829	107.00	66832	117.95	4176
87.00	1970	97.10	59	108.00	10080	119.00	408
87.95	831	97.95	19478	110.00	116949	119.90	671
88.95	486	98.95	14888	110.95	17337	120.10	97
89.60	33	99.90	866	112.00	2217	120.95	234
90.00	46	101.00	8639	112.95	858	121.95	4543
91.00	3268	101.95	431	113.90	361	123.00	5875
91.95	3785	103.00	3125	114.20	34	123.95	3008
92.95	26135	104.00	5315	114.90	473	125.00	2402
93.95	1675	105.00	4481	116.00	2770	126.95	216651
95.00	372	106.00	1716	117.00	56165	128.05	16059

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.95	87357	140.00	1572	150.00	784	160.00	3329
130.00	7300	141.00	10285	151.10	1374	160.95	4459
131.00	1332	141.95	3593	151.80	214	162.00	1597
131.90	706	143.00	2697	152.05	554	163.00	411
133.00	121	144.05	822	153.00	3400	164.00	521
133.95	2298	144.80	52	154.00	2780	164.95	3900
135.00	6331	145.05	427	155.00	5665	166.10	4324
136.00	2462	146.10	1913	156.05	8209	166.95	26330
137.00	3649	147.00	5129	157.00	1674	167.95	11902
138.05	830	147.95	12669	158.00	2002	169.05	1888
139.00	968	148.95	2447	159.05	1440	169.90	213

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.25	397	180.95	5069	191.00	1409	201.50	1142
171.00	1024	182.00	893	192.00	5612	201.70	337
172.00	1661	182.60	133	193.00	5306	202.95	2803
173.00	2477	183.00	413	194.05	1171	204.00	15634
174.00	4255	184.05	1472	194.90	816	205.00	25850
175.10	8044	185.05	7527	195.10	138	206.05	98822
176.00	2456	186.00	54627	196.00	13754	207.05	13033
177.00	3536	187.05	15490	198.00	378176	207.95	3707
178.00	1510	188.00	1488	199.00	26421	208.90	1201
179.00	15594	188.95	3490	200.00	2060	210.15	1767
180.05	10617	190.00	599	201.30	554	211.00	4359

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
212.00	197	220.20	302	231.70	82	238.90	311
212.75	245	220.95	21182	231.90	260	239.05	637
213.90	161	223.00	6669	232.20	43	239.80	290
214.80	286	224.10	58885	232.95	479	239.95	567

215.00	800	225.00	14362	233.95	1630	240.40	187
216.00	2511	226.05	1658	234.90	538	241.00	1401
217.00	26411	227.00	24843	235.05	977	242.00	3573
218.00	3353	227.95	3161	236.00	1061	243.05	3536
218.90	155	229.05	4599	237.00	1798	244.10	45859
219.10	168	229.85	509	237.90	86	245.00	5949
219.50	76	231.00	2129	238.10	306	246.00	8705

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
246.95	1846	259.00	2193	268.70	88	279.00	369
247.95	474	259.95	480	269.70	84	279.90	124
248.95	2160	260.80	94	269.90	38	280.80	101
250.00	369	261.00	192	271.05	740	281.85	267
251.00	400	262.05	84	272.00	796	283.00	1262
251.95	542	263.15	79	273.00	7269	283.95	838
253.15	1348	263.95	505	274.00	18291	284.90	276
255.00	233173	265.00	5144	275.00	99683	285.10	1638
256.00	34192	265.85	357	276.00	13500	285.80	115
257.00	2604	266.85	201	277.00	8226	286.05	302
258.00	12376	267.90	579	278.05	1554	287.95	183

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.60	72	296.00	31176	307.10	75	317.05	272
288.85	367	297.00	4435	307.90	64	319.80	105
289.20	61	297.95	394	308.10	393	320.10	193
289.80	151	298.80	136	309.05	390	321.05	917
290.00	123	300.80	339	309.60	53	322.10	626
290.70	51	301.20	158	309.95	405	323.05	10554
291.05	239	302.05	644	311.95	156	324.05	1830
291.95	479	303.10	3457	312.95	247	325.10	164
292.95	1772	304.00	1155	314.05	1675	326.00	227
293.95	579	305.15	152	314.95	3270	326.20	96
294.90	159	306.50	84	316.05	1728	326.95	2185

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
327.95	1022	339.05	159	351.00	191	360.80	57
329.05	245	340.00	186	352.05	3242	361.95	35
330.10	48	341.00	1037	353.10	2286	364.00	93
331.20	26	341.80	119	354.00	3321	365.00	14403
331.95	663	342.05	310	354.90	155	365.95	2140
333.00	994	345.95	2627	355.05	563	370.05	359
334.05	6335	347.00	401	356.40	46	371.10	1021
335.10	1772	348.10	81	356.70	42	372.10	6076
335.95	275	349.90	20	357.15	65	373.00	1543
336.20	123	350.10	167	358.05	58	373.70	20
338.80	18	350.70	22	358.95	333	373.95	80

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
377.00	142	394.90	39	410.20	39	433.30	39
383.10	1812	395.90	52	415.00	121	433.90	94
383.90	118	397.20	46	415.80	26	434.10	32
384.05	265	400.95	297	419.45	106	435.05	53
385.00	28	402.00	2398	421.05	2687	436.40	111
385.20	26	403.05	2619	422.10	1932	436.80	37
390.00	884	403.90	303	423.10	18927	437.85	77
391.05	605	404.05	997	424.00	4592	438.40	28
391.50	68	404.80	33	424.95	437	438.75	140
392.00	580	404.95	256	426.15	59	439.40	44
392.80	20	409.90	66	428.40	17	439.80	145

Average of 2.429 to 2.439 min.: 2p86289.D\data.ms

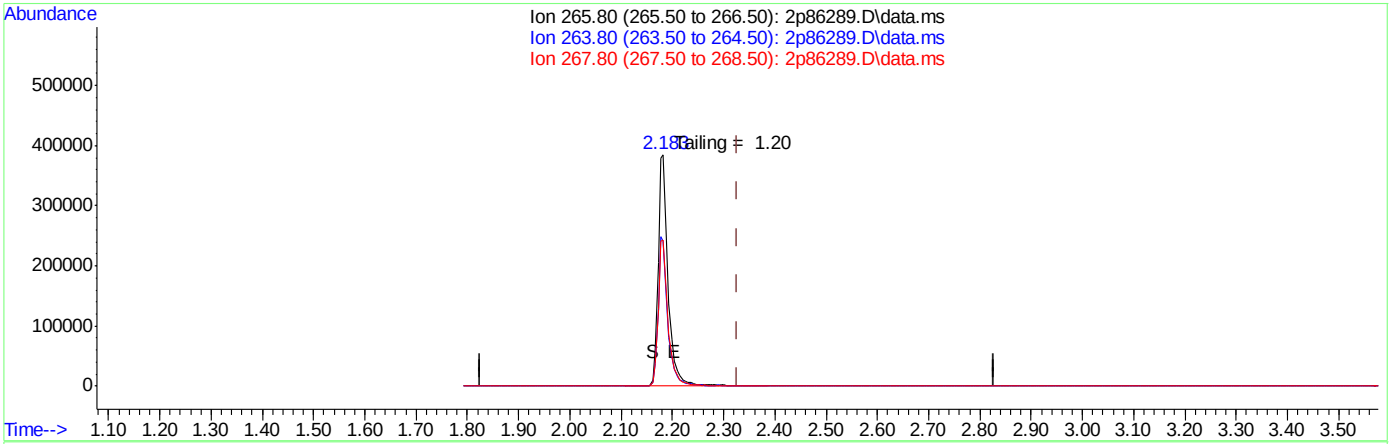
dftpp
Modified:subtracted

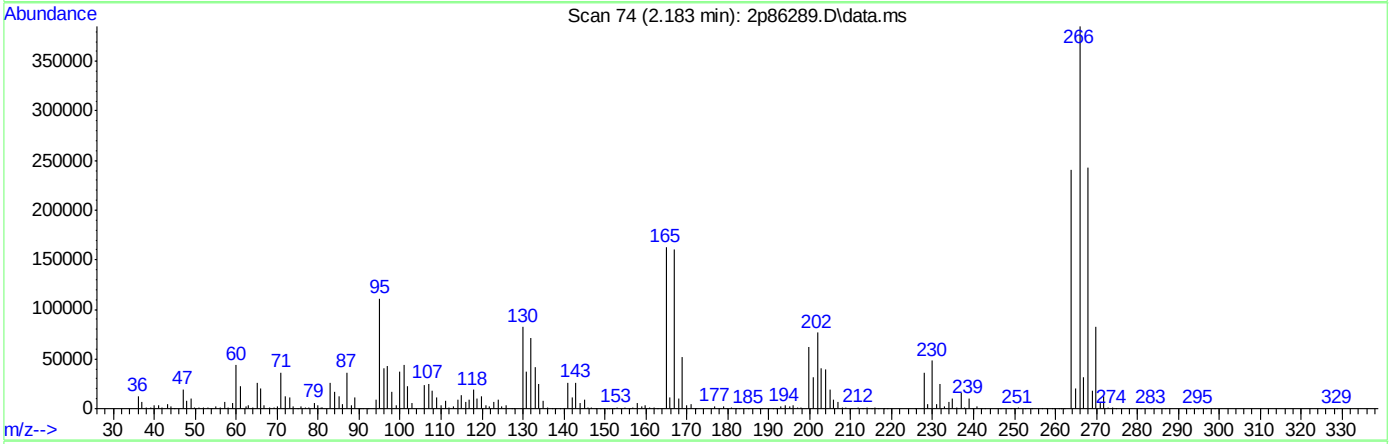
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
441.10	50053						
442.10	304725						
443.10	59507						
444.10	6216						
444.95	273						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86289.D
Acq On : 5 Apr 2019 6:10 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 06:14:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86289.D\data.ms

(1) Pentachlorophenol (t)

2.183min (-0.144) 41.34ng

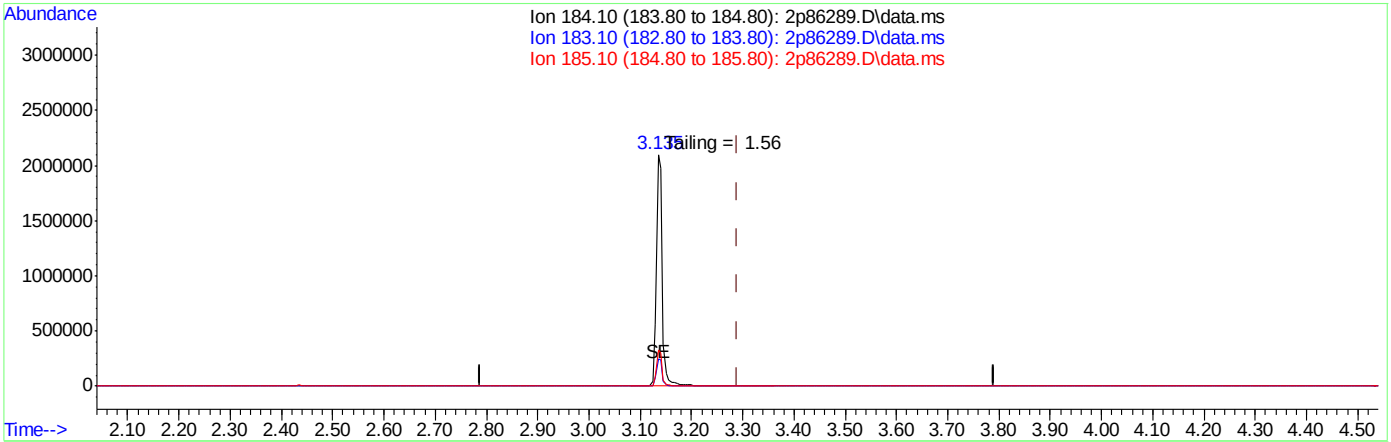
response 525624

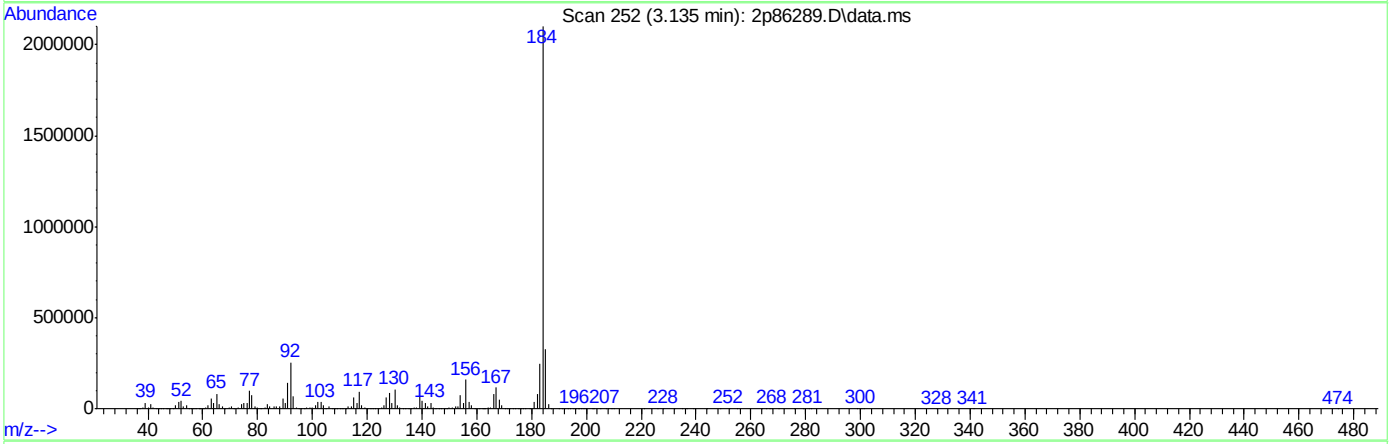
Ion	Exp%	Act%
265.80	100	100
263.80	62.50	62.21
267.80	63.10	63.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86289.D
Acq On : 5 Apr 2019 6:10 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 06:14:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86289.D\data.ms

(2) Benzidine

3.135min (-0.155) 26.87ng

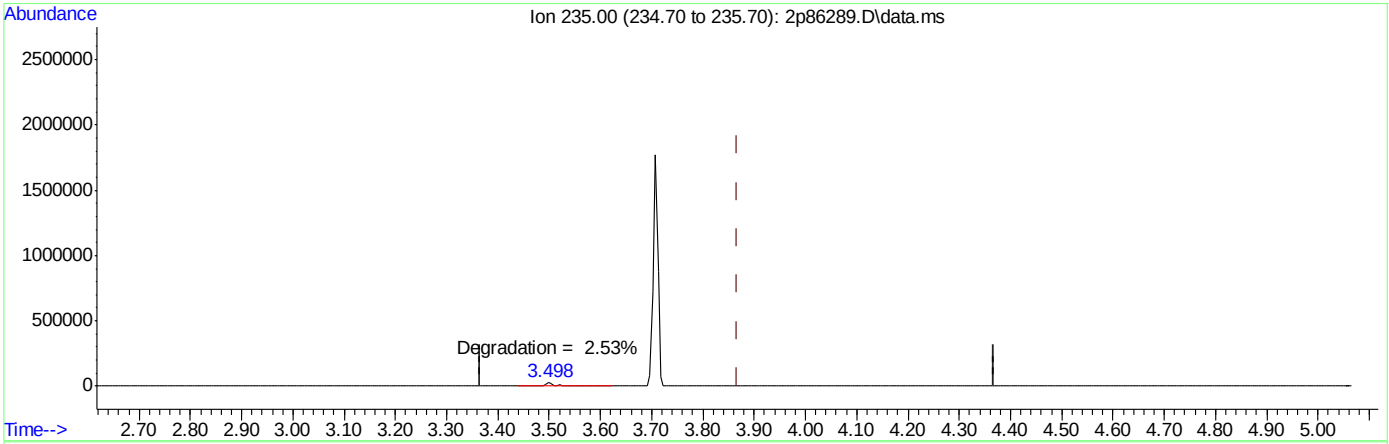
response 1750960

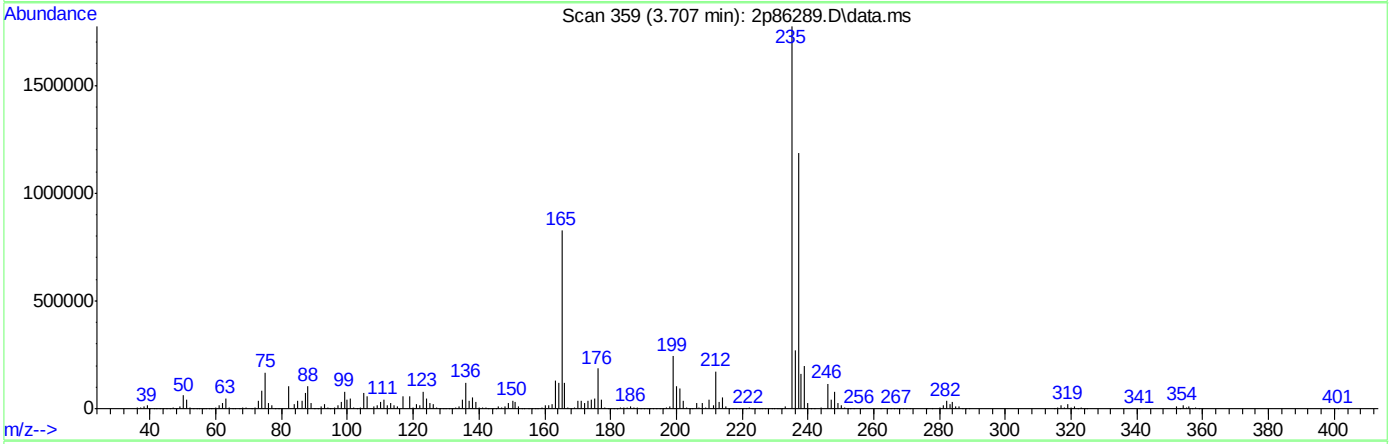
Ion	Exp%	Act%
184.10	100	100
183.10	11.60	11.67
185.10	15.20	15.68
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86289.D
Acq On : 5 Apr 2019 6:10 am
Operator : chriss2
Sample : dftpp
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 06:14:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86289.D\data.ms

(3) PP-DDT

3.707min (-0.161) 44.63ng

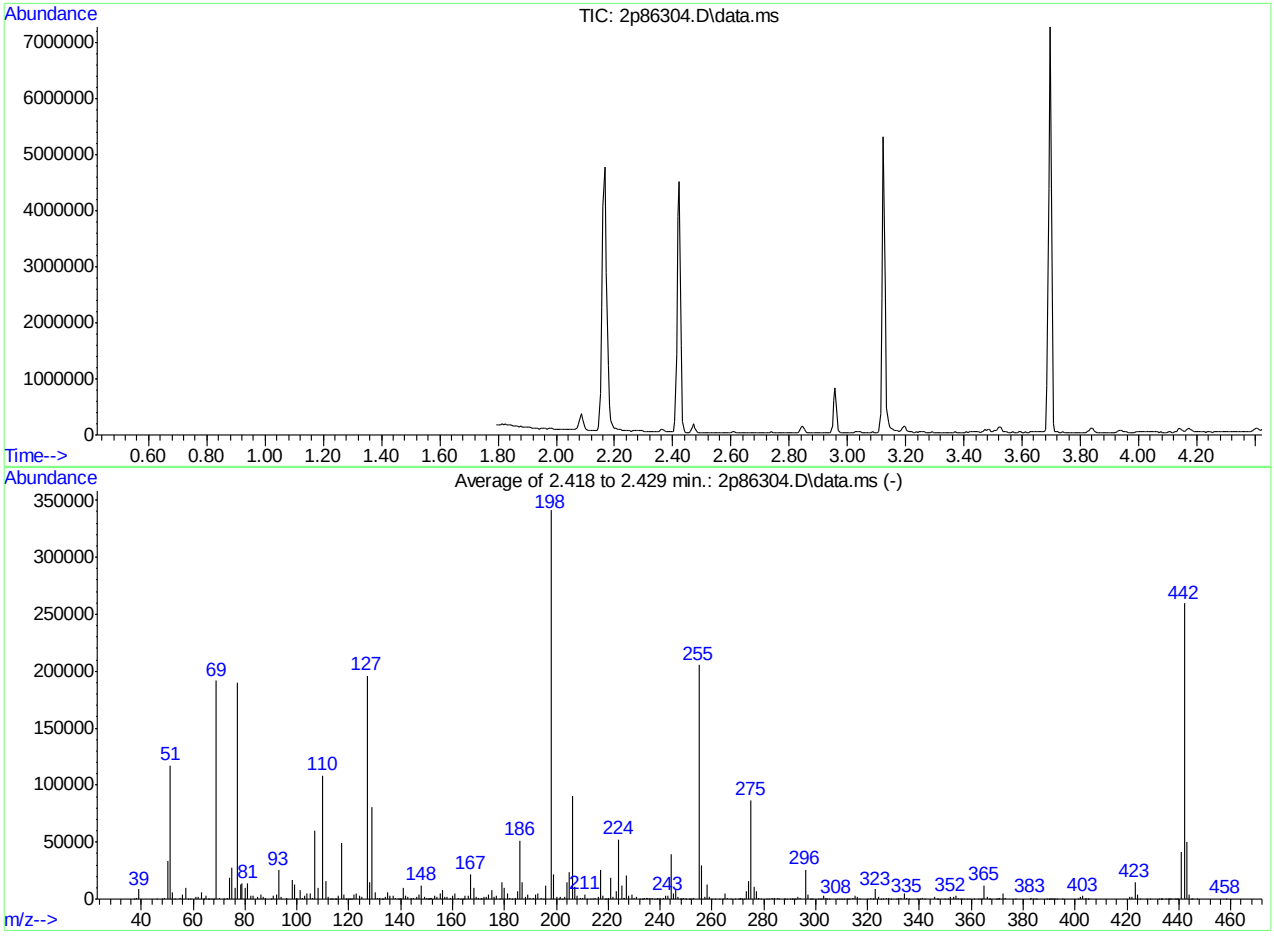
response 1138900

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\2P3817\2p86304.D Vial: 1
Acq On : 5 Apr 2019 3:23 pm Operator: christc2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3817,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 118, 119, 120; Background Corrected with Scan 112

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.5	117587	PASS
68	69	0.00	2	0.0	24	PASS
69	198	0.00	100	56.3	191835	PASS
70	69	0.00	2	0.3	604	PASS
127	198	40	60	57.5	196167	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	341035	PASS
199	198	5	9	6.4	21917	PASS
275	198	10	30	25.5	87024	PASS
365	198	1	100	3.6	12310	PASS
441	443	0.10	100	82.6	41056	PASS
442	198	40	100	76.1	259669	PASS
443	442	17	23	19.1	49717	PASS

2p86304.D DFTPP2P.M Mon Apr 08 13:07:51 2019 RPT1

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	401	56.00	3848	66.10	198	78.10	12573
38.00	1413	57.00	9541	66.95	385	78.95	13366
39.05	8662	58.00	319	68.15	24	79.95	9703
46.00	80	59.00	263	69.00	191835	81.00	13807
48.15	87	60.95	1877	70.10	604	82.00	3212
49.10	1044	62.00	2081	71.70	179	83.05	3137
50.05	33554	63.05	5847	73.00	1274	85.00	2447
51.10	117587	63.90	465	74.00	18789	85.95	3988
52.05	5618	64.10	451	75.05	27924	87.05	1760
53.00	327	65.00	3229	76.05	9793	87.90	803
55.00	601	65.90	174	77.05	190374	90.00	164

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.00	2655	103.95	4519	114.70	110	122.00	4323
92.00	3834	105.05	4724	115.20	121	123.00	4985
93.00	25396	106.00	1318	116.05	3465	123.95	2817
94.00	1773	107.00	60058	117.00	49695	125.00	2400
96.05	802	108.00	9831	117.95	3527	127.00	196167
98.00	16955	110.00	108469	118.90	282	128.05	14626
99.00	13087	111.00	15912	119.10	212	129.00	80881
99.95	911	112.00	2152	119.90	298	130.00	6357
101.05	7483	112.90	363	120.10	383	130.95	1091
101.90	559	113.10	346	120.70	144	131.90	565
103.00	2621	113.95	284	121.00	89	132.95	423

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.20	143	142.90	1958	151.90	807	162.95	520
134.05	1992	144.00	713	153.05	3401	163.90	354
135.00	5964	145.00	739	154.00	2388	164.20	339
135.95	3052	146.05	1713	155.05	5368	164.95	3442
137.00	2666	147.05	4299	156.00	7568	165.95	2970
138.10	680	148.00	12159	157.05	1735	167.00	21927
138.85	290	149.00	2021	157.95	1650	168.00	9933
139.05	190	150.05	567	159.00	1259	169.00	1902
140.00	1037	150.40	124	160.00	3140	170.00	760
141.00	9534	150.95	497	161.05	4714	170.70	150
142.05	3071	151.25	1062	162.05	1503	171.05	649

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
172.00	1623	183.10	518	194.00	1017	205.10	23307
173.10	2324	184.00	1014	194.90	460	206.05	90670
174.00	3665	185.10	6604	196.05	11832	207.10	11262
175.05	7548	186.10	51651	198.00	341035	208.05	2884
176.10	2277	187.00	15210	199.00	21917	209.05	995
177.05	2860	188.10	1664	200.05	1793	210.00	883
178.00	474	189.00	3507	200.90	438	211.05	4206
179.00	14474	189.85	689	201.60	1645	212.05	327
180.00	9710	191.05	1367	202.20	127	213.05	378
181.10	4698	192.00	4399	203.00	2492	214.00	68
182.10	903	193.05	5037	204.00	14336	215.00	876

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.05	2177	226.00	858	234.90	760	244.10	39443
217.00	25408	226.20	793	235.05	1138	245.10	5163
218.00	3287	227.00	20442	235.95	1317	246.00	7935
218.95	290	228.00	2958	237.00	1445	247.05	1616

219.35	293	229.00	4166	238.00	88	247.60	147
220.10	611	230.00	709	238.70	177	248.00	127
221.00	18620	231.00	1777	239.10	911	248.20	37
221.95	2098	232.10	346	239.95	756	249.00	1258
223.00	6813	233.00	285	241.10	1262	249.90	317
224.10	52581	233.30	182	242.05	2649	250.10	50
225.10	12031	234.00	1517	243.15	3339	251.05	408

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
251.50	18	263.95	431	274.10	16209	285.95	265
251.95	418	265.00	5288	275.05	87024	287.80	27
253.00	1190	266.00	802	276.10	10838	288.10	82
255.00	205539	267.00	63	277.00	6965	288.90	316
256.00	29091	268.90	105	278.00	1370	290.15	353
257.05	2224	270.00	303	278.95	392	290.80	84
258.05	13093	270.70	56	280.90	2	291.00	168
259.00	1866	271.05	633	281.95	159	292.00	249
259.95	406	271.70	94	283.05	762	292.20	116
260.95	378	272.15	505	283.95	579	293.05	1845
263.00	47	273.05	6996	285.15	1219	294.00	635

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.00	25964	305.10	21	317.00	294	330.95	67
297.05	4151	308.05	514	319.80	82	332.05	622
297.80	259	308.95	260	321.00	869	333.05	1006
298.10	84	309.90	221	321.95	523	334.05	5386
298.90	184	310.90	112	323.10	8567	335.05	1350
301.00	245	312.10	98	324.05	1759	336.00	238
301.70	69	312.70	35	324.95	293	338.90	69
302.00	330	313.15	245	325.80	108	339.30	79
303.05	3139	314.10	1085	327.05	1476	340.05	144
304.00	873	315.05	3052	328.00	933	341.10	1266
304.20	149	316.00	1599	329.00	126	342.05	485

Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
345.95	1857	357.00	22	369.70	22	385.10	100
346.80	206	358.40	109	370.00	109	389.05	46
347.05	226	359.10	229	370.35	145	390.00	377
349.90	46	361.00	65	371.05	658	390.20	189
350.95	228	362.80	38	372.10	4965	390.90	233
352.05	2397	363.70	55	373.10	1009	391.10	138
353.10	1916	363.90	53	377.00	194	391.80	88
354.05	2529	365.00	12310	382.40	76	392.05	343
355.10	572	366.05	1928	383.00	1155	393.00	29
355.90	148	366.95	144	384.00	303	395.05	43
356.10	23	367.20	30	384.80	36	400.95	431

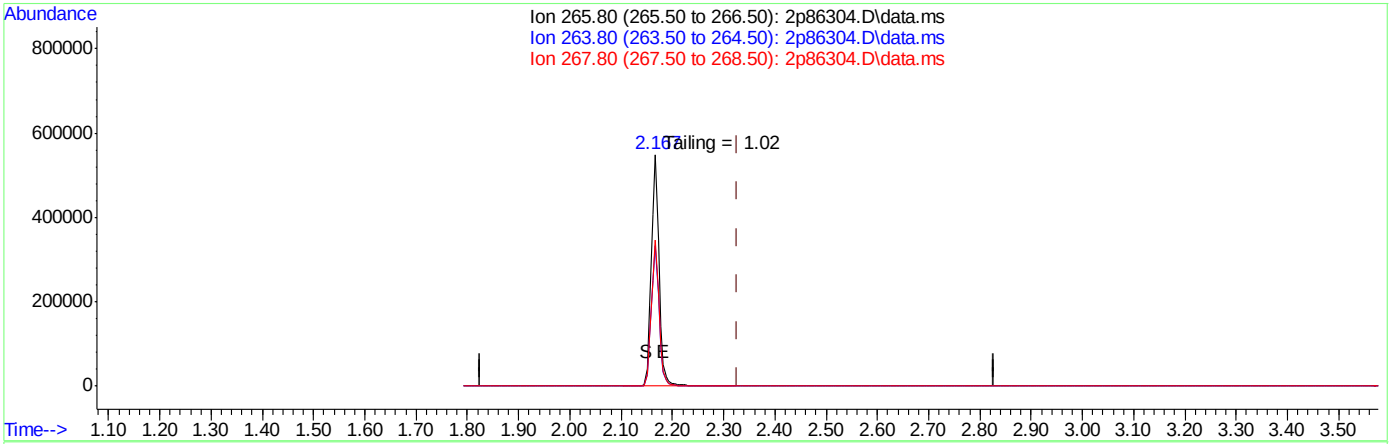
Average of 2.418 to 2.429 min.: 2p86304.D\data.ms
dftpp
Modified:subtracted

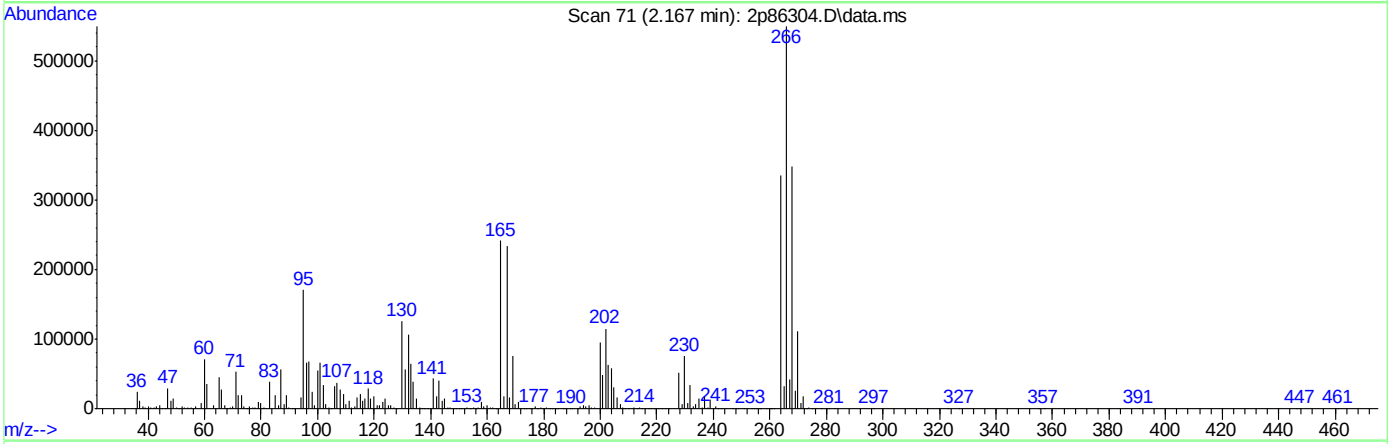
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
402.00	2101	428.90	48	438.70	100		
403.00	2746	432.20	63	439.10	48		
404.05	1119	433.00	57	439.45	52		
405.00	71	433.30	48	441.10	41056		
405.20	245	433.60	42	442.10	259669		
421.05	2142	434.90	47	443.10	49717		
422.10	2403	435.90	41	444.05	4133		
423.05	15275	436.20	33	444.90	75		
424.05	3734	436.50	62	445.15	112		
425.10	275	437.15	48	447.10	19		
427.50	33	438.20	104	458.00	51		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3817\
Data File : 2p86304.D
Acq On : 5 Apr 2019 3:23 pm
Operator : christc2
Sample : dftpp
Misc : op13652,e2p3817,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 15:26:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86304.D\data.ms

(1) Pentachlorophenol (t)

2.167min (-0.161) 45.32ng

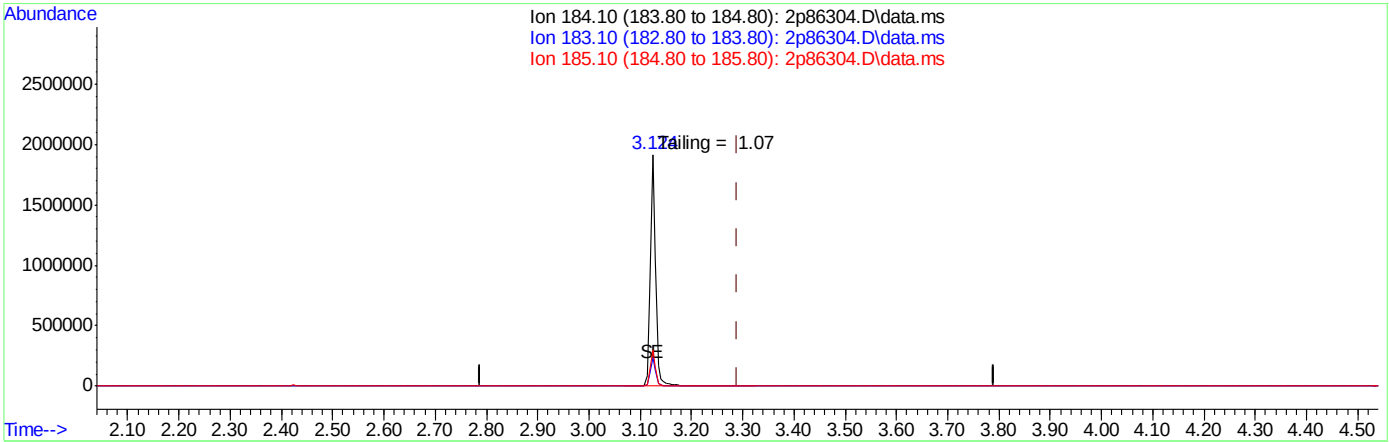
response 576227

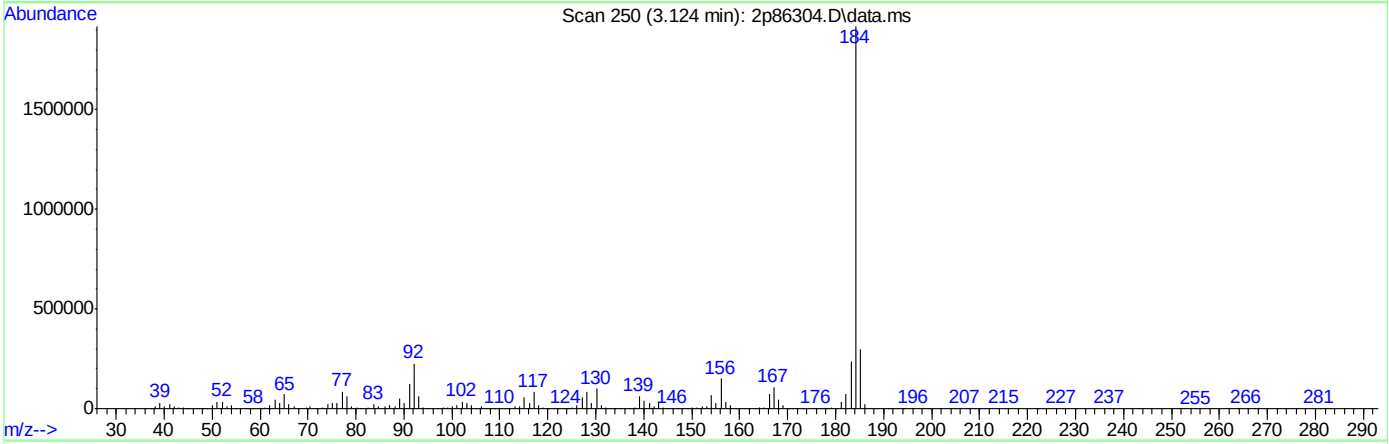
Ion	Exp%	Act%
265.80	100	100
263.80	62.50	60.84
267.80	63.10	63.25
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3817\
Data File : 2p86304.D
Acq On : 5 Apr 2019 3:23 pm
Operator : christc2
Sample : dftpp
Misc : op13652,e2p3817,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 15:26:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86304.D\data.ms

(2) Benzidine

3.124min (-0.166) 20.90ng

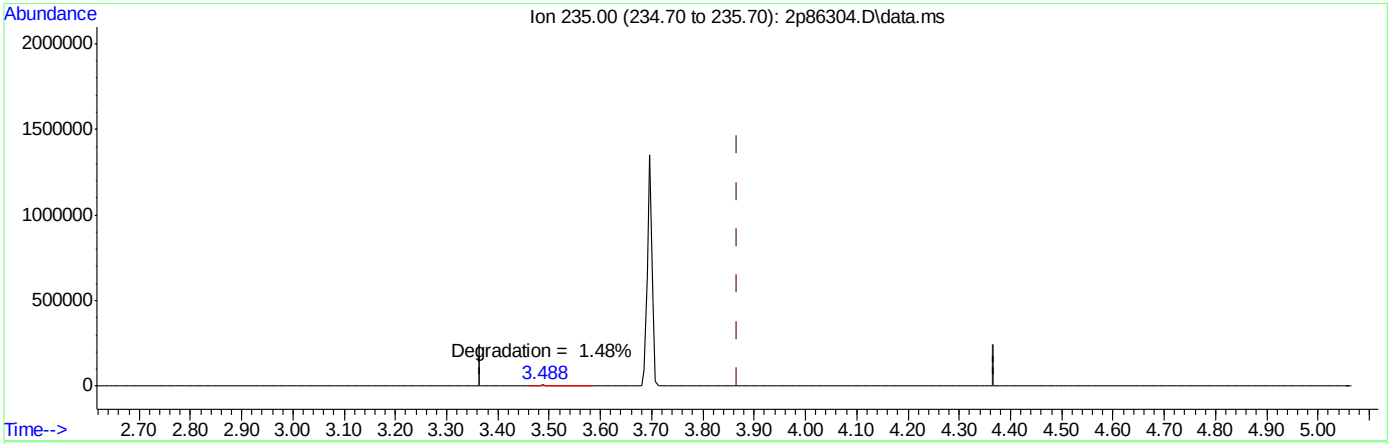
response 1361570

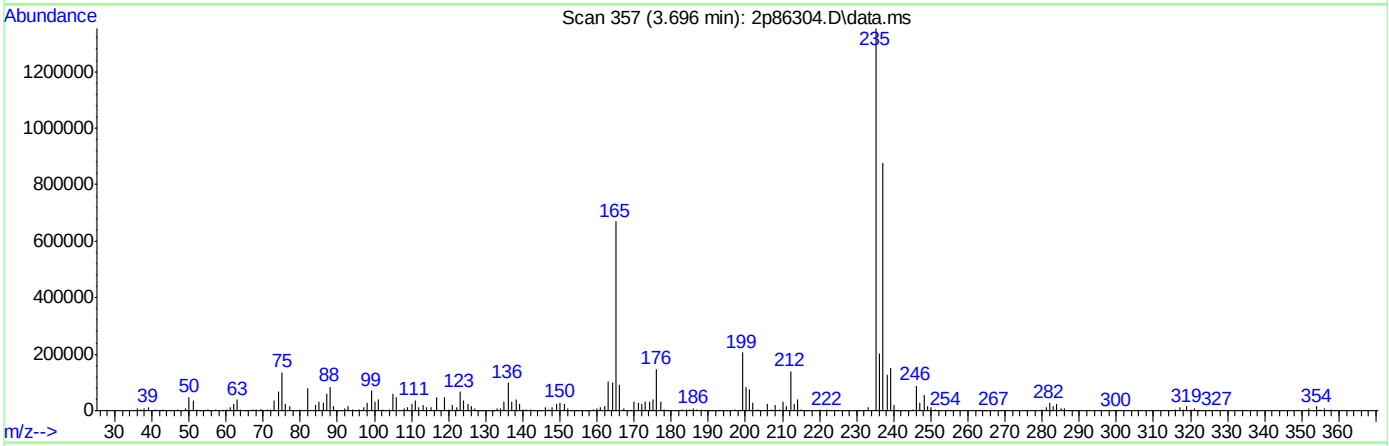
Ion	Exp%	Act%
184.10	100	100
183.10	11.60	12.21
185.10	15.20	15.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3817\
Data File : 2p86304.D
Acq On : 5 Apr 2019 3:23 pm
Operator : christc2
Sample : dftpp
Misc : op13652,e2p3817,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 05 15:26:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 15 03:14:37 2019
Response via : Initial Calibration





TIC: 2p86304.D\data.ms

(3) PP-DDT

3.696min (-0.171) 33.02ng

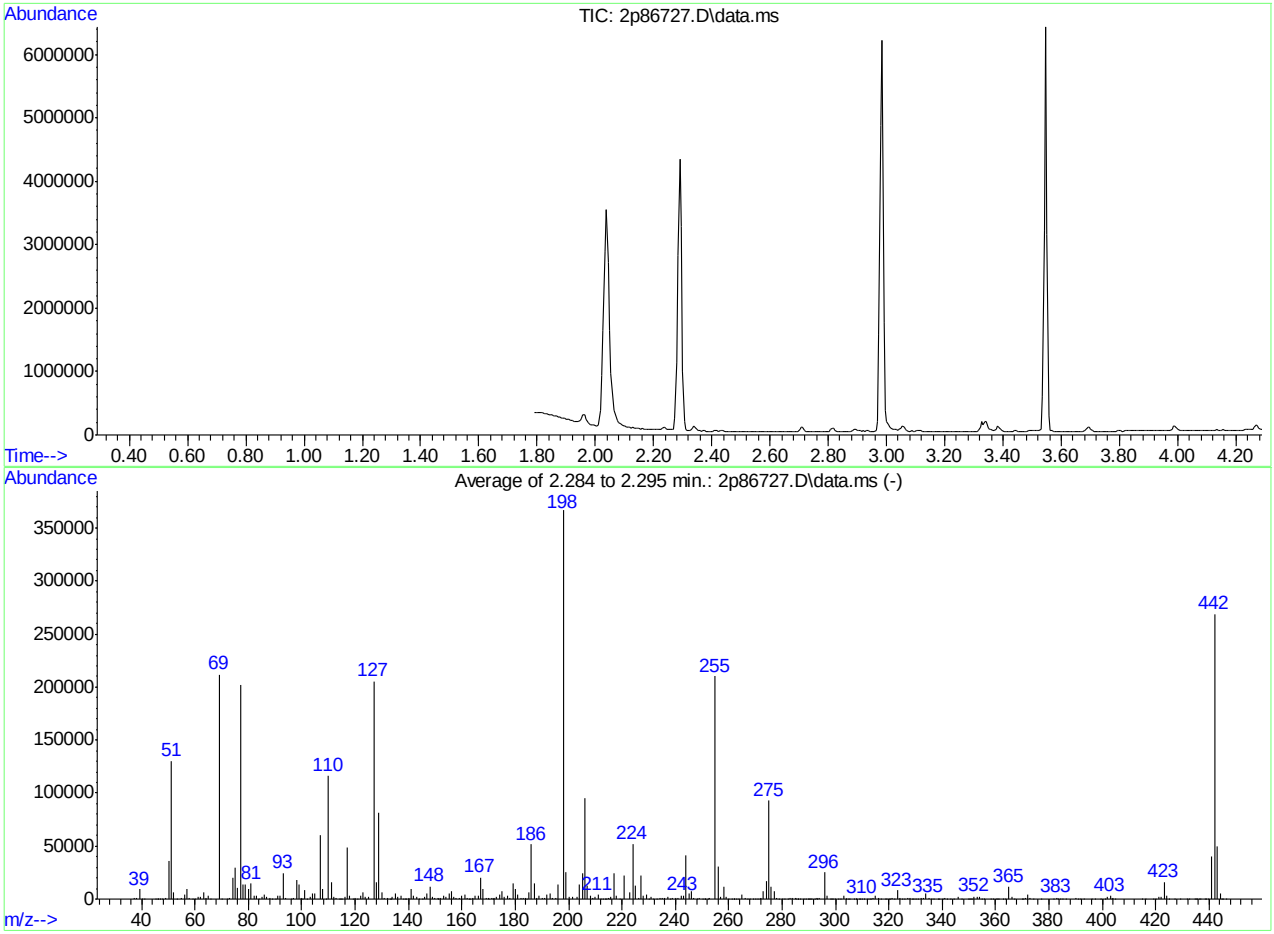
response 842650

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\2P3831\2p86727.D Vial: 1
Acq On : 18 Apr 2019 10:12 pm Operator: carolb
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3831,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 93, 94, 95; Background Corrected with Scan 88

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.5	130108	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	57.8	212085	PASS
70	69	0.00	2	0.3	573	PASS
127	198	40	60	56.0	205405	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	366656	PASS
199	198	5	9	6.9	25165	PASS
275	198	10	30	25.3	92875	PASS
365	198	1	100	3.1	11305	PASS
441	443	0.10	100	81.1	40717	PASS
442	198	40	100	73.3	268771	PASS
443	442	17	23	18.7	50184	PASS

2p86727.D DFTPP2P.M Fri Apr 19 10:06:35 2019 RPT1

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	642	50.05	36281	62.00	2322	76.05	10775
38.00	1349	51.10	130108	63.05	5910	77.05	202185
39.10	9221	52.05	6903	64.00	703	78.05	14264
40.00	166	53.05	174	65.00	2797	79.00	13524
41.00	84	55.00	909	65.90	329	80.00	9728
45.00	172	56.00	4409	69.00	212085	81.05	14357
46.00	30	57.00	9281	70.05	573	82.00	3211
46.20	74	57.95	591	72.00	13	83.05	3405
46.95	25	59.00	308	73.00	1477	83.95	76
47.80	70	59.95	152	74.00	19685	85.00	2391
49.00	720	61.05	2052	74.95	29339	86.00	4017

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.95	1762	99.00	13862	110.00	116346	120.00	924
87.90	721	100.00	589	111.00	16284	120.85	346
89.05	369	100.20	375	112.05	2019	122.05	3487
90.05	163	101.00	8251	113.00	609	123.05	6252
91.00	3474	102.00	491	113.90	222	123.95	2576
92.00	3653	103.00	2213	114.70	143	125.05	2105
92.95	24825	104.05	5118	115.00	135	127.00	205405
94.00	1463	104.95	4889	116.05	2369	128.05	15721
96.00	455	107.00	60416	117.00	48778	128.95	81986
97.05	584	107.95	9749	118.00	3545	129.95	6761
98.00	17690	109.05	77	119.05	221	131.00	1103

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.05	657	141.00	9941	151.20	344	162.00	1442
132.95	408	142.00	3235	152.00	745	162.90	168
133.20	191	143.00	2427	153.00	2722	163.00	299
134.00	2023	144.00	471	154.00	1957	163.95	696
135.00	5504	145.00	202	155.05	5388	164.95	3256
136.05	2525	146.00	1839	156.05	7102	166.05	2724
137.05	2688	147.00	4871	157.05	1638	166.95	20234
138.05	85	147.95	11990	157.95	1557	167.95	9408
138.70	140	148.95	1951	158.95	1043	169.00	1613
138.90	187	150.00	790	160.00	3099	169.80	135
140.05	956	151.00	717	161.00	4164	170.10	777

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.10	1065	181.00	4394	191.00	1106	204.05	14069
171.80	366	182.05	702	192.00	4479	205.05	24499
172.00	1285	182.95	580	193.00	4999	206.10	95131
173.05	2615	183.90	783	194.00	899	207.05	12455
174.05	3935	184.20	238	195.00	576	208.00	2830
175.05	7294	185.05	6218	196.00	13396	208.95	807
176.00	2276	186.05	51584	198.00	366656	210.05	1805
177.00	3083	187.00	14858	199.00	25165	211.05	4218
178.00	1105	188.00	1341	200.05	2078	212.10	300
179.00	14588	188.95	3189	201.55	2320	212.95	476
180.00	9677	190.05	757	203.00	2638	213.80	41

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
214.05	82	226.05	1398	237.05	1827	248.05	406
214.95	662	227.00	21770	237.95	241	248.95	1537
215.20	307	228.05	3181	239.05	763	250.05	344
215.95	2321	229.00	4534	240.05	674	250.90	93

217.00	23867	230.00	304	241.00	1564	251.10	277
218.00	3451	231.00	1953	242.05	2690	252.15	389
219.00	328	231.90	84	243.05	3637	252.90	850
221.00	22763	232.95	569	244.05	41584	255.00	210332
223.00	6169	234.05	1341	245.05	5437	256.00	30965
224.10	52075	235.00	1468	246.00	7612	256.95	2476
225.10	13012	236.00	1025	247.00	1617	258.00	11641

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
259.05	1973	269.10	33	278.95	369	287.95	96
260.00	370	269.90	387	280.00	57	288.95	427
261.00	287	270.95	454	281.05	143	289.90	116
261.80	22	271.80	174	282.05	311	290.10	95
262.00	25	272.20	706	283.00	808	290.70	23
262.85	100	273.00	7074	284.00	776	291.00	137
263.85	523	274.05	16970	284.90	274	292.05	481
265.00	4313	275.00	92875	285.10	1172	292.90	448
266.05	639	276.00	12012	285.80	41	293.05	1246
267.20	258	277.00	7643	285.95	228	294.00	582
267.90	117	278.00	1295	286.85	56	296.00	25227

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
297.00	3293	305.10	88	314.05	1398	324.05	1531
297.95	301	307.10	35	315.05	3019	325.10	113
298.70	30	307.80	83	316.05	1617	325.95	256
299.00	27	307.95	290	317.00	289	326.90	1384
299.85	57	308.85	157	318.80	72	328.00	949
301.05	519	309.20	50	319.30	25	328.80	34
301.85	573	309.90	335	319.95	175	329.00	93
303.05	3039	310.90	74	320.50	90	330.20	38
303.80	170	311.95	63	321.05	1083	330.80	58
303.95	556	312.90	148	322.00	181	332.05	793
304.90	75	313.10	77	323.10	8221	333.00	739

Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
334.00	5634	346.00	2101	358.00	18	370.20	147
335.05	1385	347.05	419	359.05	268	371.15	792
335.90	175	349.80	51	360.10	60	372.10	4613
336.70	20	350.00	30	360.80	19	373.05	1234
338.40	18	350.80	55	361.10	80	374.05	174
338.85	134	351.20	133	362.90	60	377.10	92
339.90	114	352.05	2154	363.70	42	381.50	18
340.95	1143	353.00	1846	365.05	11305	382.95	1218
341.95	313	354.05	2402	366.00	1798	383.50	48
343.10	37	355.00	460	366.90	84	384.05	439
344.20	53	355.80	28	369.90	161	385.05	145

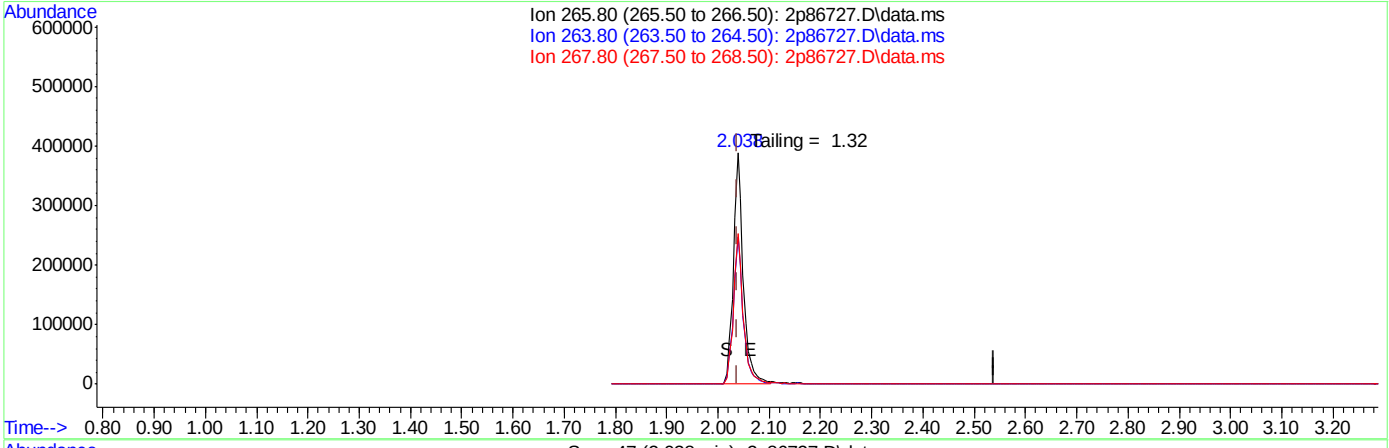
Average of 2.284 to 2.295 min.: 2p86727.D\data.ms
dftpp
Modified:subtracted

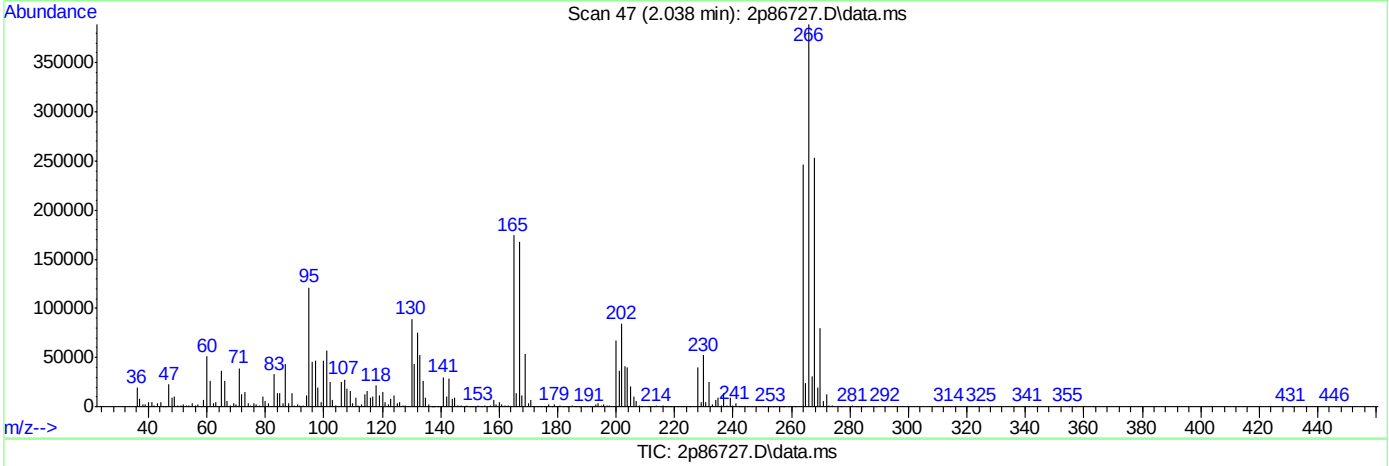
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
386.20	21	403.70	77	425.05	312	438.65	86
390.00	696	404.00	657	427.10	26	439.80	126
390.90	397	404.95	223	429.10	23	441.10	40717
391.95	322	414.90	73	431.65	57	442.10	268771
392.95	59	416.00	57	432.70	76	443.10	50184
396.10	74	419.20	19	434.55	64	444.15	4891
397.30	28	419.90	24	435.20	118	444.80	25
399.50	17	421.05	2583	435.50	46	444.95	298
400.95	424	422.05	2229	436.35	63	446.20	146
402.00	2023	423.10	16198	436.90	76		
403.00	2958	424.05	2841	438.40	31		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86727.D
Acq On : 18 Apr 2019 10:12 pm
Operator : carolb
Sample : dftpp
Misc : op13652,e2p3831,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 22:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86727.D\data.ms

(1) Pentachlorophenol (t)

2.038min (0.000) 42.28ng

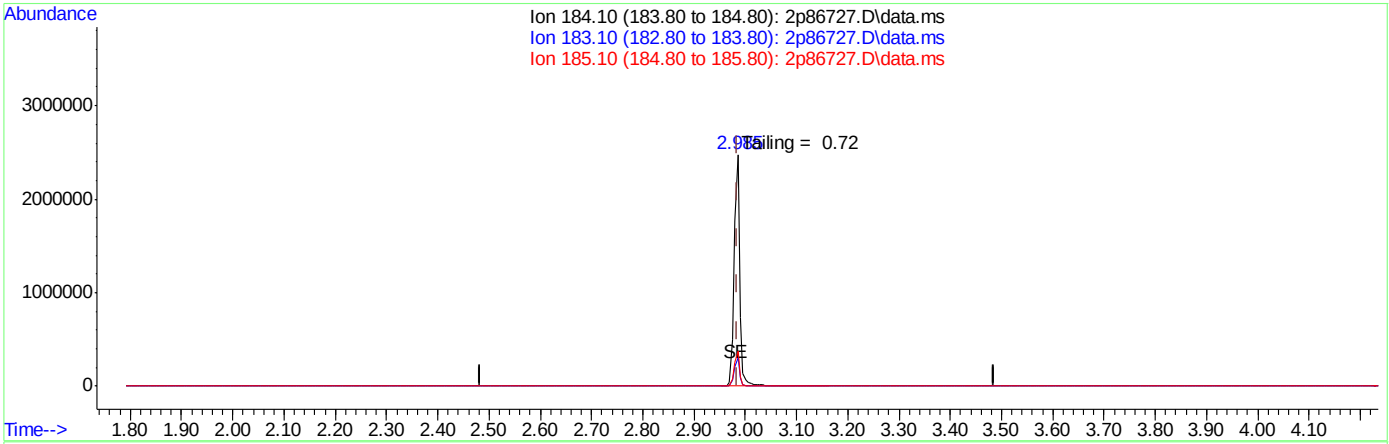
response 537556

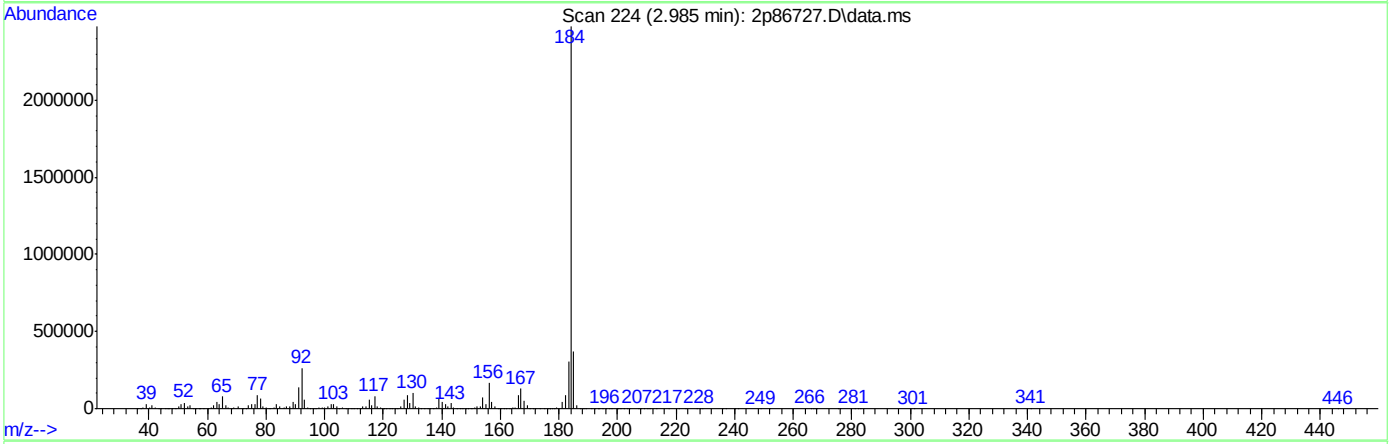
Ion	Exp%	Act%
265.80	100	100
263.80	63.50	63.48
267.80	65.20	65.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86727.D
Acq On : 18 Apr 2019 10:12 pm
Operator : carolb
Sample : dftpp
Misc : op13652,e2p3831,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 22:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86727.D\data.ms

(2) Benzidine

2.985min (0.000) 29.10ng

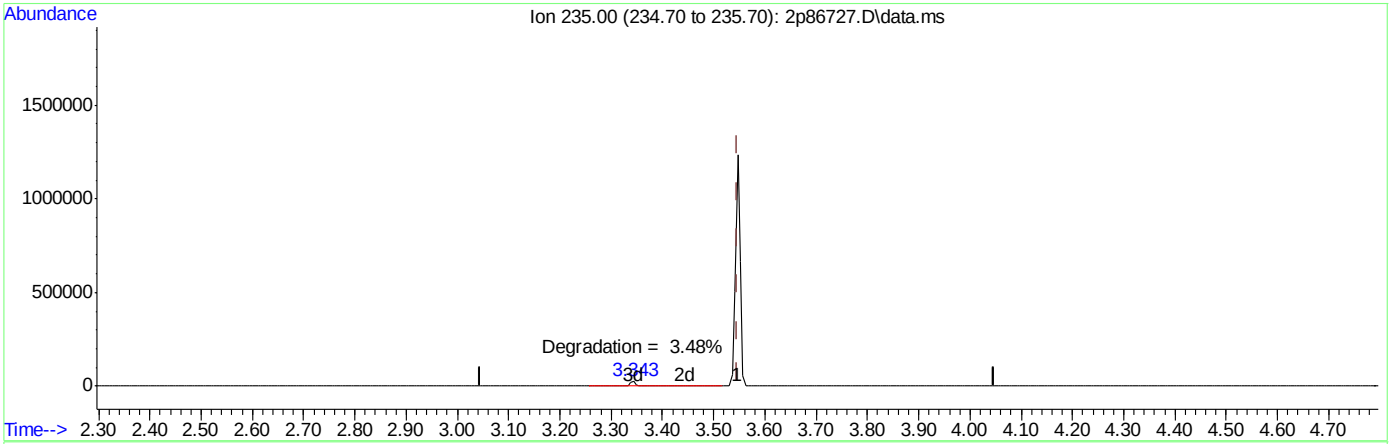
response 1895649

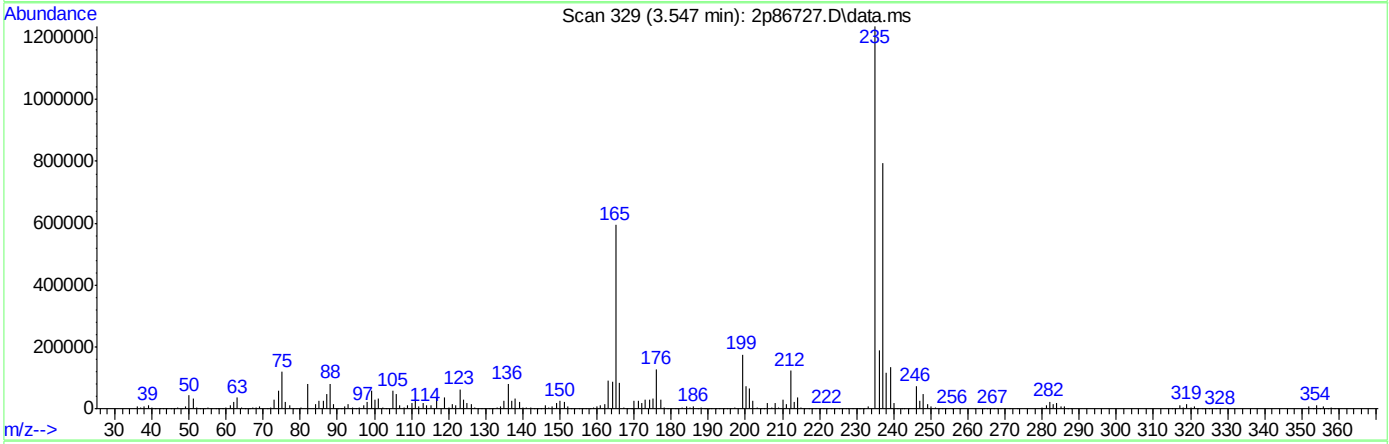
Ion	Exp%	Act%
184.10	100	100
183.10	12.20	12.18
185.10	15.00	15.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86727.D
Acq On : 18 Apr 2019 10:12 pm
Operator : carolb
Sample : dftpp
Misc : op13652,e2p3831,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 22:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86727.D\data.ms

(3) PP-DDT

3.547min (0.000) 31.83ng

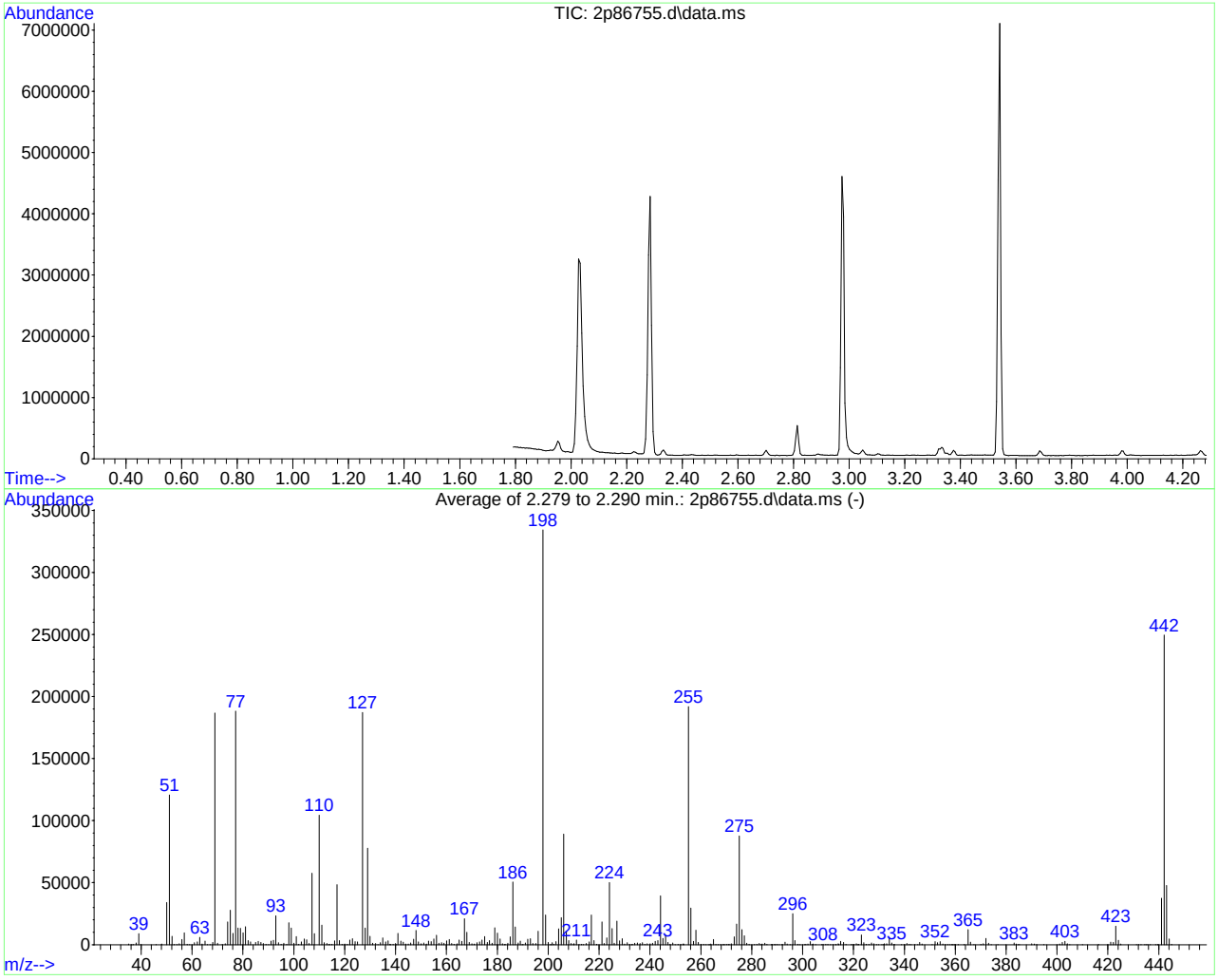
response 812123

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\data\michellc\2p3832\2p86755.d Vial: 1
Acq On : 22 Apr 2019 1:11 pm Operator: yujiac
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 92, 93, 94; Background Corrected with Scan 86

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.1	120650	PASS
68	69	0.00	2	1.0	1897	PASS
69	198	0.00	100	55.9	186798	PASS
70	69	0.00	2	0.6	1154	PASS
127	198	40	60	56.0	187121	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	334276	PASS
199	198	5	9	7.2	23973	PASS
275	198	10	30	26.2	87731	PASS
365	198	1	100	3.6	12102	PASS
441	443	0.10	100	78.4	37488	PASS
442	198	40	100	74.7	249707	PASS
443	442	17	23	19.2	47829	PASS

2p86755.d DFTPP2P.M Tue Apr 23 04:16:50 2019

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	530	52.95	71	65.10	2918	77.10	188361
36.00	7	54.00	95	66.00	144	78.10	13359
37.00	115	55.00	876	67.05	42	79.00	13191
38.00	1368	56.00	4106	68.10	1897	80.05	9653
39.05	8929	57.00	9488	69.00	186798	81.00	14475
40.00	150	58.05	252	70.00	1154	82.00	3389
45.85	49	59.00	181	71.95	62	83.00	2324
48.10	623	60.95	1689	73.05	850	85.00	1926
50.05	33952	62.05	2251	74.05	18265	86.00	2632
51.05	120650	63.05	5937	75.05	27856	87.05	1792
52.10	6847	63.95	630	76.05	9063	88.00	921

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
89.05	325	100.05	1241	112.00	1706	121.95	3709
90.15	194	101.00	6660	113.05	920	123.00	4886
91.00	2941	101.95	395	113.70	52	124.05	2438
92.00	3611	103.00	2293	114.05	291	125.00	2322
92.95	23211	104.10	4551	114.95	234	127.05	187121
93.95	1608	105.05	4023	116.05	3031	128.05	13449
95.05	237	106.05	969	117.00	48347	129.00	77751
96.05	1168	107.10	57514	117.95	3356	130.00	6735
97.20	246	108.10	8886	119.00	347	131.00	1248
98.05	17648	110.00	104403	120.00	635	132.15	938
99.00	13356	111.00	15835	121.10	363	133.05	123

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.00	1544	143.05	2072	154.00	2376	164.95	3749
135.00	5568	143.95	602	155.10	4723	166.00	2671
136.10	2267	145.00	550	156.10	7700	167.05	20925
137.05	3073	146.00	1417	157.00	1271	168.05	10033
137.80	281	147.05	4385	158.10	1674	169.00	1795
137.95	379	148.00	11558	159.05	1232	170.00	688
139.00	373	149.00	2312	160.10	3111	170.95	570
139.95	926	150.05	837	161.10	4244	172.00	1531
140.20	187	151.10	1312	162.10	909	173.05	2195
140.95	9064	152.10	609	163.00	241	174.00	3796
142.05	2922	153.00	2880	164.20	706	175.05	6562

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.10	1892	186.10	50624	196.05	10889	206.10	89088
176.95	3333	187.10	14258	197.95	334276	207.10	10636
178.00	1278	188.15	1513	199.00	23973	208.05	3300
178.95	13546	189.00	2980	200.00	1877	209.00	905
180.05	9424	189.80	143	200.90	189	210.00	478
181.10	4549	190.05	388	201.30	213	210.20	658
182.05	771	191.00	1316	201.60	1662	211.10	3751
182.90	108	192.00	4490	202.20	256	212.10	163
183.05	344	193.00	4942	203.00	2588	213.05	390
184.10	1157	193.95	934	204.10	12878	213.85	80
185.10	6387	195.10	905	205.10	21881	215.00	962

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.10	2334	228.00	3091	238.00	330	249.00	1493
217.00	23985	229.05	4854	238.95	860	249.90	181
218.00	3434	230.05	571	240.05	755	251.05	333
219.10	420	231.05	1608	241.05	1118	252.05	415
221.10	18414	232.00	412	242.05	2709	253.00	595
222.00	912	232.90	104	243.10	3420	253.25	588
223.05	5458	233.10	295	244.10	39309	255.10	191979
224.10	50024	234.00	1123	245.10	4994	256.10	29536
225.10	13006	235.05	1446	246.10	7672	257.10	2638
226.00	1241	236.05	1058	247.10	1829	258.10	11618
227.05	18903	237.05	1650	247.95	433	259.05	1917

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms

M2P3816.M Tue Apr 23 04:09:51 2019

dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
260.05	371	269.10	126	278.00	1246	288.20	24
261.05	335	269.30	88	279.00	294	289.00	242
262.05	57	270.05	308	281.05	159	289.20	60
263.00	29	270.85	243	282.00	359	290.00	334
263.50	132	271.10	330	282.95	915	290.80	115
263.90	484	272.00	725	283.70	155	291.90	166
265.00	4234	273.10	6308	284.15	452	292.10	180
265.90	435	274.10	16613	285.10	1215	293.05	2009
266.85	185	275.10	87731	286.00	326	293.95	521
267.80	117	276.10	12222	287.80	25	295.10	222
268.65	75	277.05	7217	288.00	21	296.10	25008

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
297.00	3272	308.00	400	317.00	306	327.05	1454
298.15	311	309.10	363	319.10	69	328.00	842
299.00	97	309.95	327	319.70	56	329.10	209
300.85	109	310.95	67	320.20	18	329.95	53
301.20	241	312.00	93	321.10	787	331.15	48
302.05	549	312.95	133	321.80	68	331.80	172
303.05	2575	313.20	133	322.05	354	332.15	691
303.90	188	314.00	813	323.10	7937	333.05	824
304.10	630	314.20	335	324.05	1534	334.10	5865
305.15	107	315.00	2723	325.00	236	335.05	1454
307.50	48	316.10	1777	326.05	247	335.90	98

Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
336.15	71	352.05	2435	360.00	88	376.75	73
338.85	161	353.05	1525	361.20	23	383.15	1338
340.05	192	354.10	2559	363.50	34	384.00	486
341.00	1035	355.10	645	365.05	12102	384.80	64
341.95	332	356.20	31	366.00	1952	385.20	20
342.65	80	357.05	38	367.30	119	390.05	674
344.10	19	357.90	19	370.05	245	391.10	597
345.30	70	358.70	20	371.00	878	392.05	150
346.00	1869	358.90	178	372.10	4998	394.90	67
347.00	498	359.20	42	373.05	1146	401.05	448
350.95	106	359.80	19	374.10	82	402.05	1781

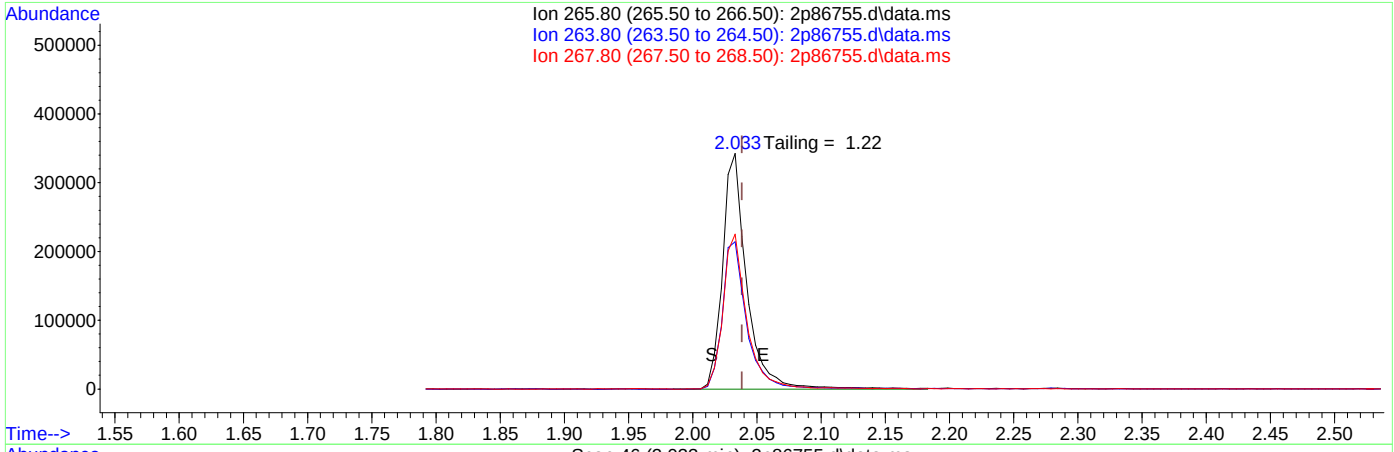
Average of 2.279 to 2.290 min.: 2p86755.d\data.ms
dftpp
Modified:subtracted

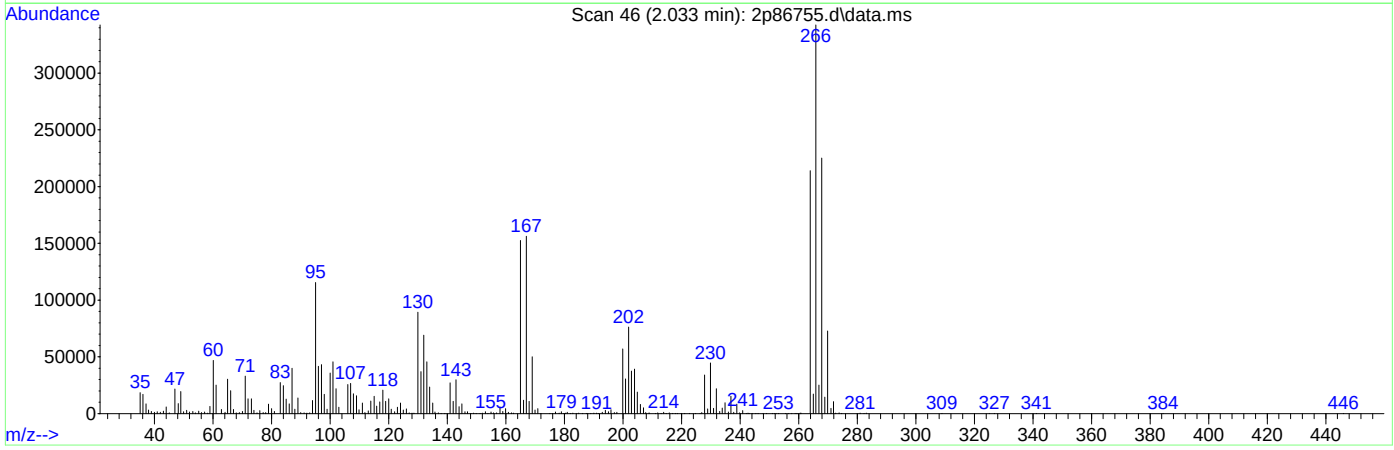
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
403.10	2741	431.20	27	442.10	249707		
404.10	807	432.10	45	443.10	47829		
405.00	180	433.00	28	444.10	4725		
410.05	118	434.45	140	445.05	233		
416.40	39	435.05	66				
419.90	75	435.60	70				
421.05	2091	436.65	88				
422.15	1862	438.75	75				
423.10	14836	439.50	67				
424.10	3653	439.70	138				
425.10	515	441.10	37488				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86755.d
Acq On : 22 Apr 2019 1:11 pm
Operator : yujiac
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 22 13:15:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86755.d\data.ms

(1) Pentachlorophenol (t)

2.033min (-0.005) 35.20ng

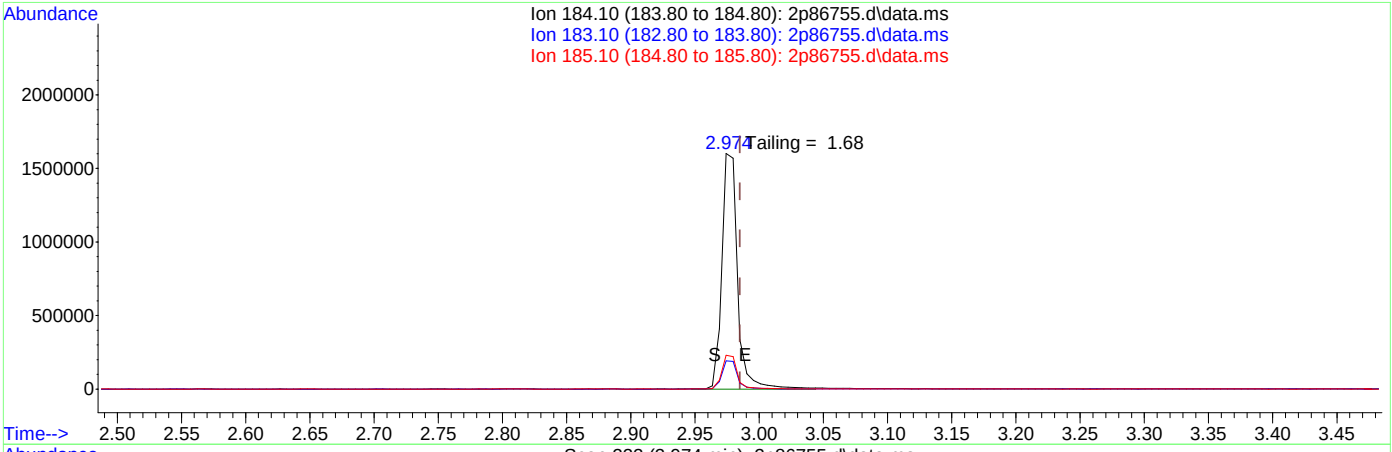
response 447460

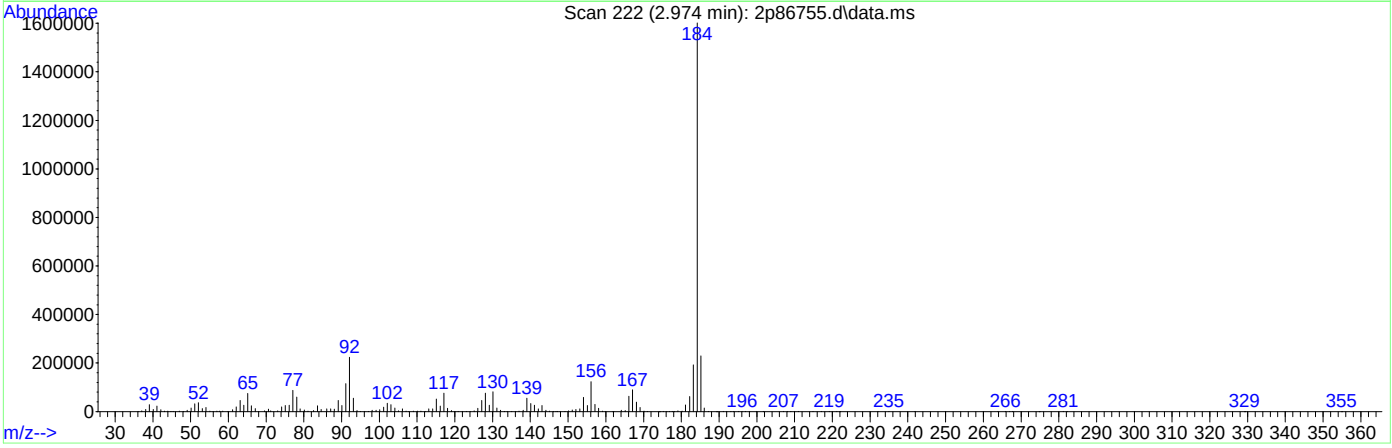
Ion	Exp%	Act%
265.80	100	100
263.80	63.50	62.48
267.80	65.20	65.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86755.d
Acq On : 22 Apr 2019 1:11 pm
Operator : yujiac
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 22 13:15:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86755.d\data.ms

(2) Benzidine

2.974min (-0.011) 21.08ng

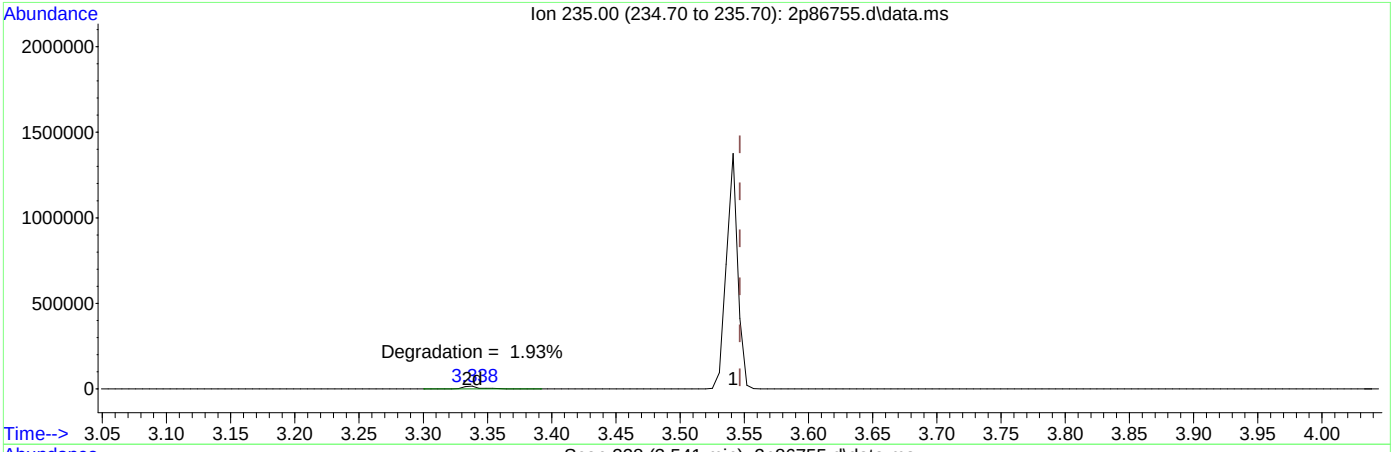
response 1373591

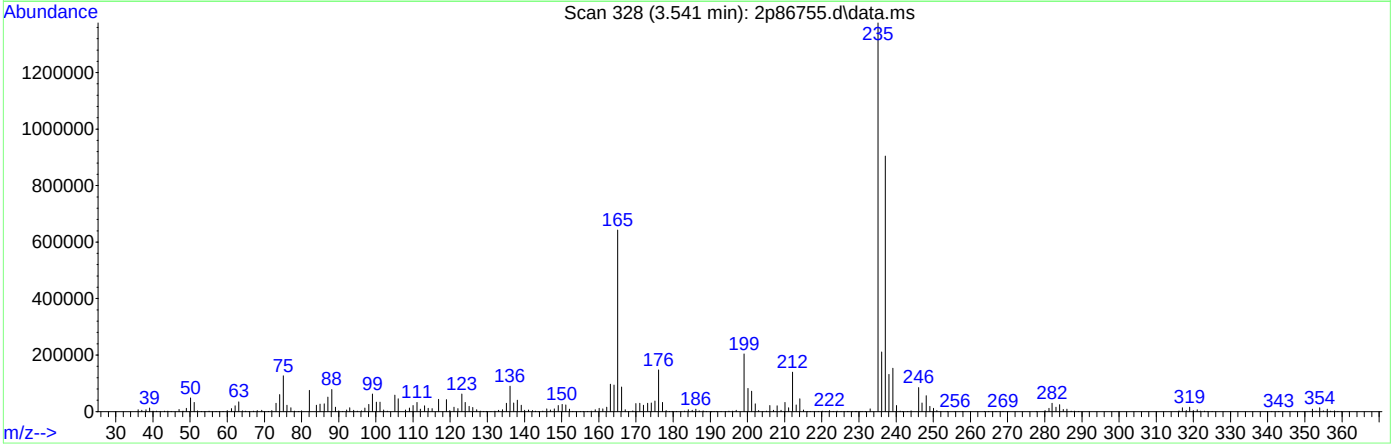
Ion	Exp%	Act%
184.10	100	100
183.10	12.20	12.00
185.10	15.00	14.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86755.d
Acq On : 22 Apr 2019 1:11 pm
Operator : yujiac
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 22 13:15:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86755.d\data.ms

(3) PP-DDT

3.541min (-0.005) 33.28ng

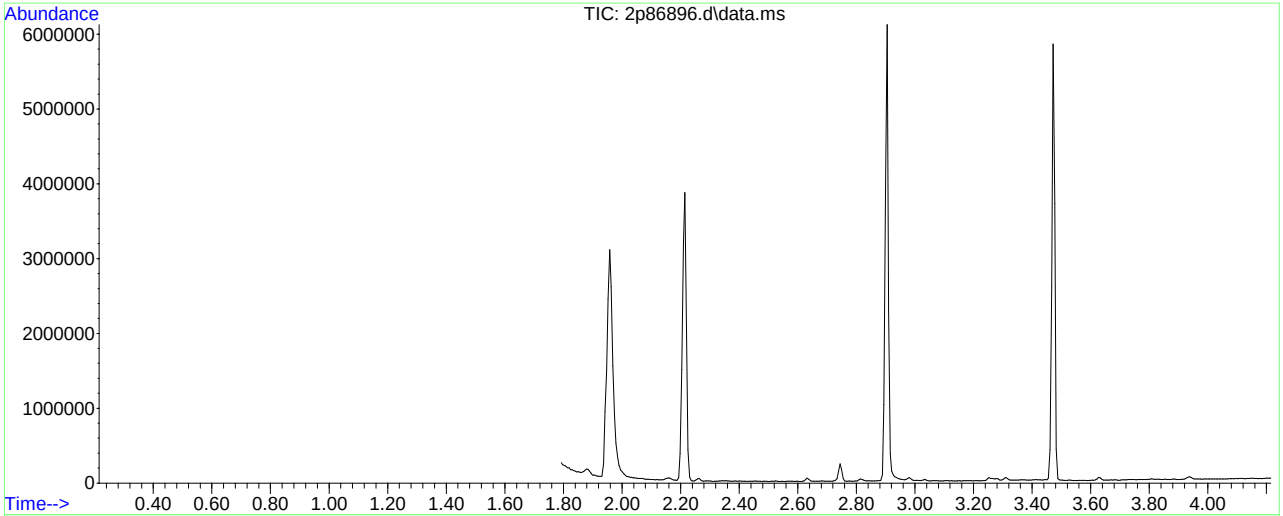
response 849179

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\data\michellc\2p3839\2p86896.d Vial: 1
Acq On : 27 Apr 2019 12:14 am Operator: chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS



AutoFind: Scans 79, 80, 81; Background Corrected with Scan 72

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.5	106719	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	54.1	171986	PASS
70	69	0.00	2	0.5	863	PASS
127	198	40	60	53.9	171567	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	318178	PASS
199	198	5	9	7.0	22162	PASS
275	198	10	30	26.7	85049	PASS
365	198	1	100	3.7	11636	PASS
441	443	0.10	100	79.7	40496	PASS
442	198	40	100	86.5	275243	PASS
443	442	17	23	18.5	50784	PASS

2p86896.d DFTPP2P.M Mon Apr 29 03:21:24 2019

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	115	51.05	106719	62.05	2069	74.05	15102
36.95	694	52.05	5310	63.05	5353	75.05	24213
38.00	1308	54.20	34	64.05	960	76.05	8393
39.05	8699	55.00	438	65.05	2753	77.05	168865
40.05	285	56.00	3184	66.00	384	78.05	11606
44.70	26	57.00	8262	67.05	106	79.00	11355
45.10	224	57.90	129	68.95	171986	80.00	8590
46.00	22	58.20	32	70.00	863	80.95	11469
46.70	84	59.00	5	71.05	126	82.00	2408
49.00	246	59.95	137	72.20	17	82.95	2145
50.05	28923	61.00	1767	73.00	1009	84.95	2392

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.00	2912	98.95	11293	110.00	96556	120.00	391
87.00	1592	100.00	887	110.95	13443	121.10	82
88.00	373	101.00	6143	112.05	1724	122.00	3223
88.95	451	101.95	326	112.95	510	123.00	4347
89.95	77	103.00	2614	113.95	275	124.00	2446
91.10	2378	104.00	3529	114.40	61	125.00	1832
92.05	2907	105.00	4022	115.05	288	127.05	171567
93.00	20274	106.05	1170	116.10	2608	128.10	13109
94.00	1242	107.00	52356	117.00	41334	129.00	70094
96.00	840	108.00	8781	118.00	3034	130.00	5335
98.05	14962	109.10	1341	119.05	233	131.05	1112

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.00	248	139.90	503	149.10	2069	157.70	474
132.60	292	140.10	282	150.05	547	158.05	1366
133.00	200	141.00	8015	151.05	577	159.05	922
133.30	113	142.05	2693	151.50	634	160.05	2599
134.00	1345	143.00	1723	151.90	306	161.00	3652
135.00	4484	143.90	339	152.20	457	162.00	920
136.00	2134	144.20	84	153.00	2639	163.10	587
137.10	2670	144.90	491	154.00	1802	164.00	659
137.75	399	146.00	1616	155.05	4651	164.90	2598
138.10	298	147.00	3650	156.10	6374	166.10	2306
138.95	190	148.00	9530	157.05	1406	167.05	17435

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
168.05	7727	178.00	992	188.95	2588	199.00	22162
169.10	1491	179.00	12041	190.05	479	200.00	1702
170.00	419	180.05	8245	190.40	152	200.90	227
170.60	170	181.00	3827	191.00	1275	201.50	2250
170.95	694	181.95	647	192.05	4117	203.05	2491
171.95	1508	182.95	481	193.05	4207	204.10	11523
173.00	1765	183.95	874	194.00	835	205.10	20434
174.10	3485	185.05	6145	194.70	120	206.10	82880
175.00	6068	186.10	47619	195.05	841	207.10	10157
176.00	1947	187.10	12511	196.05	11191	208.00	2070
177.00	2717	188.05	1374	198.00	318178	208.95	682

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
209.90	590	217.00	21875	227.00	19187	234.95	863
210.10	639	218.00	2732	228.05	2494	235.20	353
211.05	3549	218.90	187	229.05	3745	235.95	1011
211.90	575	219.10	199	230.05	373	237.00	1625
212.10	299	219.80	81	231.10	1736	238.10	298
212.60	46	221.00	19840	231.95	120	238.90	284
213.00	155	221.80	962	232.30	105	239.05	430
213.15	155	223.10	5194	232.80	108	239.95	328
214.15	134	224.10	47766	233.00	97	240.20	241
215.10	861	225.10	12268	233.30	232	241.05	1062
216.10	2060	226.10	738	234.05	1456	242.10	2787

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms

M2P3816.M Mon Apr 29 03:17:56 2019

dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
243.10	3256	252.10	786	262.70	26	274.05	15242
244.10	35075	253.00	867	263.30	75	275.05	85049
245.10	5336	255.05	184939	265.10	4259	276.10	10568
246.05	6925	256.05	25533	265.95	418	277.10	6998
247.05	1425	257.05	2185	267.30	99	278.05	1211
247.80	33	258.05	10262	268.10	45	279.10	397
248.20	147	259.00	1369	269.20	41	281.10	118
249.00	1145	259.95	266	270.05	174	281.70	55
249.95	350	260.90	158	271.20	413	282.10	152
250.80	114	261.10	147	271.95	742	283.05	834
251.00	387	262.10	86	273.05	5290	283.90	120

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
284.15	440	291.95	382	301.05	219	310.00	317
285.10	1228	293.00	1481	301.30	169	310.70	18
285.70	76	293.95	319	301.90	186	311.20	84
286.05	319	294.20	168	302.15	388	312.60	73
288.25	97	295.10	274	303.15	2970	313.15	181
288.90	324	296.05	23483	304.00	872	314.05	1239
289.10	157	297.05	3154	305.15	37	314.50	357
290.00	244	297.90	293	306.10	71	315.05	2939
290.40	26	298.20	84	306.95	50	316.05	1792
290.90	30	299.05	90	307.95	461	317.05	295
291.10	35	300.20	96	309.05	209	318.95	61

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
319.90	113	329.30	22	341.05	940	359.05	281
320.10	61	330.15	71	342.05	275	360.50	86
321.10	725	331.80	101	346.05	1937	361.85	52
322.20	536	332.10	398	347.05	439	363.70	21
323.15	8068	333.15	855	347.90	103	365.10	11636
324.10	1649	334.10	5142	351.10	19	366.05	1575
325.05	63	335.10	1441	352.05	2646	367.05	87
326.00	324	336.15	162	353.10	1666	370.05	292
327.05	1627	338.90	134	354.10	2735	371.05	654
328.05	787	340.00	29	355.15	437	372.15	4309
328.85	86	340.35	67	358.20	43	373.15	1140

Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
373.90	41	391.20	87	406.20	43	425.80	26
374.30	43	392.05	385	410.90	18	426.80	18
375.80	69	393.20	65	414.60	46	432.25	90
376.20	55	396.10	56	415.10	62	433.45	59
377.15	107	397.15	70	415.95	77	434.30	60
383.15	1387	401.05	146	421.10	2058	434.85	122
383.80	125	401.80	342	422.10	2060	435.85	50
384.00	175	402.10	1210	423.10	16695	436.35	64
388.00	52	403.10	2993	424.05	3108	437.00	70
390.10	836	404.10	1051	424.95	245	437.20	58
391.00	253	404.85	96	425.20	138	438.50	43

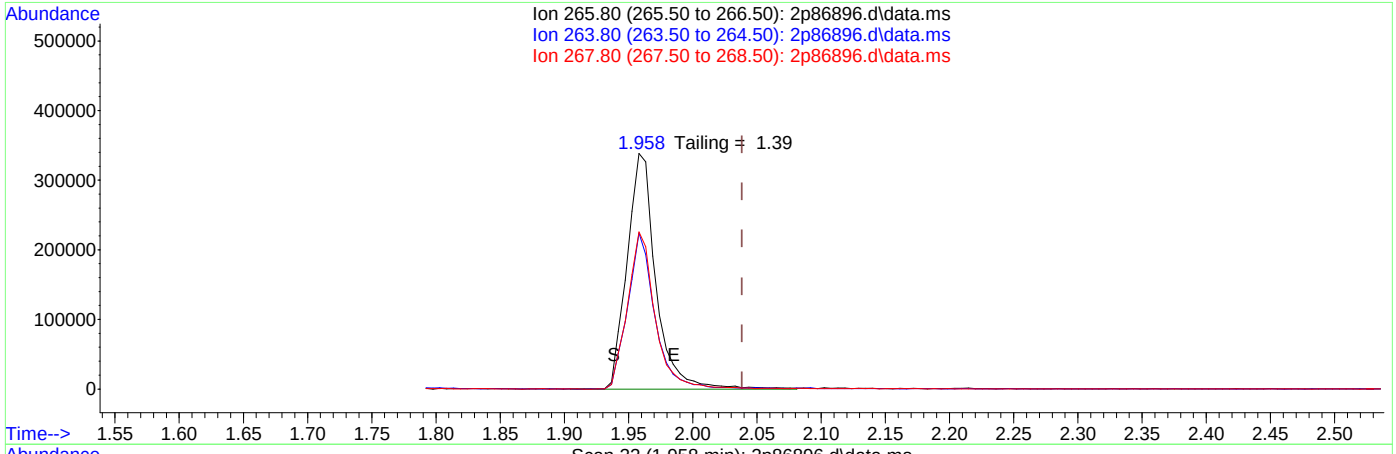
Average of 2.209 to 2.220 min.: 2p86896.d\data.ms
dftpp
Modified:subtracted

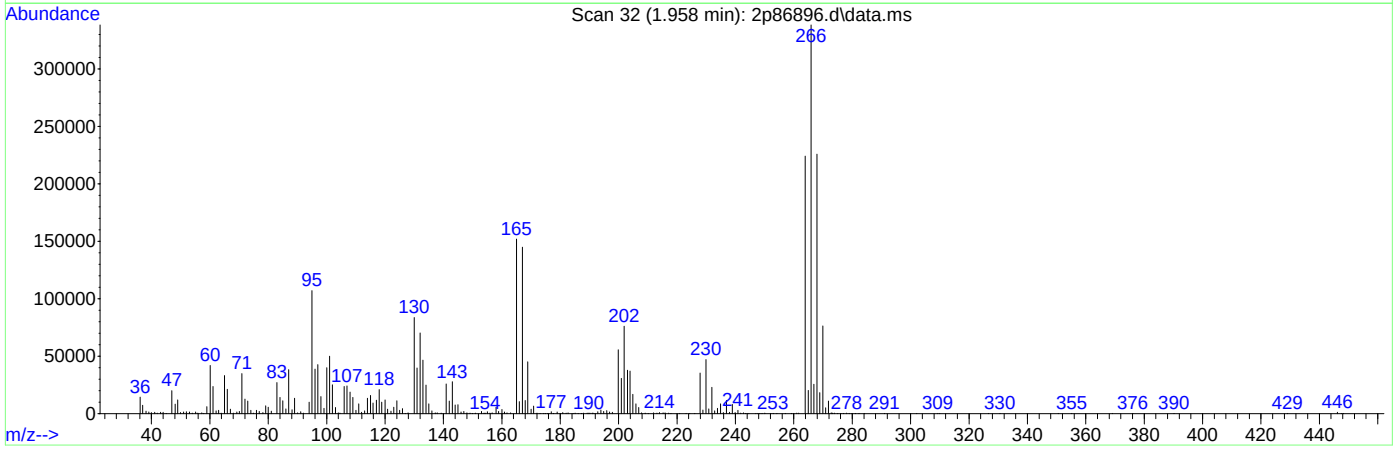
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
438.70	88						
439.00	77						
439.70	132						
441.15	40496						
442.10	275243						
443.10	50784						
444.10	4192						
444.90	114						
445.15	192						
446.30	208						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86896.d
Acq On : 27 Apr 2019 12:14 am
Operator : chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 27 00:17:47 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86896.d\data.ms

(1) Pentachlorophenol (t)

1.958min (-0.080) 41.50ng

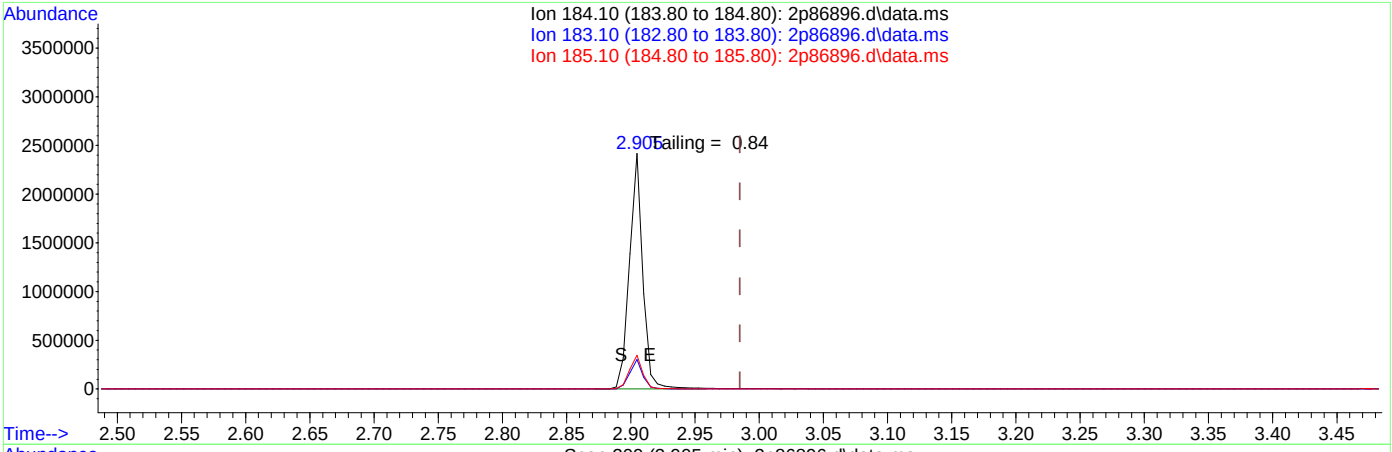
response 527588

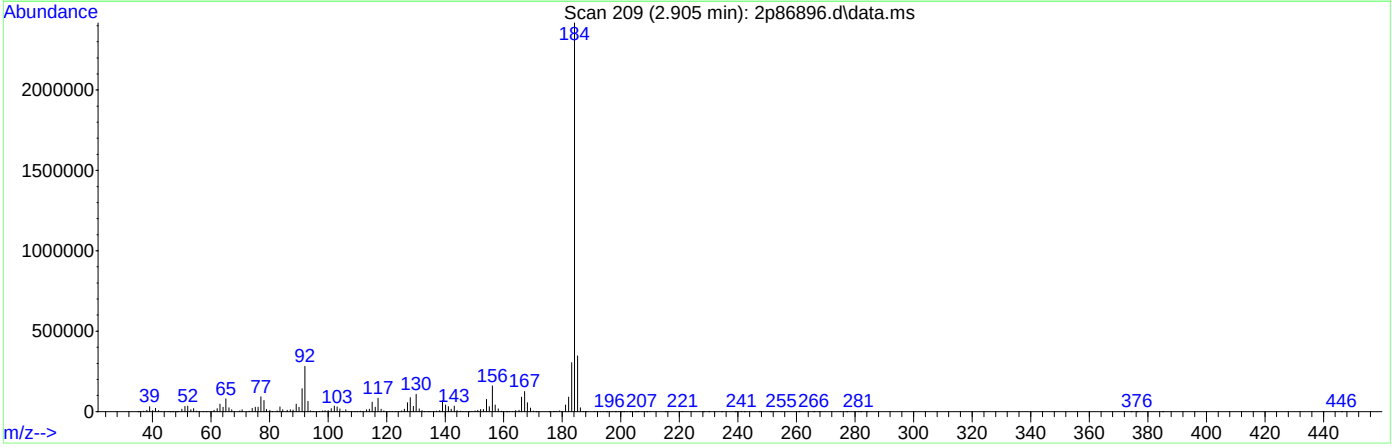
Ion	Exp%	Act%
265.80	100	100
263.80	63.50	66.19
267.80	65.20	66.70
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86896.d
Acq On : 27 Apr 2019 12:14 am
Operator : chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 27 00:17:47 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86896.d\data.ms

(2) Benzidine

2.905min (-0.080) 27.12ng

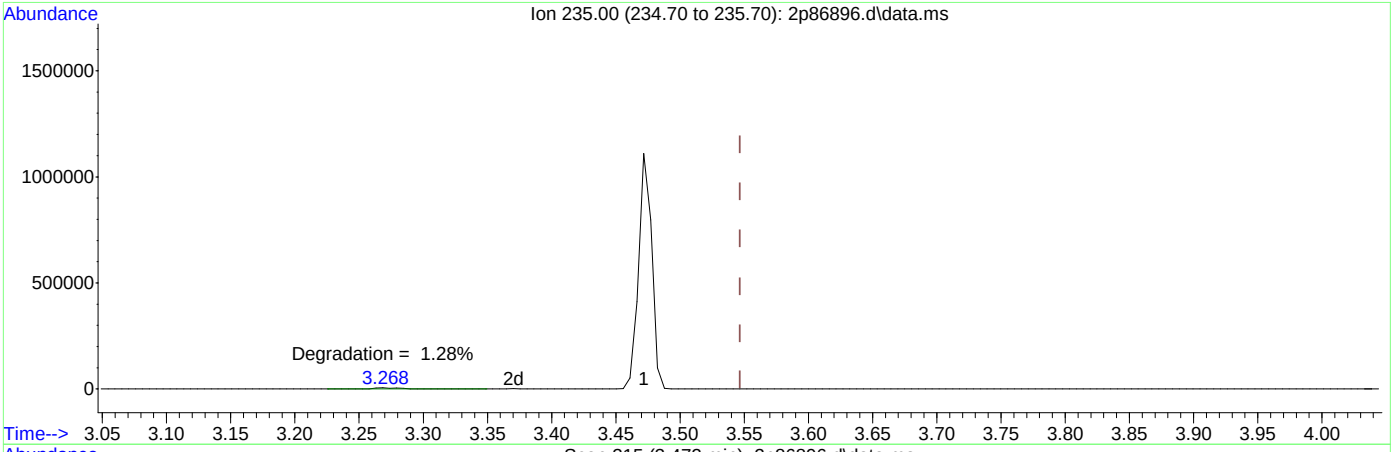
response 1767204

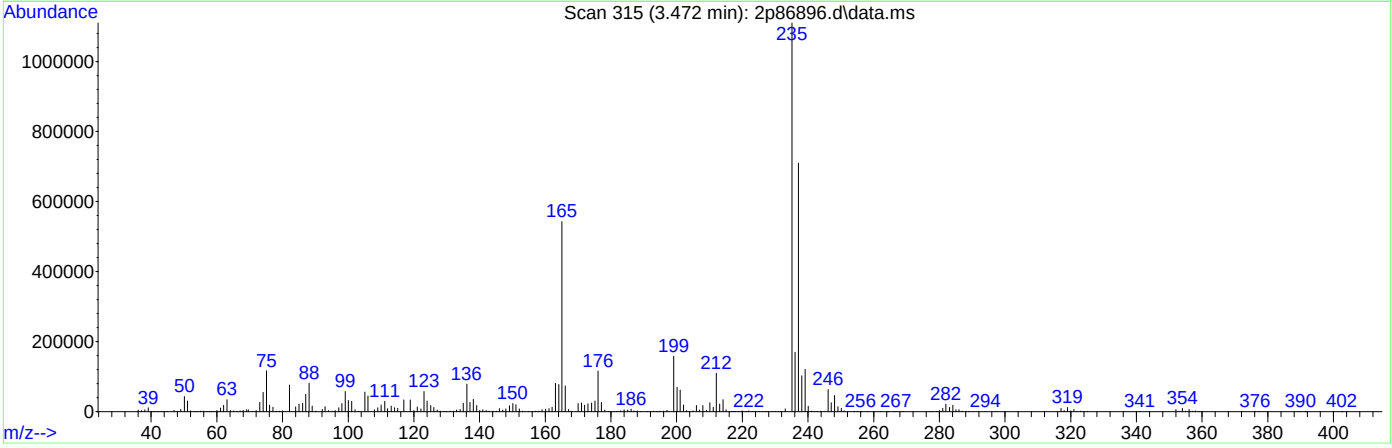
Ion	Exp%	Act%
184.10	100	100
183.10	12.20	12.56
185.10	15.00	14.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86896.d
Acq On : 27 Apr 2019 12:14 am
Operator : chriss2
Sample : dftpp Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Results File: DFTPP2P.RES
Quant Time: Apr 27 00:17:47 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 18 22:16:56 2019
Response via : Initial Calibration





TIC: 2p86896.d\data.ms

(3) PP-DDT

3.472min (-0.075) 31.16ng

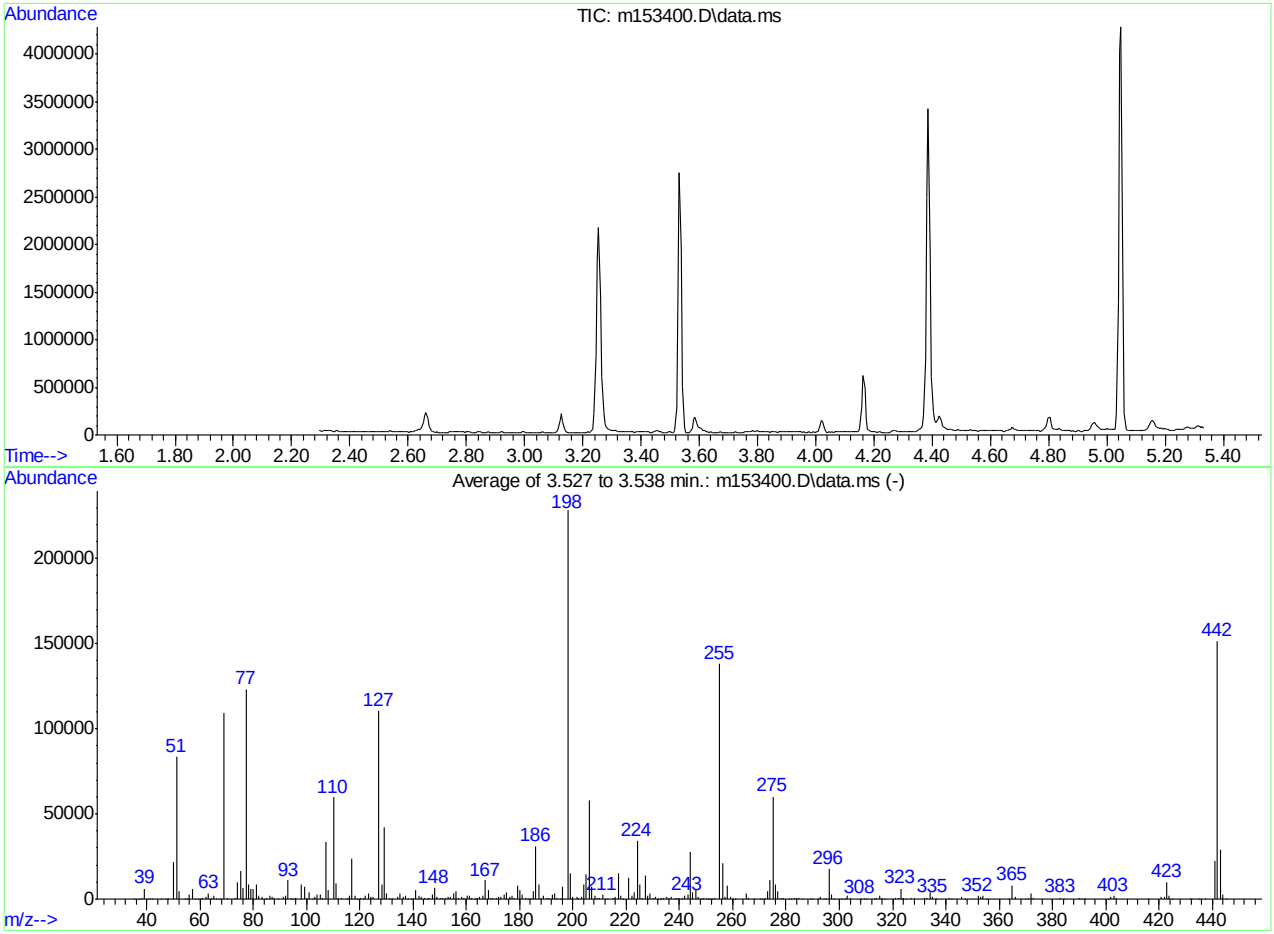
response 795049

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6556\m153400.D Vial: 1
Acq On : 12 Apr 2019 4:58 pm Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 232, 233, 234; Background Corrected with Scan 227

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.5	83353	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.9	109417	PASS
70	69	0.00	2	0.5	587	PASS
127	198	40	60	48.3	110333	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	228245	PASS
199	198	5	9	6.7	15342	PASS
275	198	10	30	26.3	60088	PASS
365	198	1	100	3.5	7944	PASS
441	443	0.10	100	76.7	22441	PASS
442	198	40	100	66.4	151640	PASS
443	442	17	23	19.3	29258	PASS

m153400.D DFTPPM.M Mon Apr 15 10:09:48 2019

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.05	145	51.10	83353	63.10	3596	77.15	123209
37.10	209	52.15	4307	64.10	625	78.15	8467
38.05	897	54.05	87	65.15	2129	79.05	6159
39.15	6253	55.15	232	66.15	73	80.05	5853
40.10	195	56.05	2688	67.25	67	81.05	8537
41.10	120	57.10	5718	69.05	109417	82.05	2132
42.10	208	58.05	177	70.10	587	83.05	1534
45.15	195	59.10	164	73.15	628	85.10	720
47.05	84	60.25	76	74.15	10167	86.00	2187
48.05	35	61.10	999	75.05	16325	87.10	1201
50.10	21429	62.10	1285	76.15	6286	88.00	403

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.90	187	102.05	27	115.15	89	125.05	1325
91.05	1664	103.05	1155	115.35	80	127.05	110333
92.05	2036	104.05	2618	116.10	1891	128.05	8651
93.05	11119	105.05	2668	117.05	24037	129.05	42210
94.10	847	106.05	577	118.05	1706	130.05	3478
95.05	66	107.05	33346	119.05	243	131.05	599
96.05	472	108.05	5277	120.05	485	132.10	350
98.05	8449	110.05	59730	121.05	83	134.00	1116
99.05	7050	111.05	9373	122.05	1973	135.05	3321
100.05	488	112.00	1011	123.05	3147	136.10	1328
101.00	4263	113.10	394	124.05	1393	137.10	1798

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
138.10	290	149.05	1241	160.05	1874	171.00	474
139.00	164	150.10	368	161.00	2310	172.00	1168
140.05	637	151.10	927	162.10	764	173.05	1392
141.05	5052	152.05	420	163.05	306	174.05	2424
142.05	1814	153.05	1518	164.00	402	175.05	4285
143.05	1255	154.05	1495	165.00	1548	176.05	1345
144.05	426	155.05	3367	166.05	1862	177.05	2049
145.10	258	156.05	4406	167.00	10980	178.05	797
146.00	993	157.00	731	168.05	5142	179.00	8027
147.05	2537	158.05	1066	169.05	828	180.05	5622
148.05	6361	159.05	821	170.10	369	181.05	2868

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
182.00	648	193.05	3156	205.05	14674	217.00	15393
182.85	239	194.05	685	206.05	58202	218.05	2071
184.10	798	195.10	323	207.05	7007	218.95	243
185.05	4312	196.05	7412	208.05	2262	221.05	12676
186.05	31280	198.05	228245	209.05	834	222.05	1753
187.05	8815	199.05	15342	210.05	550	223.05	3874
188.05	825	200.00	1360	211.05	2390	224.05	34048
189.05	1776	201.50	1132	212.15	132	225.05	8703
190.10	440	202.05	125	213.05	114	226.05	787
191.00	857	203.00	1463	215.00	687	227.05	13699
192.05	2666	204.05	8600	216.00	1389	228.00	1864

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
229.00	3009	239.00	645	249.00	980	259.00	1289
230.00	543	240.00	459	250.00	238	260.05	243
231.05	1290	241.00	798	250.90	214	261.05	247
231.95	88	242.05	1723	251.15	124	265.05	3210

232.85	67	243.05	2595	251.85	192	265.90	369
233.05	224	244.05	27525	252.05	175	267.95	218
234.05	941	245.05	3763	253.10	830	269.90	199
235.05	1105	246.00	5027	255.05	138016	271.00	331
235.95	727	247.00	1057	256.05	20895	272.10	371
237.00	1179	247.85	74	257.00	1533	273.00	4347
237.95	151	248.10	315	258.05	7770	274.05	11288

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
275.05	60088	288.95	243	303.00	2082	322.10	448
276.05	8382	289.95	90	304.05	497	323.05	5936
277.00	4694	292.00	274	308.00	262	323.75	151
278.05	974	293.00	1257	309.05	87	324.10	877
278.95	369	294.00	282	310.05	107	324.75	67
281.00	108	294.95	260	313.05	167	326.95	998
282.05	150	296.05	17684	314.05	770	328.00	485
283.05	650	297.00	2329	315.00	2071	332.05	479
284.05	377	297.95	152	315.95	997	333.00	704
285.05	933	300.95	176	316.95	103	334.00	4003
285.95	106	302.10	273	321.00	603	335.05	1055

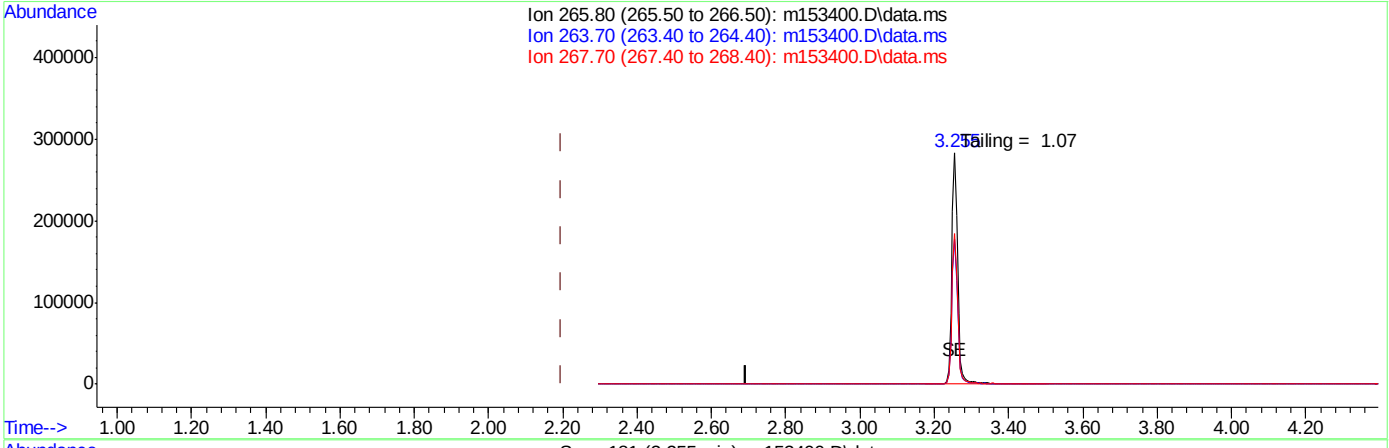
Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

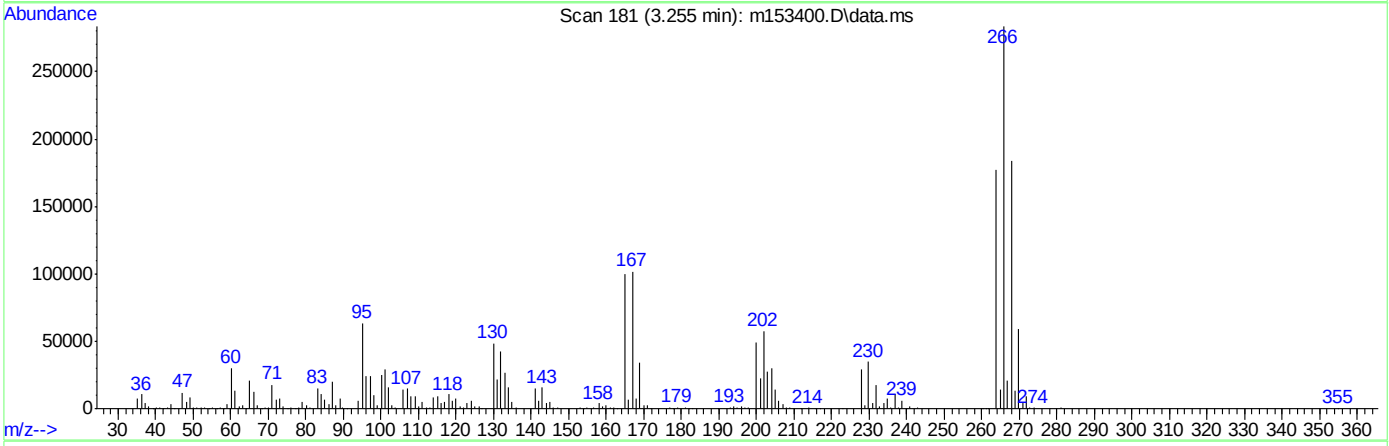
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
336.00	158	366.00	1213	402.00	1403	435.15	76
341.05	758	369.95	83	403.00	1720	437.35	68
342.05	113	370.95	450	404.05	694	441.05	22441
345.90	1329	372.05	3189	415.85	75	442.05	151640
347.00	309	373.00	932	421.00	1660	443.05	29258
352.05	1697	383.05	897	422.05	1409	444.05	2810
353.05	1382	384.05	131	423.05	10152	445.05	96
354.05	1721	390.05	411	423.95	1897		
355.10	287	390.95	241	425.10	175		
363.75	104	392.05	178	431.65	69		
364.95	7944	400.95	239	432.05	120		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(1) Pentachlorophenol (MC)

3.255min (+1.059) 0.00ppm m

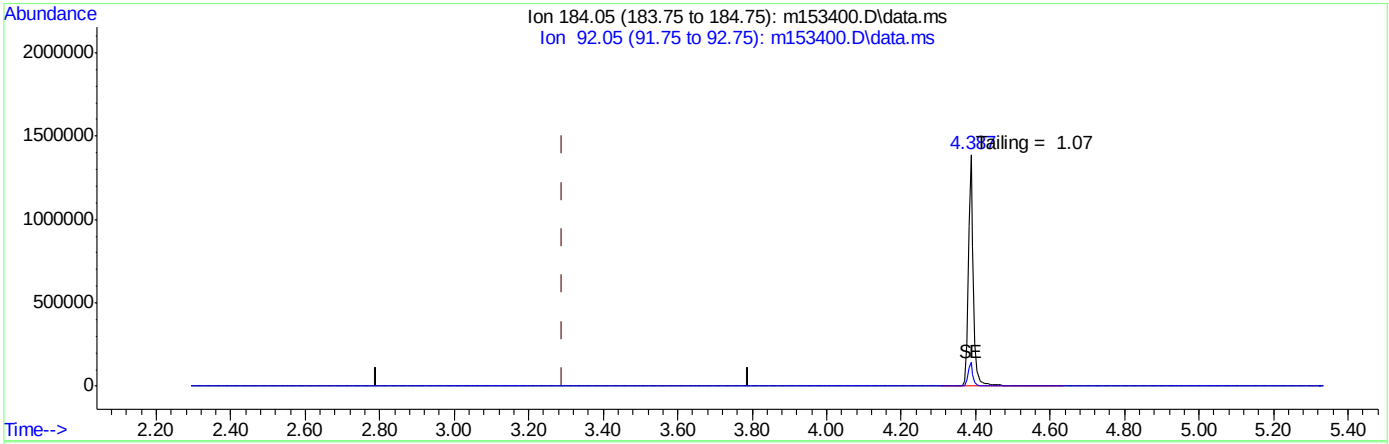
response 314549

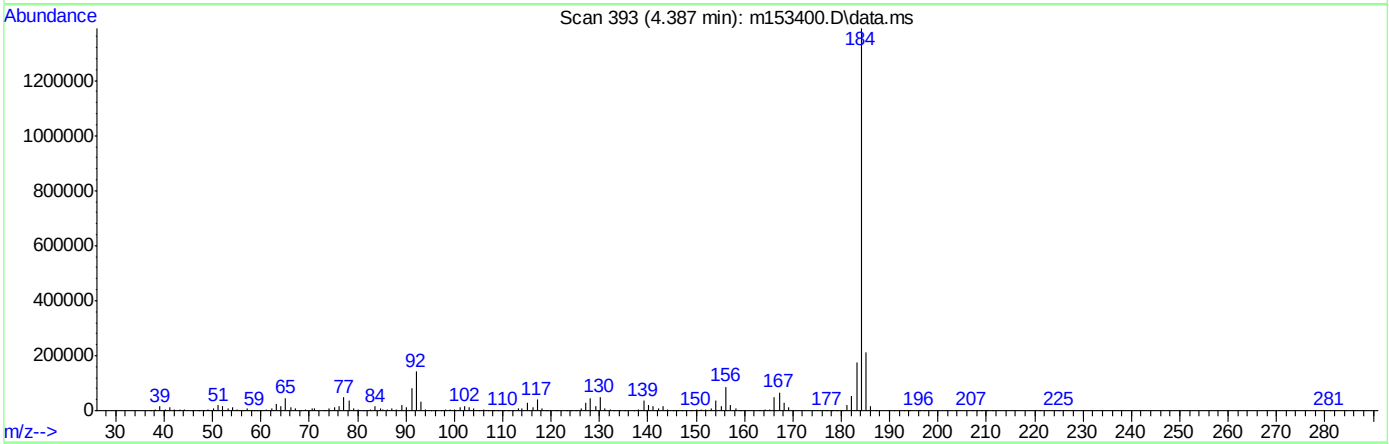
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	62.39
267.70	67.90	64.91
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(2) Benzidine (M)

4.387min (+1.096) 0.00ppm m

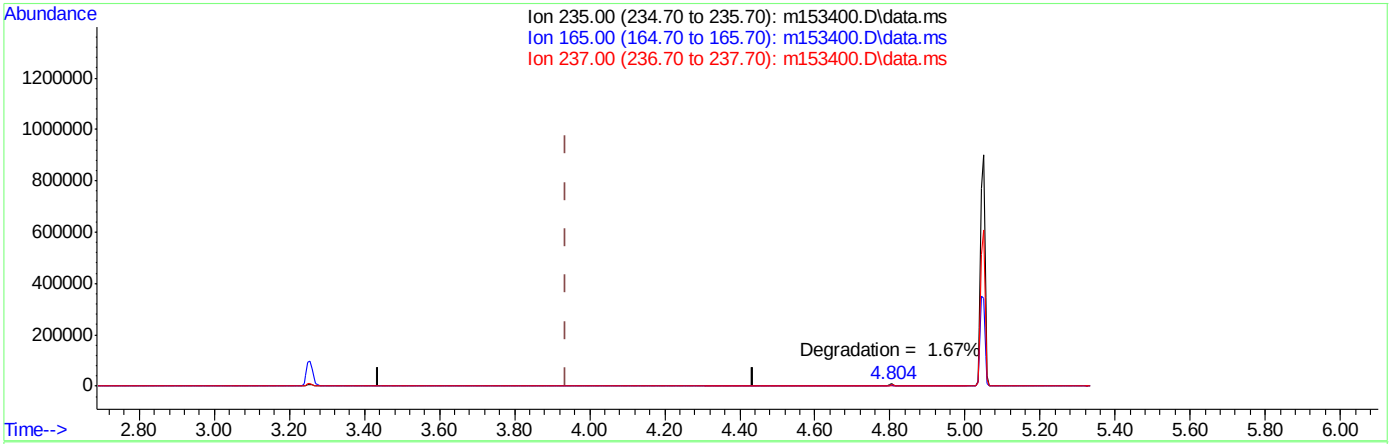
response 1290999

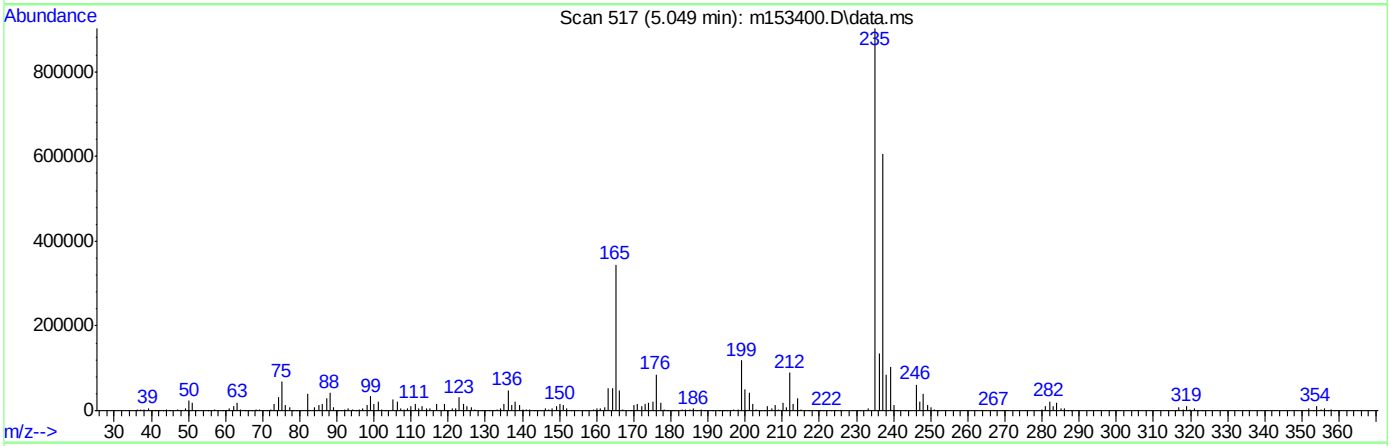
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	10.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(3) PP-DDT (MC)

5.049min (+1.112) 0.00ppm m

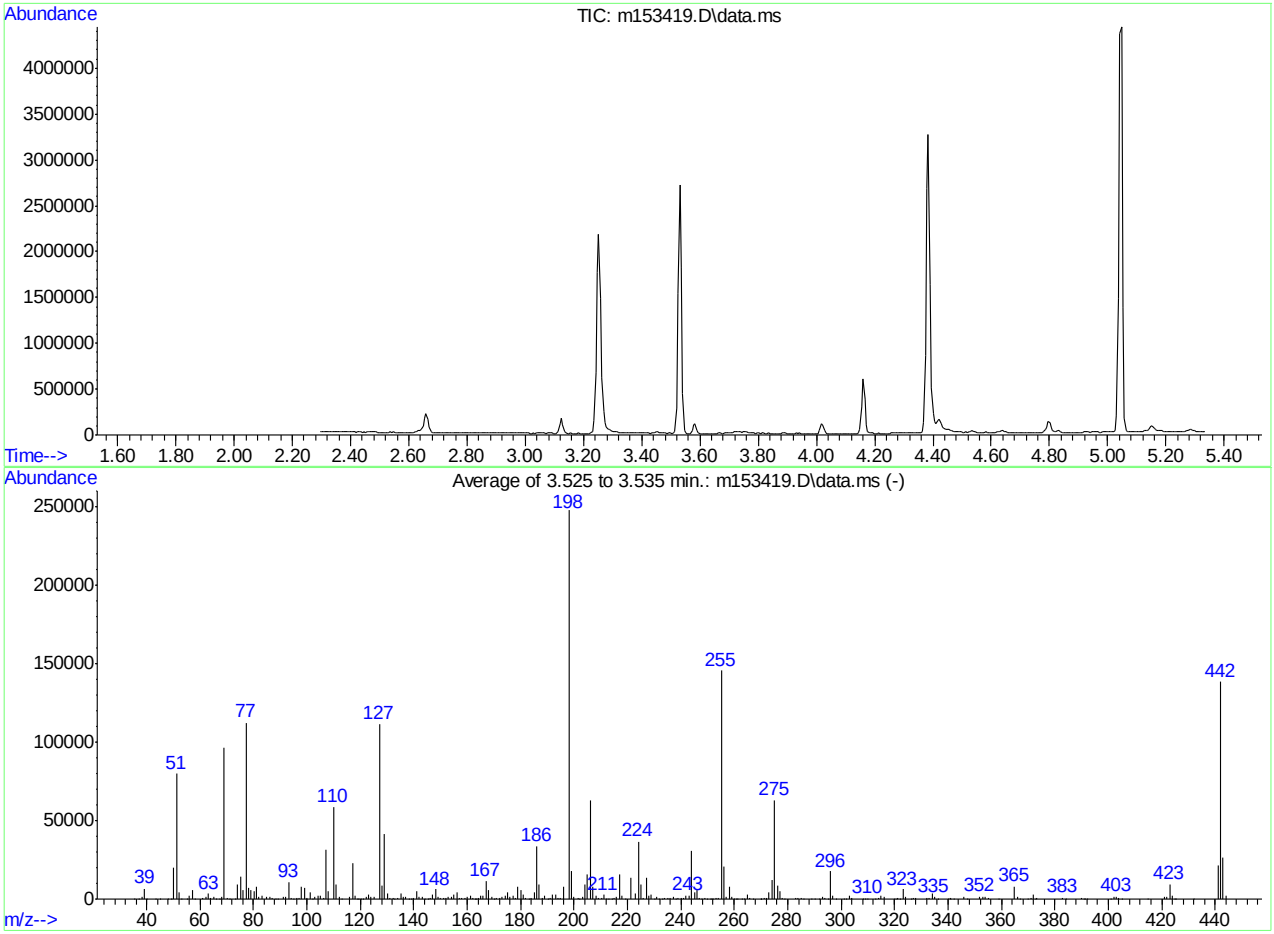
response 741987

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	38.16#
237.00	66.90	67.26
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6557\m153419.D Vial: 1
Acq On : 13 Apr 2019 1:19 am Operator: chriss2
Sample : DFTPP Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 231, 232, 233; Background Corrected with Scan 226

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.2	79824	PASS
68	69	0.00	2	1.4	1315	PASS
69	198	0.00	100	39.1	96837	PASS
70	69	0.00	2	0.5	513	PASS
127	198	40	60	45.1	111752	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	247893	PASS
199	198	5	9	7.1	17598	PASS
275	198	10	30	25.5	63149	PASS
365	198	1	100	3.3	8195	PASS
441	443	0.10	100	80.5	21483	PASS
442	198	40	100	55.9	138565	PASS
443	442	17	23	19.3	26703	PASS

m153419.D DFTPPM.M Mon Apr 15 12:14:59 2019

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.15	193	52.15	3977	66.10	158	78.15	7432
37.10	285	53.15	174	67.25	81	79.05	5986
38.15	1157	55.10	229	68.10	1315	80.05	5150
39.15	6629	56.05	2387	69.05	96837	81.05	7646
40.05	302	57.05	5636	70.15	513	82.05	1465
43.15	41	58.05	272	71.10	275	83.05	1816
45.10	188	61.10	897	73.05	271	85.05	1363
48.05	123	62.05	1289	74.05	9374	86.05	1470
49.05	372	63.15	3298	75.05	14679	87.05	967
50.15	20225	64.05	433	76.15	5453	88.05	194
51.10	79824	65.15	1755	77.15	112440	88.95	101

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.05	1589	102.00	165	116.05	1615	127.05	111752
92.10	1670	103.05	1321	117.05	22864	128.05	8605
93.05	10868	104.05	2167	118.05	1829	129.05	41613
94.05	858	105.10	2382	119.00	274	130.05	3279
95.05	15	106.10	449	119.25	84	131.05	755
96.10	493	107.05	31480	120.10	350	132.10	394
97.10	401	108.05	5240	121.05	68	132.85	67
98.05	7546	110.05	58845	122.05	1741	134.05	928
99.05	7176	111.05	9347	123.05	2726	135.05	3606
100.05	675	112.05	1202	124.05	1425	136.05	1312
101.05	4091	113.05	338	125.05	1144	137.05	1632

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
138.00	376	149.05	1486	160.05	1663	170.10	259
139.05	117	150.05	389	161.05	2307	171.00	473
140.00	436	151.10	907	162.05	767	172.00	1035
141.05	4895	152.00	461	162.95	75	173.05	1224
142.05	1553	153.00	1813	163.15	95	174.05	2357
143.00	1396	154.10	1209	164.00	405	175.05	4039
144.00	251	155.05	3183	165.05	2112	176.05	1252
145.10	253	156.05	4262	166.05	1844	177.05	1888
146.05	799	157.10	766	167.05	11530	178.05	844
147.00	2586	158.05	783	168.05	5833	179.00	8239
148.05	6261	159.00	835	169.05	1199	180.05	5972

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
181.05	2717	192.00	2860	204.05	9075	215.00	640
182.00	495	193.00	2830	205.05	15542	216.00	1593
183.00	307	194.10	804	206.05	62842	217.00	15595
184.05	682	195.00	453	207.05	7890	218.00	2287
185.05	4024	196.05	8130	208.05	2387	219.00	214
186.05	33794	198.05	247893	209.05	794	221.05	13950
187.05	9482	199.00	17598	210.20	686	223.00	3633
188.00	944	200.00	1561	211.05	2578	224.05	36498
189.00	1878	201.50	1082	212.05	329	225.05	9028
190.05	240	201.95	58	213.00	169	226.00	890
191.00	1095	203.00	1718	213.95	78	227.05	13846

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
228.00	2076	239.00	537	249.90	351	259.95	92
229.00	2752	240.00	613	250.90	289	260.85	91
229.90	181	241.00	937	251.65	71	261.15	122
231.05	1253	242.00	2116	252.05	325	262.95	80

231.95	302	243.05	2410	253.00	785	263.85	123
233.05	217	244.05	30928	253.95	384	265.00	3138
234.00	939	245.05	4208	255.05	145861	265.85	570
235.00	927	246.00	5673	256.05	21114	267.05	101
236.00	795	247.00	815	257.00	1676	269.85	195
237.00	1231	247.85	69	258.00	7741	270.05	103
237.95	169	249.00	965	259.00	1212	271.00	391

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
272.05	493	286.05	123	302.00	223	320.85	90
273.00	4649	288.95	158	303.00	2148	321.00	632
274.05	12184	289.95	239	304.05	481	321.95	118
275.05	63149	291.90	333	308.05	83	323.05	6148
276.05	8481	293.00	1366	309.05	113	324.00	1379
277.00	5064	294.05	406	309.95	123	326.00	141
278.00	869	295.05	381	312.95	77	326.90	909
278.95	177	296.00	17858	314.00	793	328.00	468
283.00	631	297.00	2470	315.00	1942	332.00	627
283.95	416	298.05	124	316.00	1184	333.00	566
285.00	942	300.95	193	320.05	86	334.00	3776

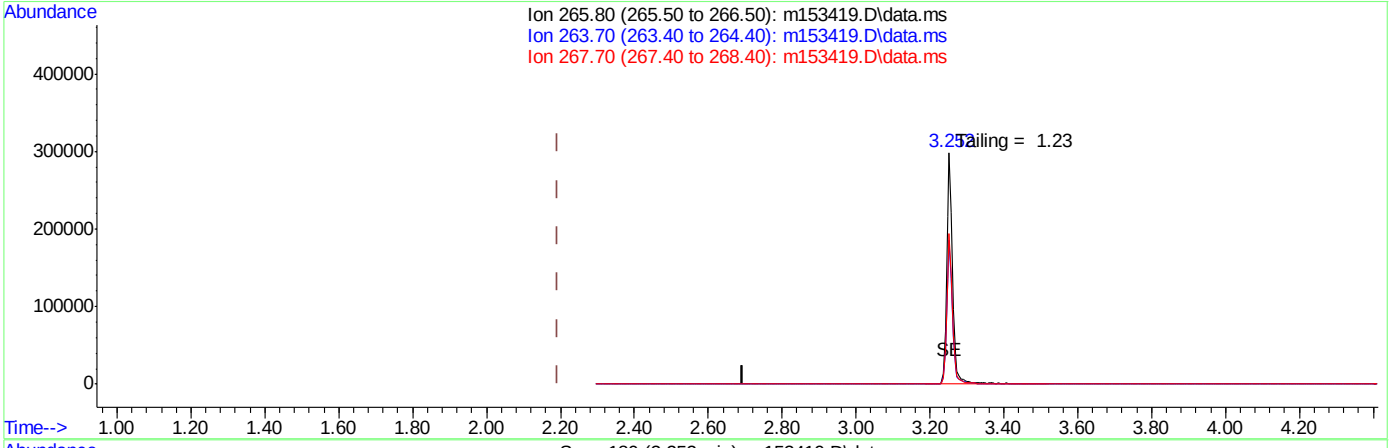
Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

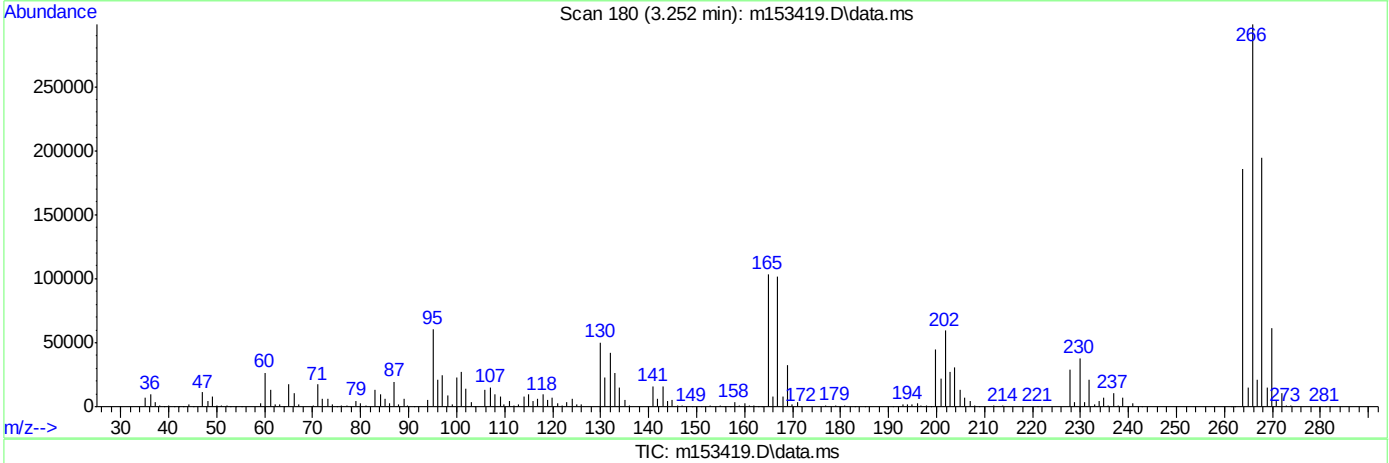
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
335.00	1152	355.00	394	384.05	255	421.00	1512
336.05	67	358.95	86	390.00	555	422.00	1371
340.05	68	364.95	8195	390.85	121	423.05	9346
340.85	180	365.90	1231	391.05	81	424.00	1930
341.05	510	366.95	97	391.90	207	424.95	97
342.05	78	370.00	202	400.95	106	425.15	87
345.95	1174	371.00	446	401.95	1208	432.05	77
347.00	238	372.05	3059	403.00	1644	441.00	21483
351.95	1730	372.85	123	403.90	653	442.05	138565
353.00	1450	373.05	605	404.95	89	443.05	26703
354.05	1729	382.95	754	414.85	75	443.95	2465

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(1) Pentachlorophenol (MC)

3.252min (+1.057) 0.00ppm m

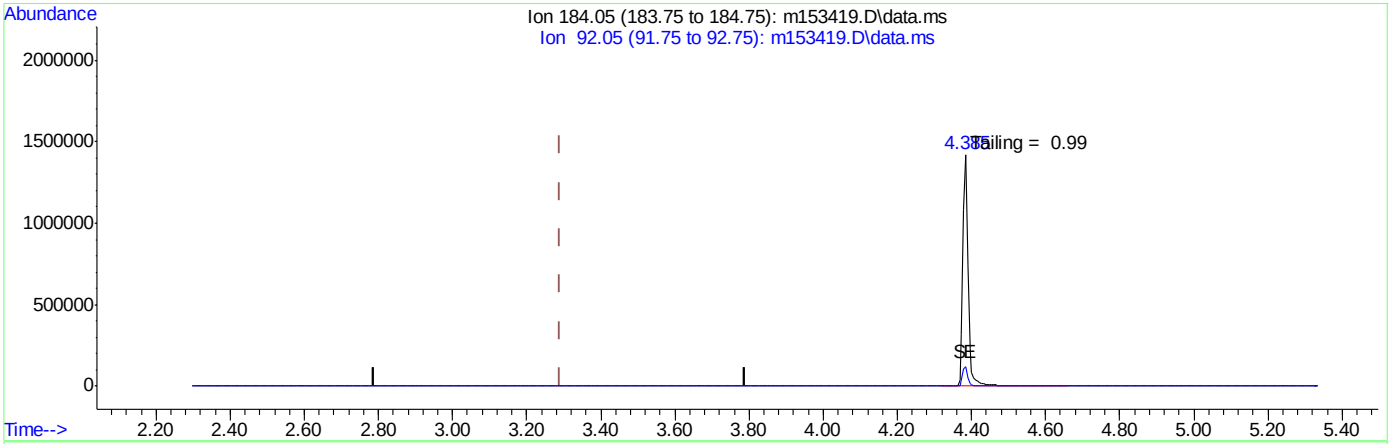
response 330705

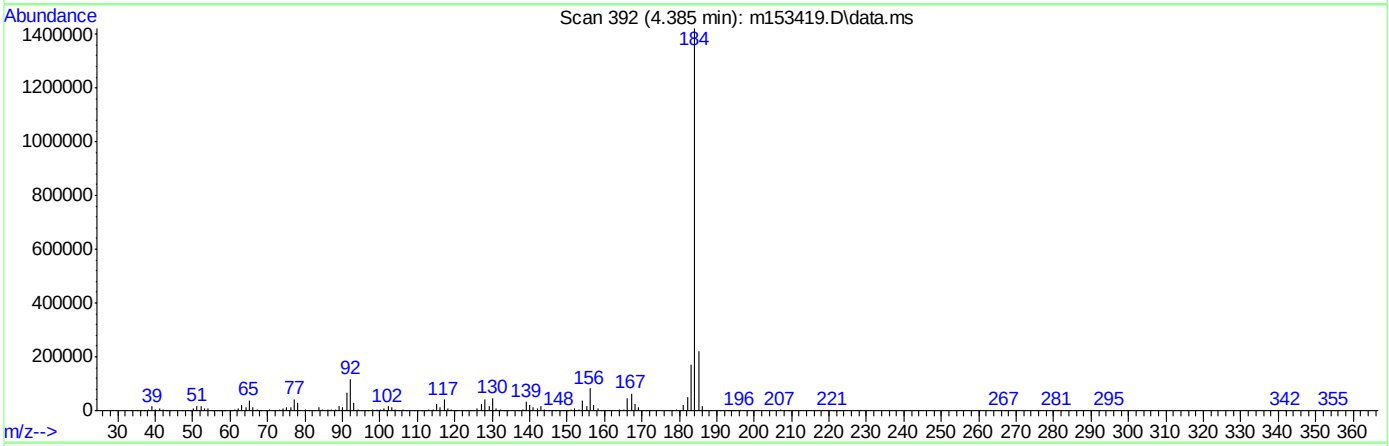
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	62.19
267.70	67.90	65.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(2) Benzidine (M)

4.385min (+1.094) 0.00ppm m

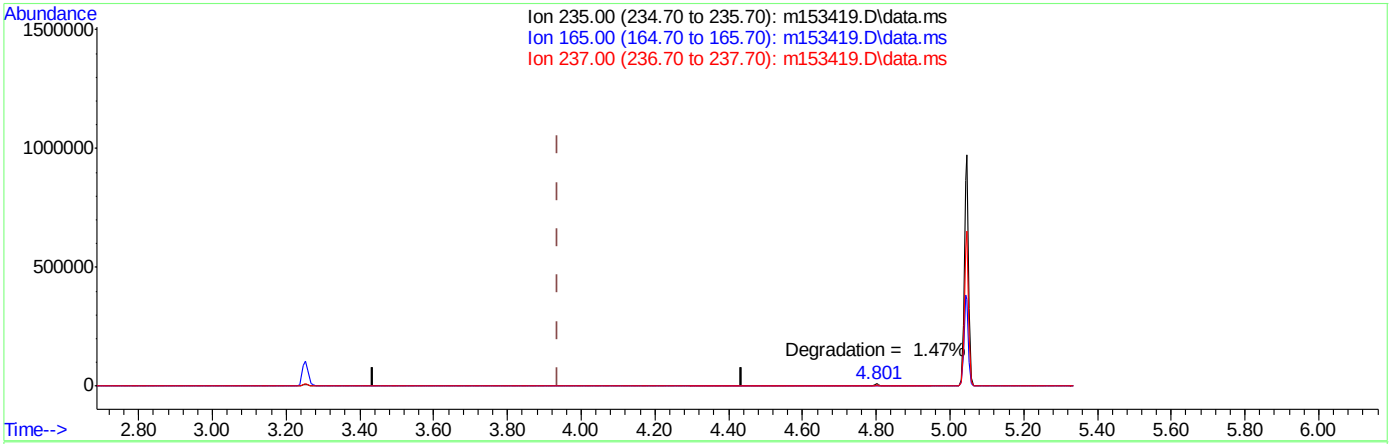
response 1335399

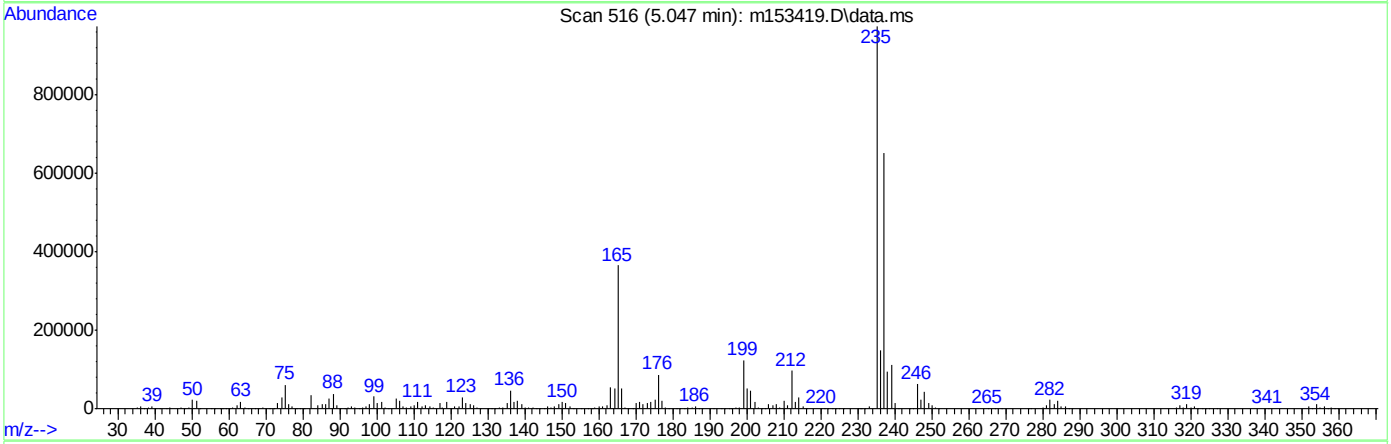
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(3) PP-DDT (MC)

5.047min (+1.110) 0.00ppm m

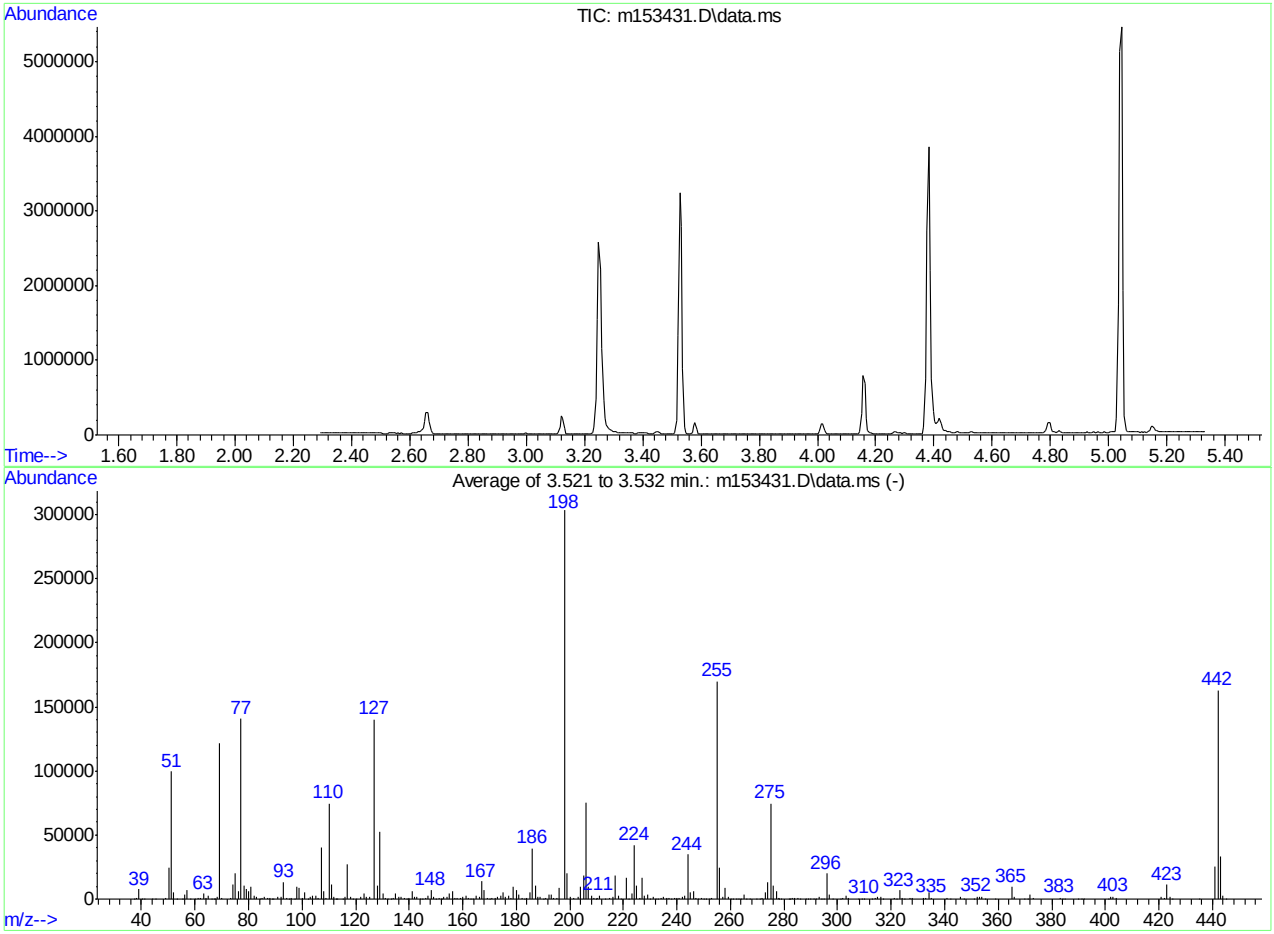
response 800686

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	37.44#
237.00	66.90	66.98
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6557\m153431.D Vial: 1
Acq On : 14 Apr 2019 2:31 pm Operator: chriss2
Sample : DFTPP Inst : MSM
Misc : op17006,em6558,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 231, 232, 233; Background Corrected with Scan 226

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.8	99360	PASS
68	69	0.00	2	1.6	1999	PASS
69	198	0.00	100	40.2	121985	PASS
70	69	0.00	2	0.6	727	PASS
127	198	40	60	46.2	139984	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	303253	PASS
199	198	5	9	6.8	20557	PASS
275	198	10	30	24.5	74381	PASS
365	198	1	100	3.0	9225	PASS
441	443	0.10	100	75.9	24993	PASS
442	198	40	100	53.7	162856	PASS
443	442	17	23	20.2	32909	PASS

m153431.D DFTPPM.M Mon Apr 15 13:13:17 2019

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	398	53.10	338	66.05	86	78.15	10220
38.10	1298	55.10	41	67.00	150	79.05	8132
39.15	7601	56.05	3206	67.25	86	80.05	5980
40.05	259	57.05	6702	68.10	1999	81.05	9416
41.10	70	58.10	434	69.05	121985	82.05	2241
44.10	134	60.05	79	70.10	727	83.05	2172
45.15	227	61.05	1041	73.10	789	84.00	178
49.05	598	62.10	1339	74.10	11176	85.05	1295
50.15	24760	63.10	4206	75.00	19830	86.05	2102
51.15	99360	64.05	688	76.15	6484	87.05	1160
52.15	5234	65.10	2592	77.10	140523	88.05	546

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.95	86	100.00	818	111.05	11776	123.05	4016
89.15	102	101.05	5075	112.00	1463	124.00	1859
91.05	2110	102.00	392	112.85	72	125.05	1764
92.05	2219	103.05	1572	113.05	237	127.05	139984
93.05	13235	104.05	2772	115.05	110	128.05	10446
94.05	1173	105.05	2905	116.05	1991	129.05	52821
95.05	165	106.05	930	117.05	27530	130.05	4377
96.10	596	107.05	40237	118.05	2076	131.00	828
97.10	463	108.05	5953	119.05	421	132.10	360
98.05	9454	109.10	1155	120.05	407	133.00	230
99.05	8770	110.05	74805	122.05	2212	134.00	1235

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
135.05	4115	146.00	1198	156.05	5765	167.05	13822
136.05	1791	147.05	3063	157.05	1179	168.05	6877
137.05	1969	148.05	7280	158.00	1004	169.05	943
138.00	514	149.05	1779	159.00	904	170.05	424
139.00	367	150.05	479	160.00	2028	171.00	603
140.05	507	151.10	858	161.05	3052	172.00	1280
141.05	6023	151.95	226	162.05	974	173.05	1657
142.05	2131	152.15	188	163.00	479	174.05	2911
143.00	1562	153.05	2044	163.95	341	175.05	5440
144.05	418	154.05	1565	165.00	2446	176.05	1799
145.00	362	155.05	4051	166.05	2053	177.05	2334

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	784	189.00	1885	201.45	1330	212.95	241
179.00	9935	190.00	417	203.00	2185	215.00	762
180.05	7300	190.95	798	204.05	10010	216.00	1556
181.00	3493	192.05	3316	205.05	18016	216.95	18422
182.05	614	193.05	3747	206.05	75304	218.00	2536
183.10	213	194.05	732	207.00	10024	219.05	179
184.00	787	195.10	497	208.05	2296	221.05	17058
185.05	4854	196.05	9021	209.00	877	221.95	381
186.05	39656	197.95	303253	209.95	172	223.00	4531
187.05	10866	199.00	20557	210.15	556	224.05	42005
188.05	1366	200.00	1707	211.00	2941	225.05	10171

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.05	933	237.05	1286	247.90	232	260.00	284
227.05	16604	237.95	315	249.00	1239	260.95	323
228.00	2741	239.00	714	249.95	174	262.05	69
229.00	3320	240.05	496	251.00	250	262.95	149

229.85	325	240.95	915	252.00	393	263.75	78
231.00	1598	242.05	2157	253.05	819	265.00	3870
232.00	273	243.05	2460	255.05	169738	265.85	100
232.95	215	244.05	34728	256.05	24767	266.95	249
234.00	1021	245.05	5260	256.95	2023	269.85	93
235.05	1490	246.05	6372	257.95	8949	271.00	261
236.00	929	247.00	1017	259.00	1597	271.95	511

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.05	5297	284.00	499	296.05	20103	314.00	907
274.05	13499	285.05	1089	297.00	3199	314.95	2021
275.05	74381	285.95	92	297.95	211	316.00	1387
276.05	10104	288.05	84	300.95	241	317.00	191
277.00	5791	288.95	300	302.00	584	321.00	584
277.85	87	289.90	167	303.05	2502	322.05	308
278.05	842	291.10	164	304.00	552	323.05	6967
279.00	163	292.05	386	307.90	255	324.00	1261
281.85	112	293.00	1470	308.95	166	324.95	179
282.05	114	293.95	271	309.95	305	326.90	1289
283.00	856	294.95	242	312.85	72	328.00	778

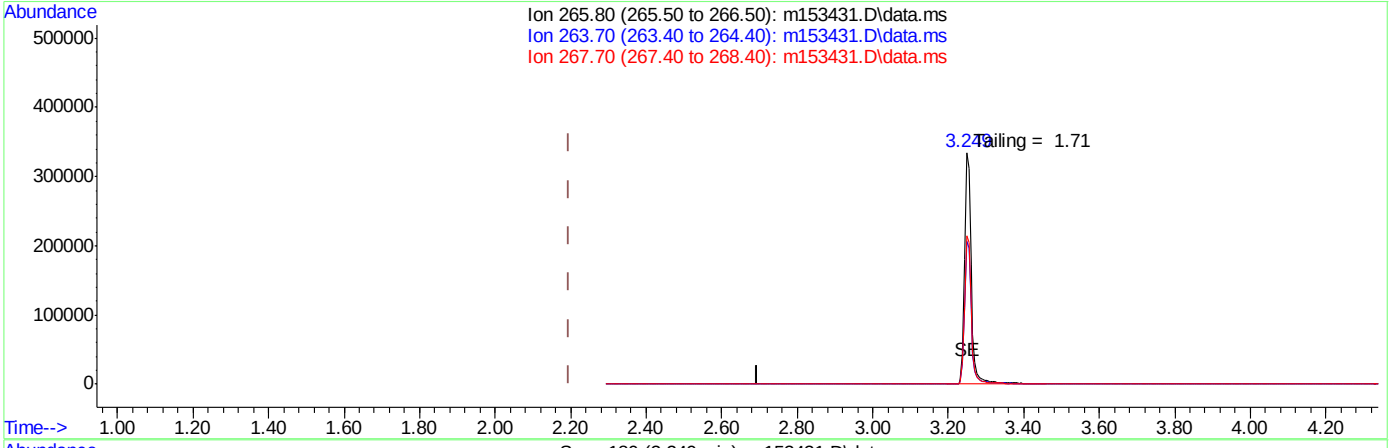
Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

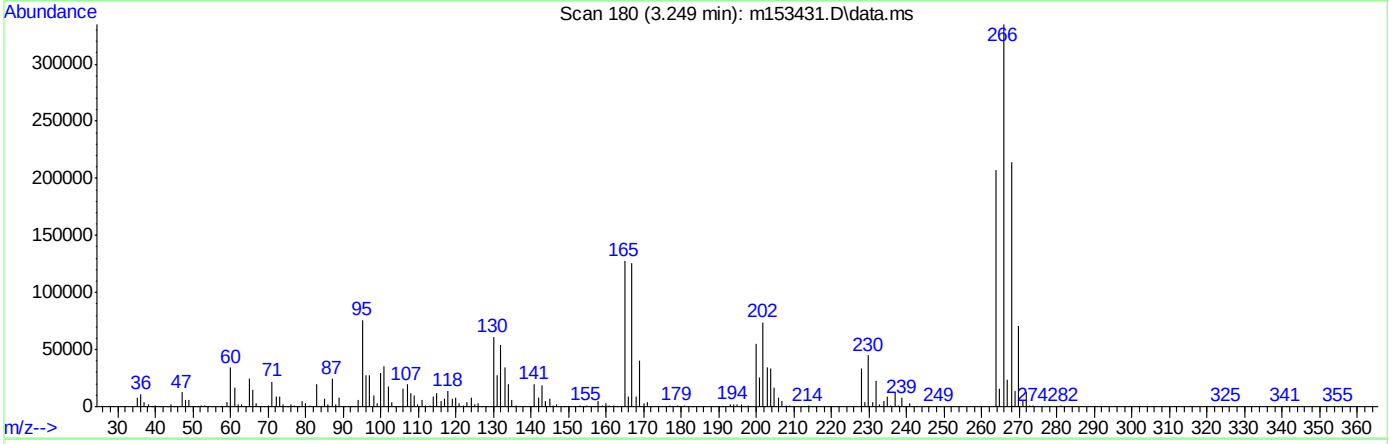
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
332.00	570	354.00	2175	384.95	82	424.00	2183
332.95	610	355.00	476	389.95	444	425.00	272
334.05	5090	358.95	69	391.10	316	435.25	79
335.00	1180	364.95	9225	392.00	205	441.00	24993
341.00	667	365.95	1460	400.95	214	442.05	162856
342.00	238	369.90	168	401.95	1384	443.05	32909
345.95	1447	371.00	384	403.00	2194	444.00	2798
346.95	300	372.00	3641	403.90	684	444.95	195
351.05	80	373.00	883	421.00	1541		
352.05	2071	383.00	892	421.95	1249		
352.95	1486	384.00	238	422.95	11345		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(1) Pentachlorophenol (MC)

3.249min (+1.053) 0.00ppm m

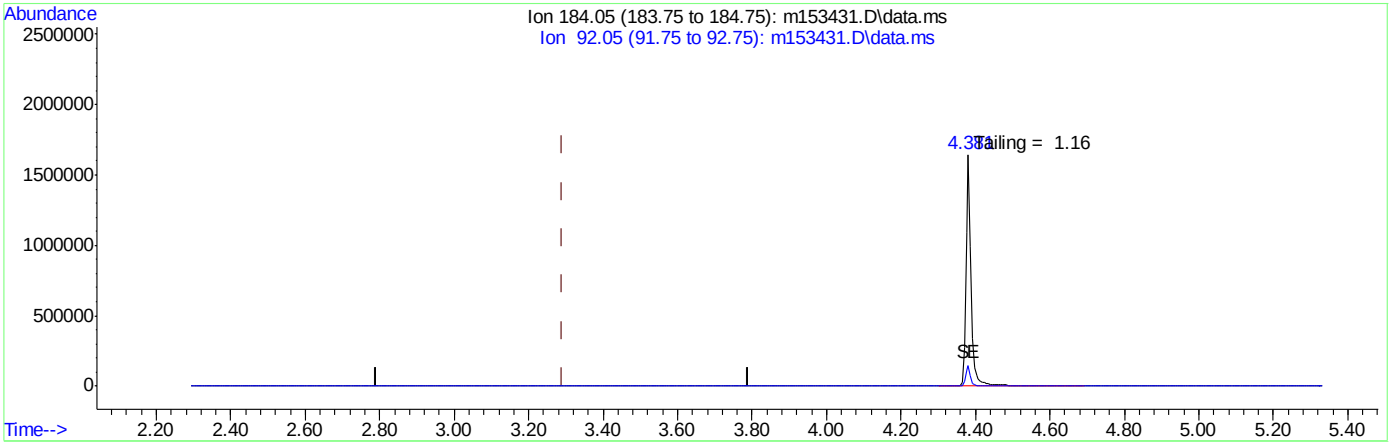
response 394185

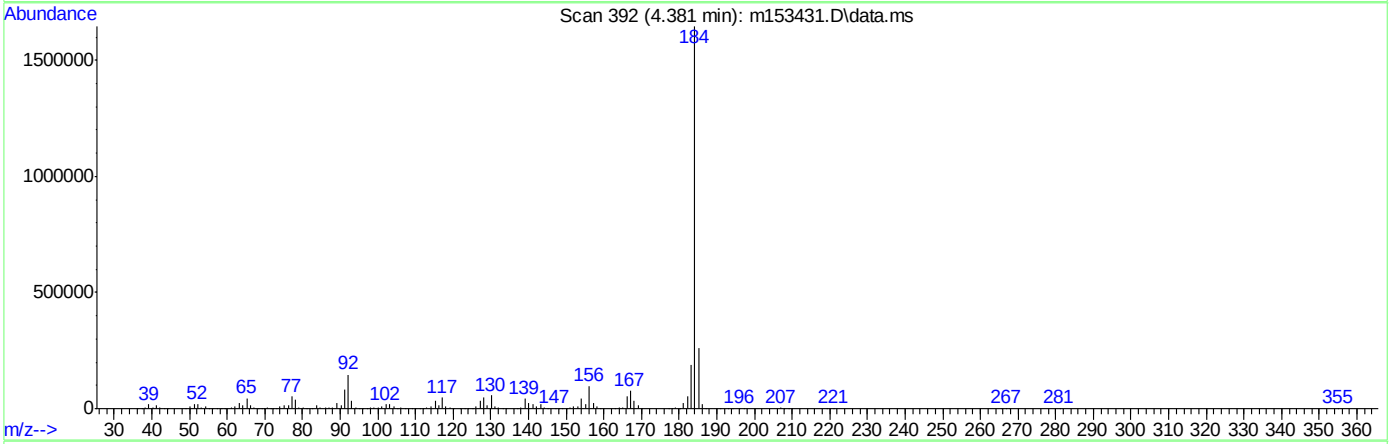
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	61.77
267.70	67.90	63.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(2) Benzidine (M)

4.381min (+1.091) 0.00ppm m

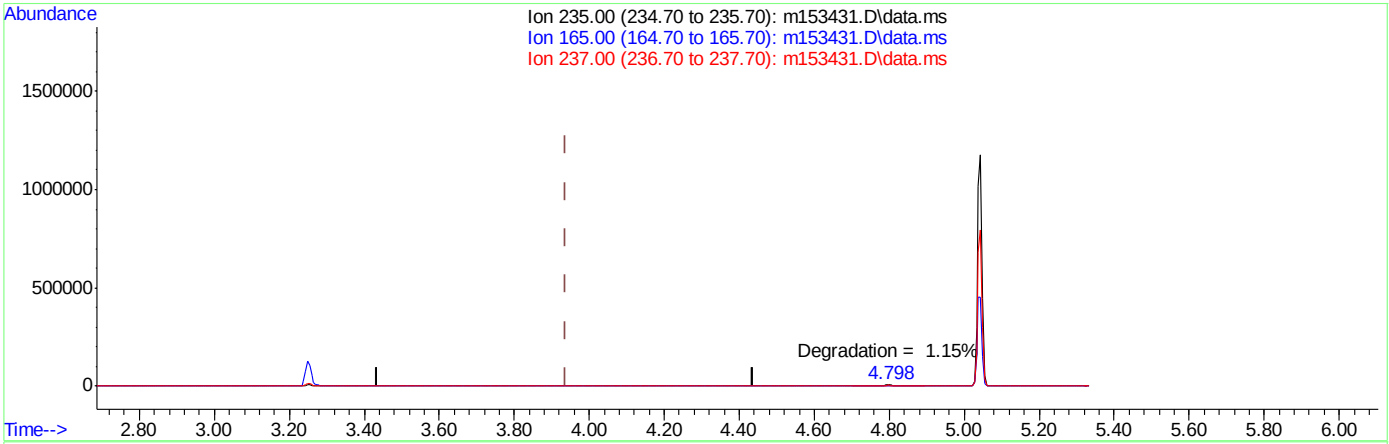
response 1550554

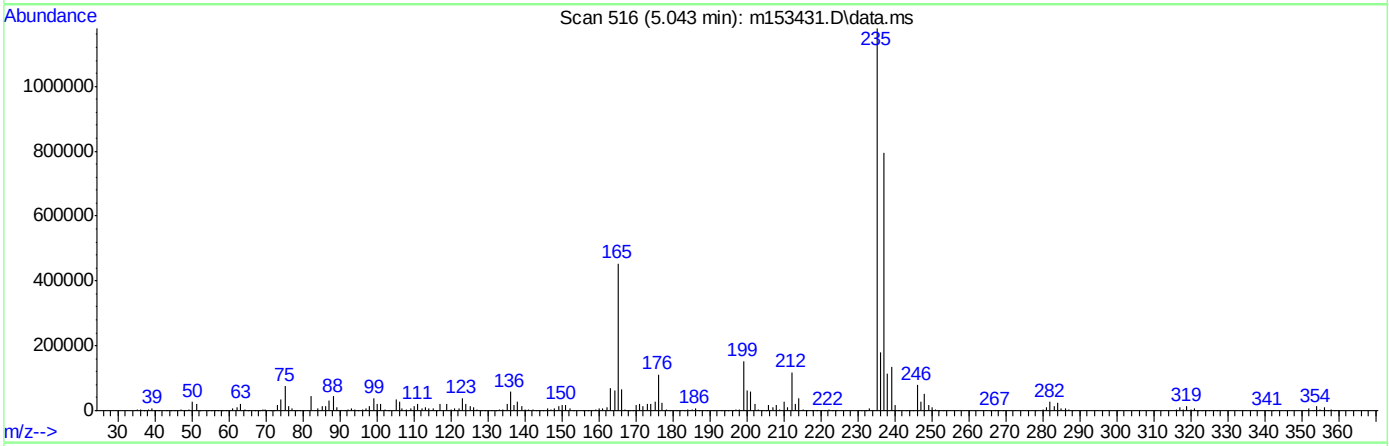
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(3) PP-DDT (MC)

5.043min (+1.107) 0.00ppm m

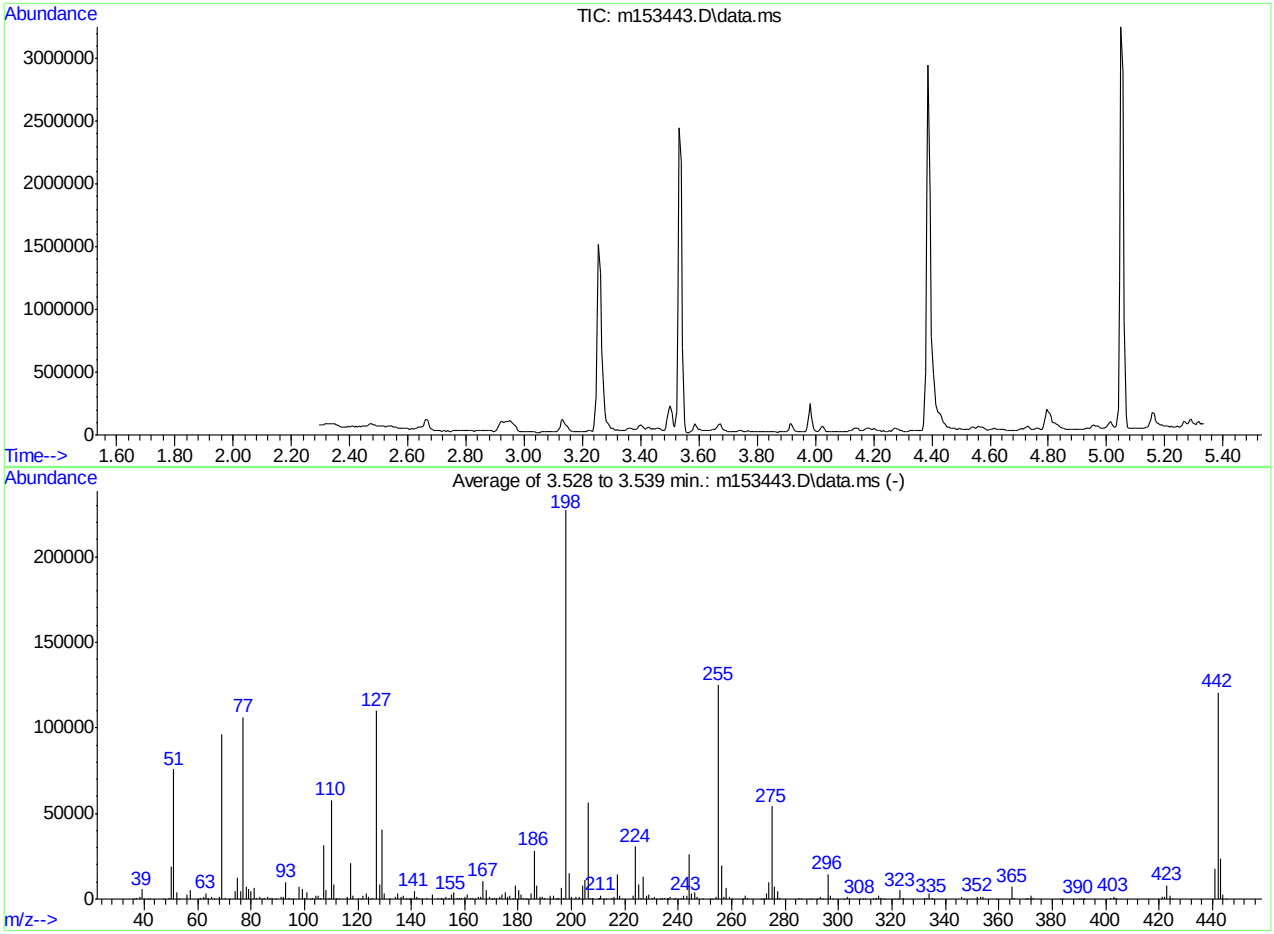
response 970552

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	38.55#
237.00	66.90	67.38
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6559\m153443.D Vial: 1
Acq On : 15 Apr 2019 1:54 pm Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6559,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 232, 233, 234; Background Corrected with Scan 227

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.3	75686	PASS
68	69	0.00	2	1.2	1135	PASS
69	198	0.00	100	42.4	96290	PASS
70	69	0.00	2	0.5	481	PASS
127	198	40	60	48.4	109790	PASS
197	198	0.00	1	0.2	521	PASS
198	198	100	100	100.0	227010	PASS
199	198	5	9	6.8	15330	PASS
275	198	10	30	23.9	54288	PASS
365	198	1	100	3.1	6995	PASS
441	443	0.10	100	73.0	17393	PASS
442	198	40	100	53.2	120749	PASS
443	442	17	23	19.7	23826	PASS

m153443.D DFTPPM.M Mon Apr 15 14:50:53 2019

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	69	52.10	3815	68.10	1135	81.05	6792
37.10	431	53.10	265	69.00	96290	82.10	992
38.15	1103	56.10	2472	70.05	481	83.05	1617
39.15	5667	57.10	5312	72.10	186	84.05	152
40.05	199	60.05	67	74.10	4745	85.10	626
41.15	182	61.05	1005	75.00	12273	86.00	1341
42.10	1	62.10	1104	76.05	4561	87.05	504
47.05	118	63.10	3409	77.10	106422	88.05	378
49.05	517	64.10	524	78.15	7379	89.05	288
50.15	18749	65.15	1468	79.05	6168	91.05	1499
51.10	75686	66.10	319	80.05	4876	92.05	1153

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.05	10066	105.00	1915	118.05	1684	132.00	202
94.10	910	106.10	793	120.00	470	134.05	1090
95.05	37	107.00	31271	121.05	189	135.05	3007
96.05	290	108.05	4938	122.05	1880	136.05	1148
98.05	7369	109.10	353	123.05	3023	137.05	1799
99.05	6043	110.05	57754	124.05	1472	138.10	523
100.10	725	111.05	8673	125.05	920	139.05	302
101.05	4031	112.05	914	127.00	109790	140.05	493
101.95	264	113.05	291	128.05	8253	141.00	4708
103.00	971	116.05	1440	129.05	40373	142.05	1481
104.05	2236	117.05	20778	130.05	3392	143.05	998

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
144.05	355	158.00	847	169.10	1119	179.00	7762
146.00	882	159.00	743	170.00	325	180.05	5345
148.00	2802	160.00	1627	170.35	74	181.05	2540
150.00	368	161.05	2528	171.05	545	182.00	425
151.15	585	162.05	709	172.00	846	182.95	79
151.45	141	163.00	379	173.00	1404	183.15	73
153.00	1552	163.95	182	174.00	2486	185.05	3038
154.00	897	164.95	1645	175.05	4253	186.05	28210
155.05	2806	166.00	1601	176.00	1135	187.05	7784
156.05	4221	167.00	10672	177.05	2077	188.05	1072
157.05	954	168.05	5167	178.00	720	189.05	1629

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
189.95	356	201.50	1126	213.05	109	228.00	1718
192.00	2289	202.95	1177	215.00	592	228.95	2573
193.05	2261	204.05	7771	216.00	1063	230.00	440
193.95	290	205.05	11485	217.00	14279	231.00	1183
194.95	94	206.05	56466	218.00	1698	232.00	299
195.10	364	207.05	980	218.95	155	232.95	266
196.05	6356	208.05	534	223.00	2206	233.95	743
196.85	521	210.00	291	224.00	30559	235.00	842
197.95	227010	210.45	522	225.05	8549	235.85	77
198.95	15330	211.00	2170	226.05	829	236.00	596
200.05	1132	212.00	242	227.00	13004	237.00	1063

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.05	81	248.95	138	265.00	1709	285.00	939
239.05	562	252.00	224	265.90	394	285.95	167
240.00	326	252.95	76	271.00	315	289.05	238
241.00	732	254.00	1074	271.85	118	289.95	71

242.05	1789	255.05	124837	272.15	288	291.95	238
243.00	1975	256.00	19407	273.05	3425	293.00	1241
244.05	26131	256.95	1410	274.00	9925	294.00	217
245.05	3408	258.00	6568	275.05	54288	296.00	14475
246.00	4263	258.95	1081	276.05	7532	296.95	1897
247.00	1044	260.00	172	277.00	4730	297.90	203
248.00	246	264.05	133	278.05	747	302.00	219

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
303.05	1595	321.05	349	353.00	1058	383.90	262
304.00	451	321.95	67	354.00	1410	390.05	302
307.95	255	323.05	5083	359.05	83	390.85	91
308.95	104	324.00	917	364.95	6995	391.65	89
309.95	188	332.00	552	365.95	923	392.00	204
312.90	148	333.00	482	369.95	84	401.90	771
313.85	104	334.05	3301	370.95	393	403.00	1345
314.05	546	335.00	790	371.85	201	403.85	102
314.95	1766	345.95	1066	372.05	2266	404.00	450
316.00	859	347.00	155	372.95	653	421.05	1291
317.00	238	352.05	1581	382.95	185	421.95	1202

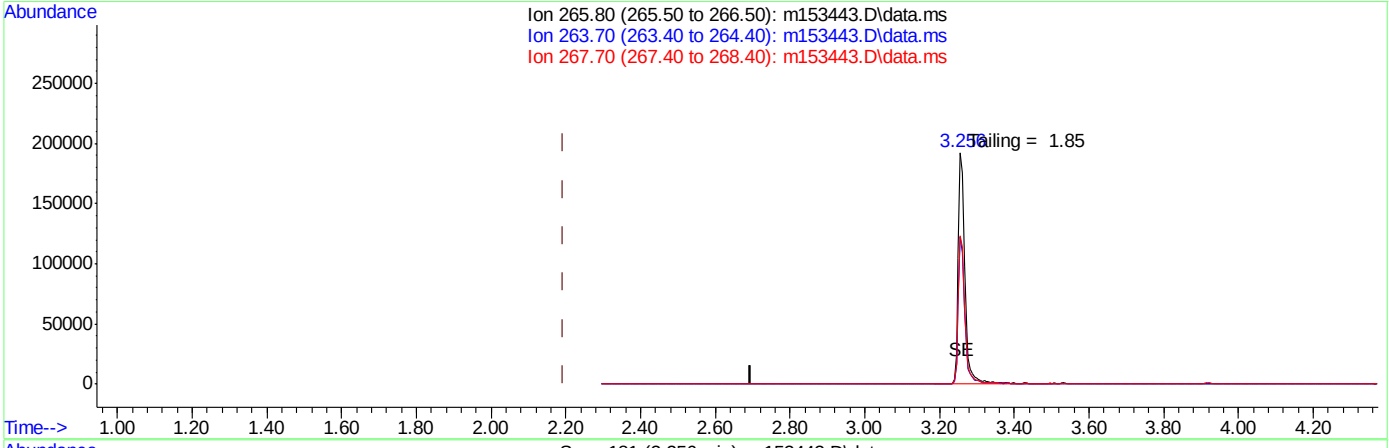
Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

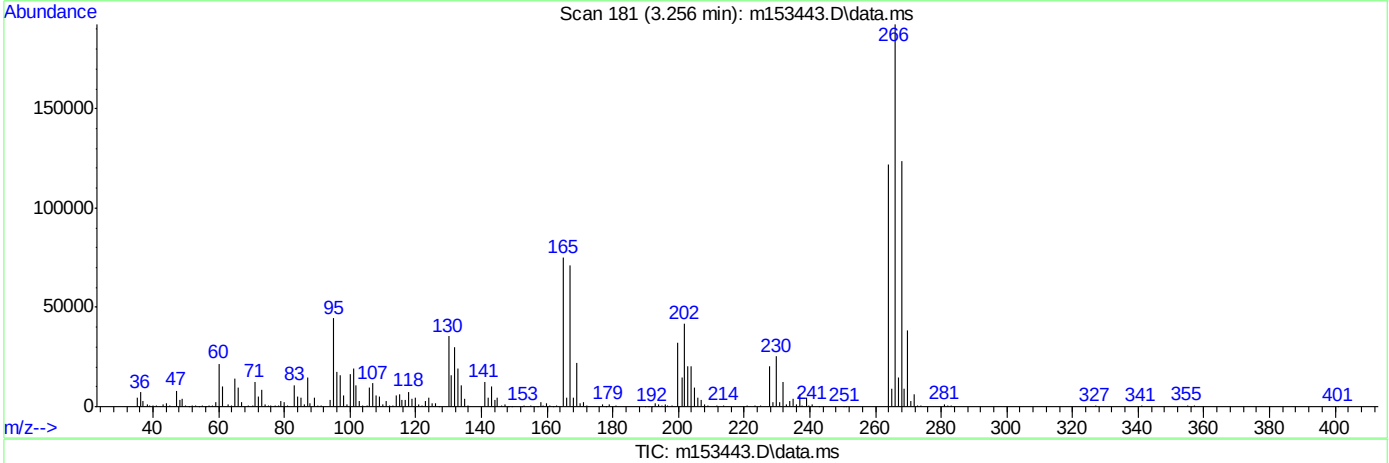
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
422.95	8040						
423.95	1668						
425.00	243						
441.00	17393						
442.05	120749						
443.00	23826						
444.00	2377						
444.95	77						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(1) Pentachlorophenol (MC)

3.256min (+1.060) 0.00ppm m

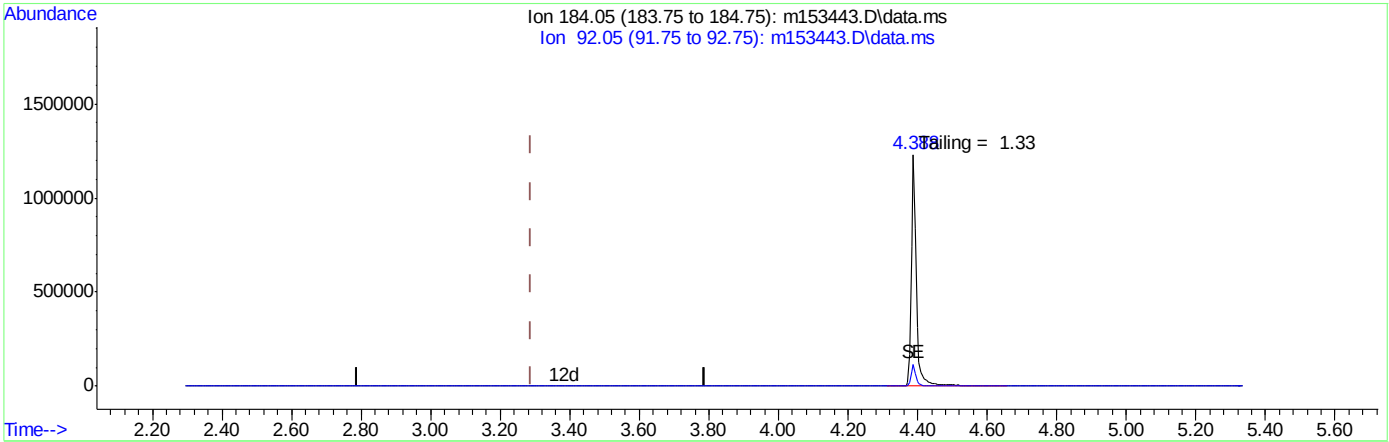
response 233348

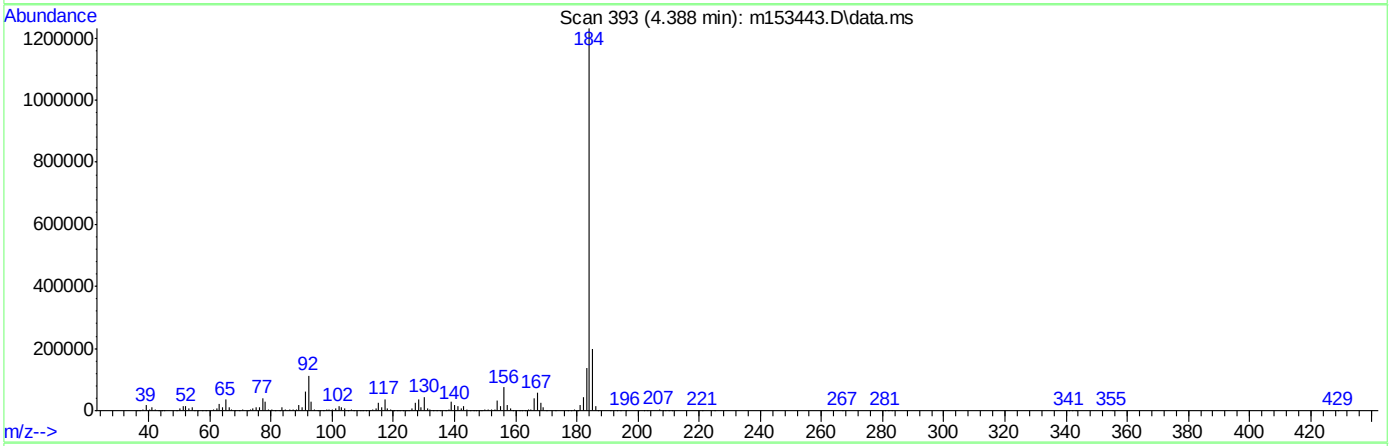
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	63.39
267.70	67.90	64.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(2) Benzidine (M)

4.388min (+1.097) 0.00ppm m

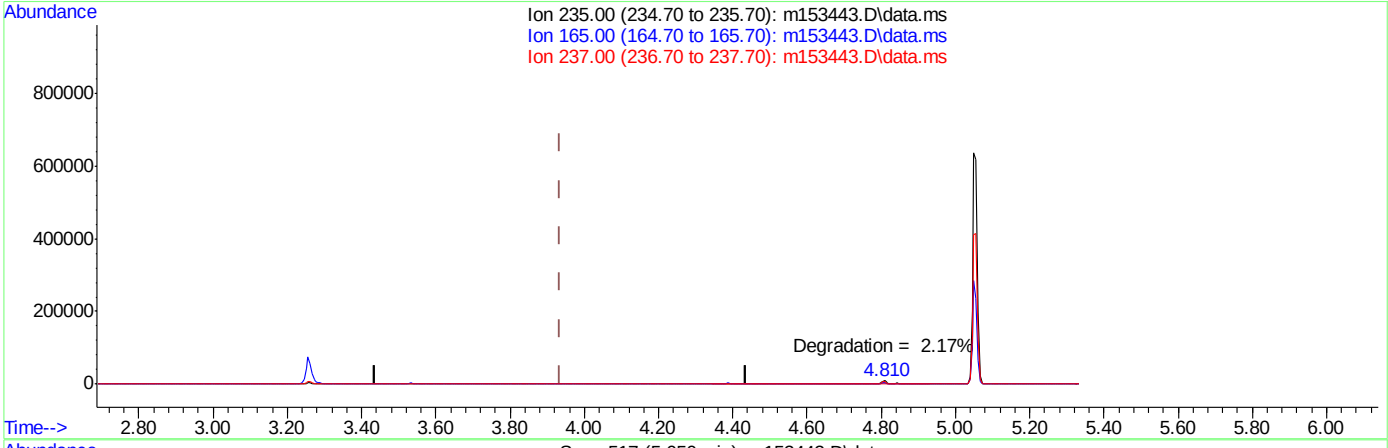
response 1246674

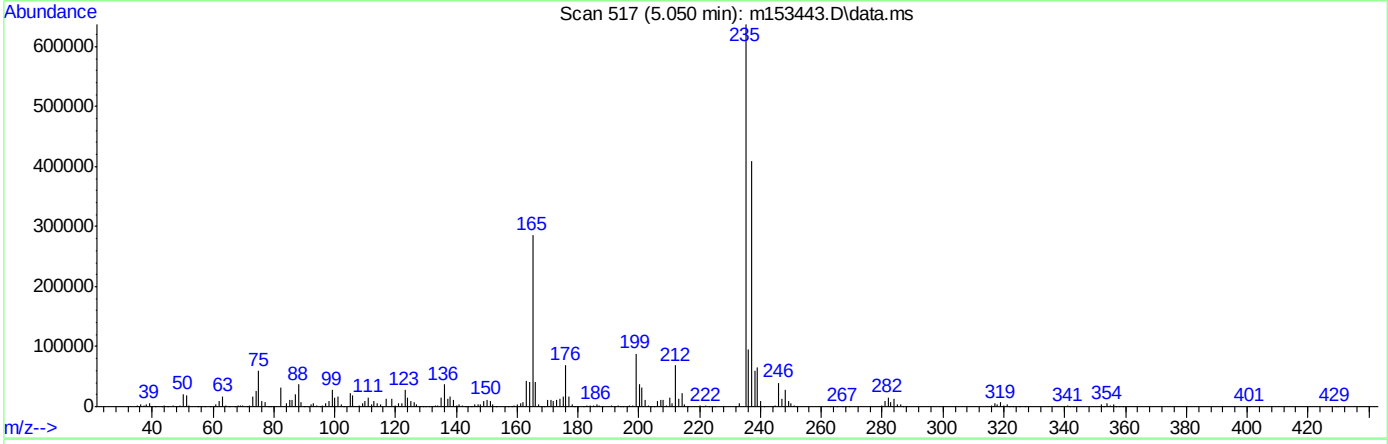
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	9.25#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(3) PP-DDT (MC)

5.050min (+1.113) 0.00ppm m

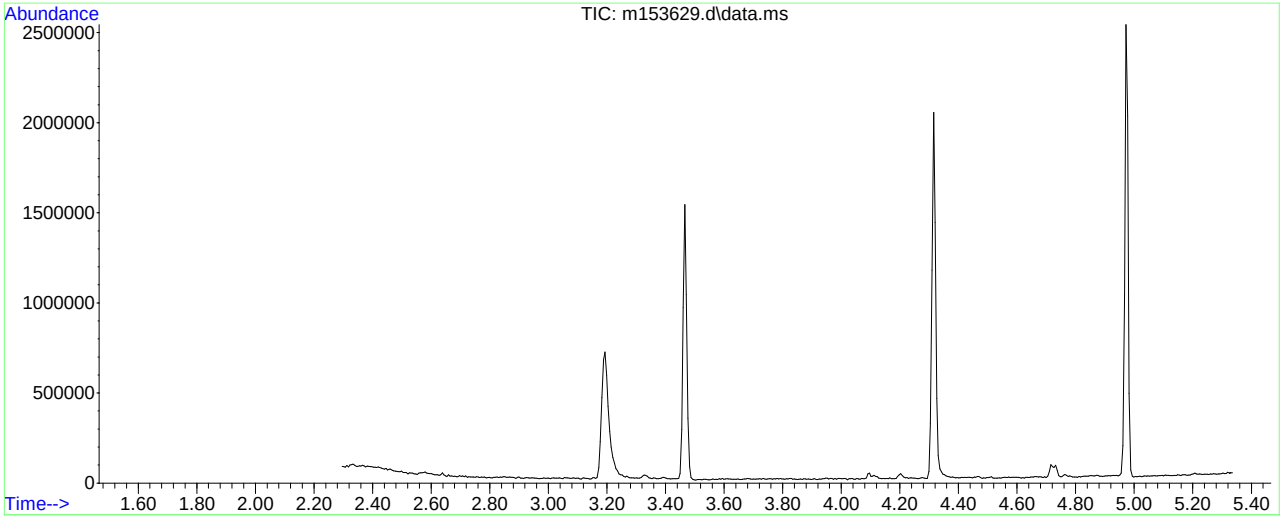
response 547854

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	44.89
237.00	66.90	64.29
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\data\michellc\em6566\m153629.d Vial: 1
Acq On : 20 Apr 2019 10:42 pm Operator: carolb
Sample : DFTPP Inst : MSM
Misc : op17006,em6566,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Jul 02 07:43:31 2017



AutoFind: Scans 219, 220, 221; Background Corrected with Scan 211

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.7	51008	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.6	62697	PASS
70	69	0.00	2	0.8	495	PASS
127	198	40	60	48.8	64272	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	131685	PASS
199	198	5	9	6.9	9107	PASS
275	198	10	30	25.2	33136	PASS
365	198	1	100	2.9	3862	PASS
441	443	0.10	100	78.6	12485	PASS
442	198	40	100	62.5	82304	PASS
443	442	17	23	19.3	15894	PASS

m153629.d DFTPPM.M Mon Apr 22 02:22:28 2019

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.15	287	51.15	51008	62.15	855	75.10	8986
38.15	625	52.15	2769	63.15	2648	76.10	3879
39.15	4461	53.10	349	64.10	386	77.15	71756
40.10	110	53.55	110	65.15	1220	78.15	5051
41.15	186	54.25	84	66.15	179	79.10	3997
42.15	418	55.10	345	67.15	112	80.05	3473
44.10	91	56.10	1293	69.05	62697	81.05	3976
45.05	388	57.05	3490	70.10	495	82.10	1275
46.95	86	58.25	80	71.20	184	83.05	1148
49.05	383	59.05	76	73.10	595	85.10	908
50.15	13135	61.10	849	74.15	5595	86.05	958

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.05	599	96.00	366	107.05	19117	116.05	1222
87.85	83	97.35	169	108.05	2918	117.05	13719
88.15	288	98.00	4432	109.00	262	117.95	308
88.95	115	99.05	3909	110.05	34261	118.10	551
89.15	68	100.05	437	111.05	5000	119.10	215
91.10	1081	101.10	2500	112.05	352	120.05	287
92.05	1165	102.10	240	112.25	271	120.95	111
93.10	6745	103.05	755	113.10	305	122.10	1328
93.75	105	104.05	1501	114.25	68	123.05	2067
94.05	611	105.05	1485	114.95	111	124.00	778
95.15	205	106.00	253	115.25	148	125.00	953

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.05	64272	137.10	1076	147.00	1571	157.00	651
128.05	5007	138.05	304	148.05	4180	157.35	132
129.05	24645	139.00	202	149.05	932	158.05	617
130.00	2104	140.10	382	149.95	112	159.00	582
131.05	521	141.05	2910	150.35	73	160.05	1258
131.90	216	142.10	981	151.10	570	161.10	1494
132.15	112	143.05	759	152.20	250	162.10	493
132.45	91	143.85	104	153.05	945	163.15	75
134.05	634	144.15	190	154.05	733	165.05	1114
135.10	1925	145.00	185	155.05	1970	166.00	893
136.10	642	146.00	576	156.10	2945	167.05	6231

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
168.05	3039	178.00	552	187.05	4998	196.05	4125
169.00	648	179.00	5024	188.10	786	198.05	131685
170.90	302	180.05	3324	189.00	1255	199.00	9107
171.80	213	181.10	1864	190.05	297	200.05	705
172.05	601	181.95	109	191.05	27	200.75	75
173.00	913	182.15	91	192.00	1634	201.35	738
173.95	652	183.15	70	193.05	2137	201.65	260
174.15	524	183.95	127	193.90	307	202.05	179
175.10	2478	184.20	327	194.15	150	203.05	1021
176.05	847	185.10	2346	194.95	189	204.00	5229
177.05	1224	186.05	17020	195.15	305	205.05	8100

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
206.05	34507	215.00	263	226.25	366	238.95	242
207.05	4684	216.05	865	227.05	7651	240.00	365
208.00	717	217.00	8877	228.00	1177	241.00	651
209.00	457	218.05	1175	229.00	1891	242.10	1354
209.25	130	218.90	158	229.90	162	243.00	1208
210.05	341	221.05	7163	231.10	868	244.05	16926
210.25	275	222.00	1411	232.05	154	245.05	2328
211.05	1144	223.05	1952	234.10	600	246.05	2703
211.75	129	224.05	19047	235.00	842	247.00	525
212.15	178	225.05	5165	236.10	336	248.25	68
213.05	144	226.00	384	237.05	856	248.95	636

Average of 3.461 to 3.471 min.: m153629.d\data.ms

MM6556.M Mon Apr 22 00:52:26 2019

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
249.95	92	261.10	156	271.95	296	284.00	470
251.30	271	263.05	89	273.00	2193	285.00	610
252.05	234	264.05	224	274.05	5834	288.85	72
252.95	542	264.95	1911	275.05	33136	290.65	79
253.25	166	265.85	68	276.00	4394	290.95	75
255.05	80280	267.45	109	277.00	2422	291.15	85
256.05	11516	268.15	98	278.05	516	291.75	82
257.00	847	269.95	71	279.05	124	292.15	77
258.00	4399	270.85	169	281.15	254	293.00	924
258.95	829	271.05	79	281.95	90	293.65	83
259.95	111	271.65	121	283.10	561	293.85	245

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
294.75	197	309.95	76	322.05	97	334.00	1751
295.05	211	312.95	111	323.05	3144	335.00	470
296.05	9419	313.95	635	324.10	580	341.05	239
297.00	1225	315.00	903	324.95	82	341.85	71
298.05	166	315.95	421	325.65	72	342.05	67
298.25	76	316.15	127	326.95	351	346.00	663
300.80	322	319.35	88	327.95	344	350.75	69
301.75	77	320.05	67	328.35	67	352.00	1011
303.05	1170	320.85	435	328.85	73	353.00	673
304.10	475	321.05	149	331.95	368	354.00	814
308.00	285	321.65	68	333.10	505	354.95	194

Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
356.25	95	373.00	281	409.05	113	429.05	85
359.05	166	374.15	102	420.75	126	429.75	80
360.35	88	382.90	582	421.00	641	430.25	73
362.65	70	384.05	79	421.25	87	432.15	179
365.00	3862	390.15	137	422.00	753	432.85	69
366.00	712	390.95	77	423.00	4637	433.85	79
367.05	69	392.10	162	424.05	1115	434.55	69
368.50	145	400.95	68	424.95	145	436.05	128
371.10	275	402.00	899	426.95	71	436.35	72
372.00	1660	403.00	1042	427.65	81	437.25	86
372.85	88	404.05	525	428.55	74	441.00	12485

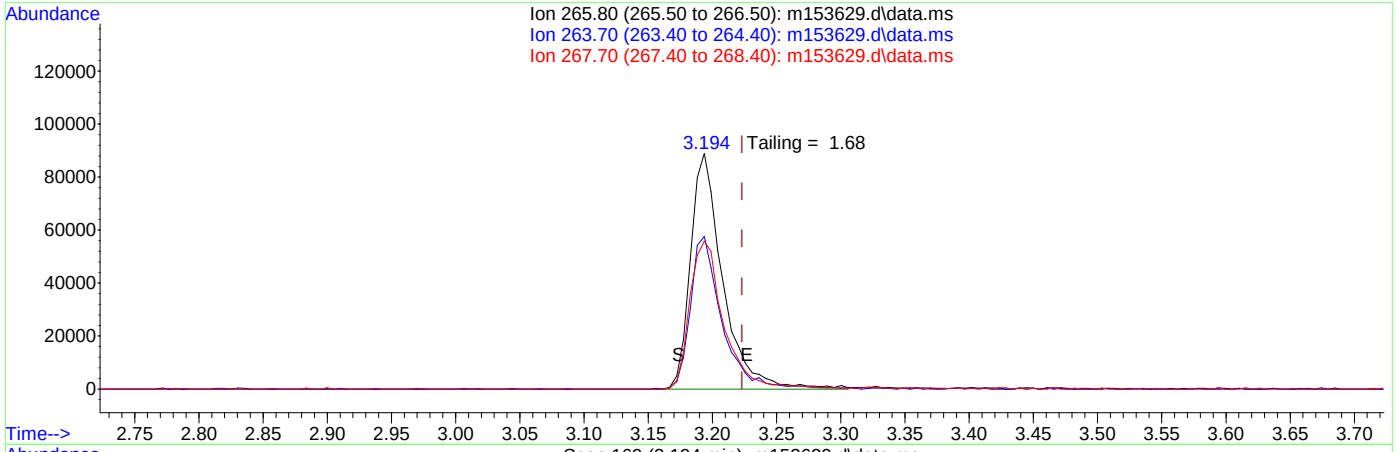
Average of 3.461 to 3.471 min.: m153629.d\data.ms
DFTPP
Modified:subtracted

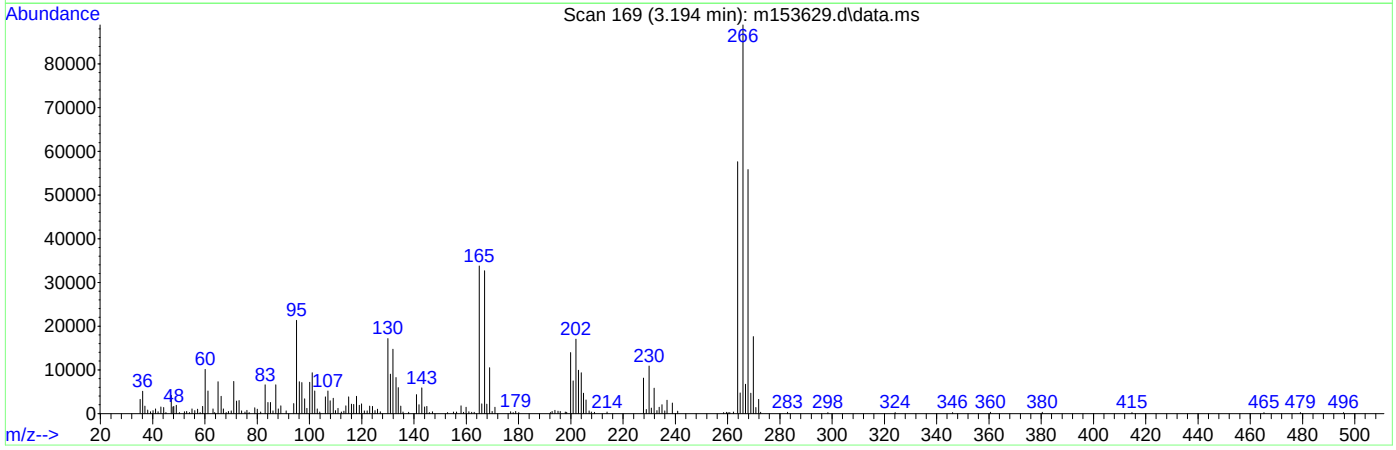
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
442.05	82304						
443.05	15894						
444.00	1640						
486.45	67						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153629.d
Acq On : 20 Apr 2019 10:42 pm
Operator : carolb
Sample : DFTPP Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: Apr 20 22:48:20 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153629.d\data.ms

(1) Pentachlorophenol (MC)

3.194min (-0.029) 0.00ppm

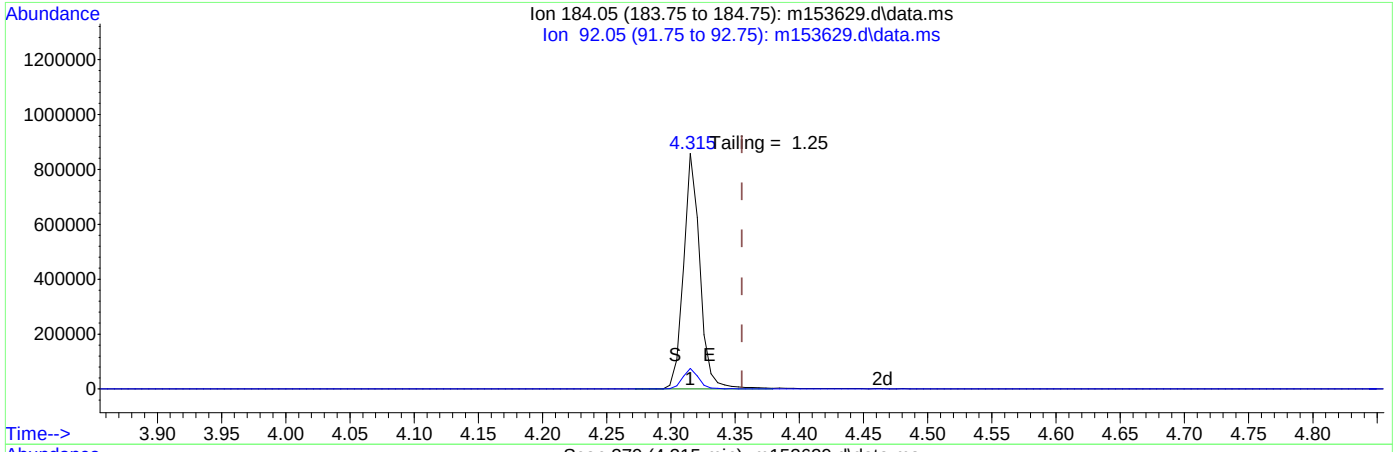
response 154444

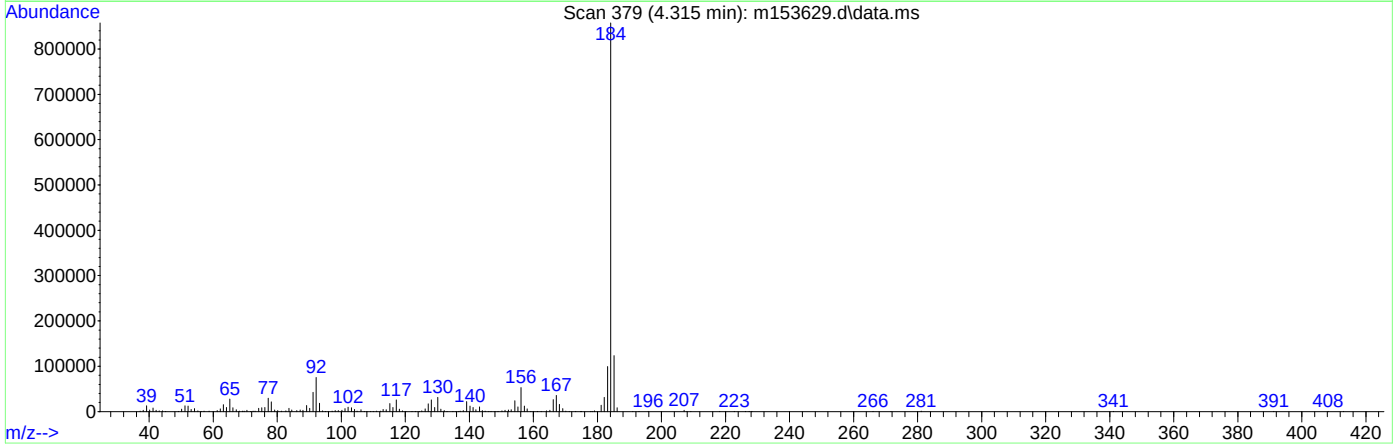
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	64.83
267.70	67.90	62.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153629.d
Acq On : 20 Apr 2019 10:42 pm
Operator : carolb
Sample : DFTPP Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: Apr 20 22:48:20 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153629.d\data.ms

(2) Benzidine (M)

4.315min (-0.040) 0.00ppm

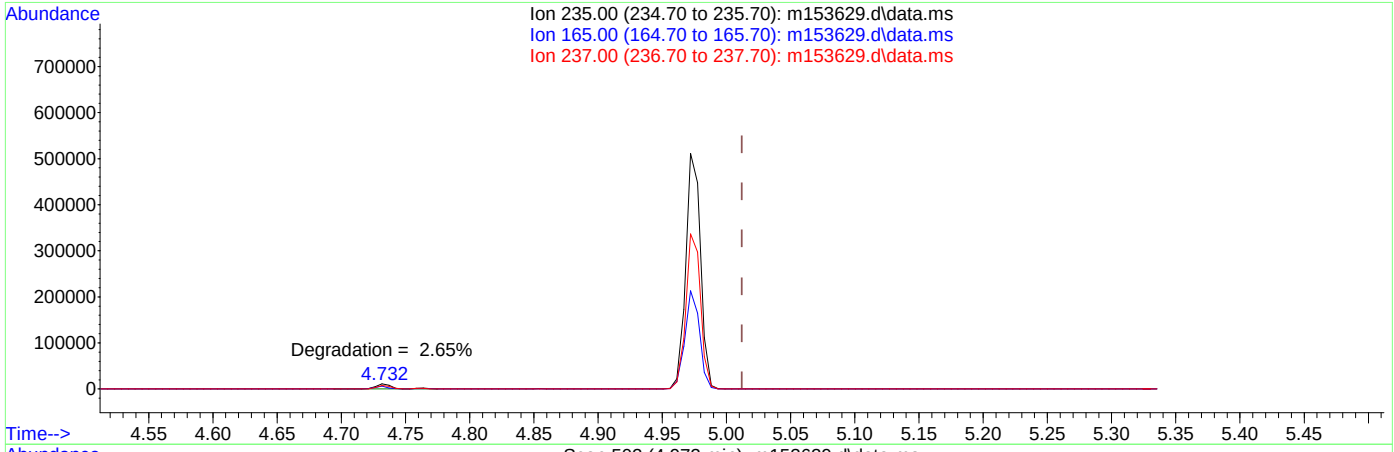
response 769014

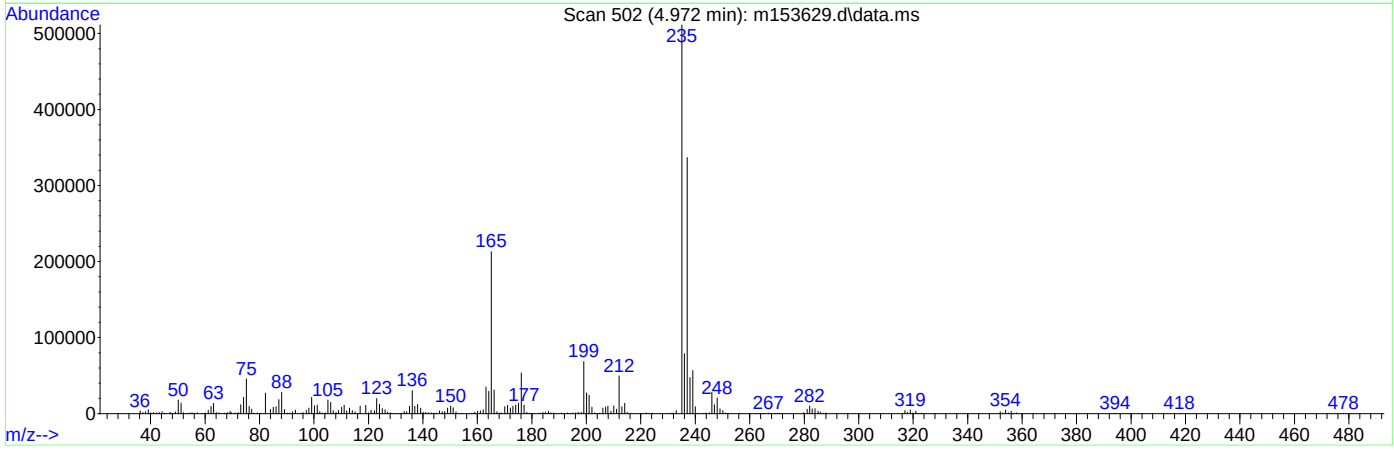
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153629.d
Acq On : 20 Apr 2019 10:42 pm
Operator : carolb
Sample : DFTPP Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: Apr 20 22:48:20 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153629.d\data.ms

(3) PP-DDT (MC)

4.972min (-0.040) 0.00ppm

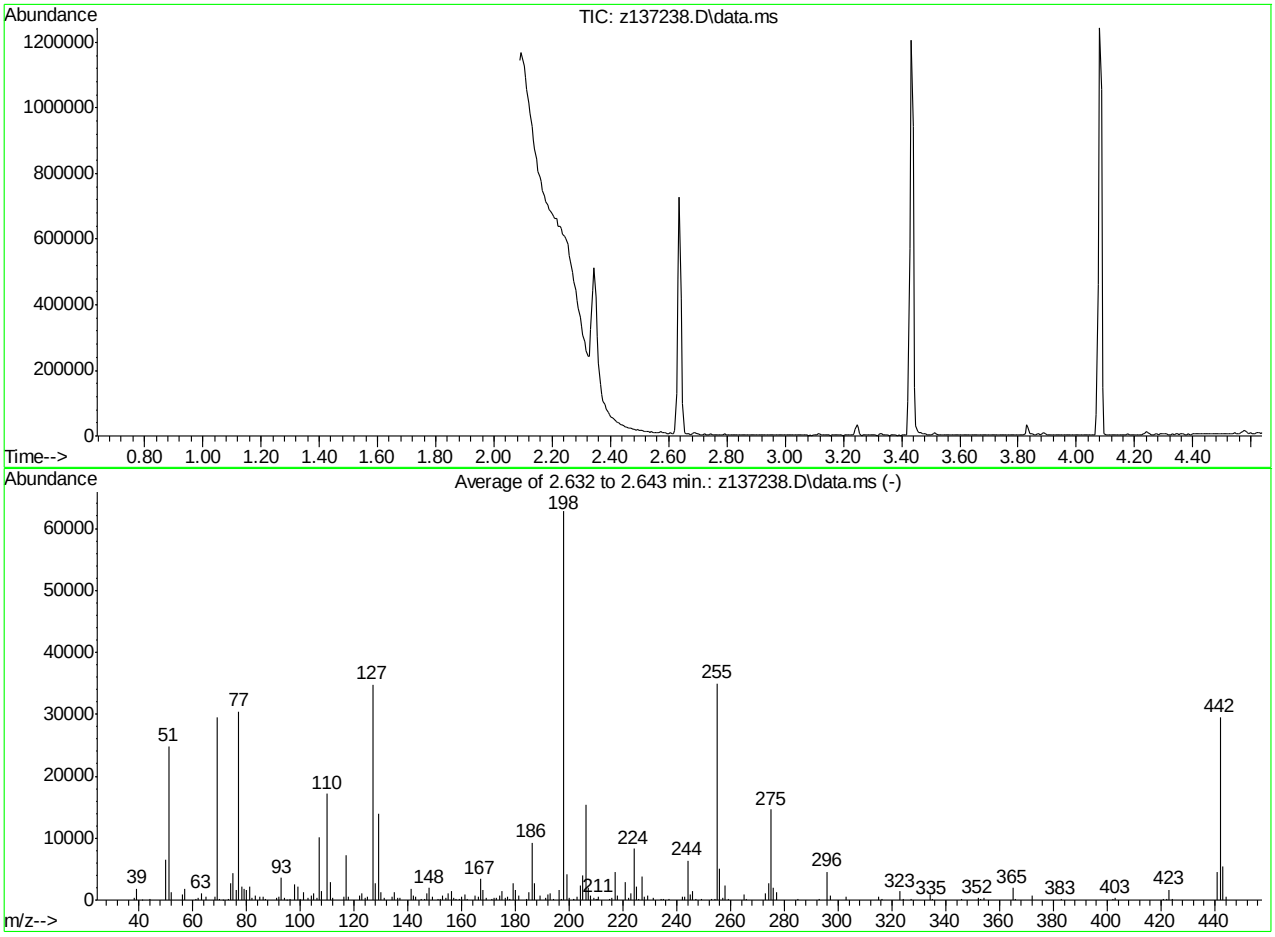
response 409228

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	41.60#
237.00	66.90	65.88
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\ez6761\z137238.D Vial: 1
Acq On : 25 Apr 2019 3:59 am Operator: chriss2
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6761,1000,,,1,1 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M (ChemStation Integrator)
Title : column rtx-5msi 30mx0.25mmx0.25um



AutoFind: Scans 103, 104, 105; Background Corrected with Scan 98

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.6	24857	PASS
68	69	0.00	2	1.7	491	PASS
69	198	0.00	100	46.9	29458	PASS
70	69	0.00	2	0.8	245	PASS
127	198	40	60	55.5	34800	PASS
197	198	0.00	1	0.3	167	PASS
198	198	100	100	100.0	62744	PASS
199	198	5	9	6.6	4171	PASS
275	198	10	30	23.3	14642	PASS
365	198	1	100	3.1	1931	PASS
441	443	0.01	100	83.8	4480	PASS
442	198	40	100	47.1	29558	PASS
443	442	17	23	18.1	5348	PASS

z137238.D DFTPPZ.M Thu Apr 25 09:22:07 2019

Average of 2.632 to 2.643 min.: z137238.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.05	385	63.10	1112	78.10	2149	93.00	3536
39.10	1844	65.10	535	79.05	1777	94.00	297
41.10	51	68.10	491	80.05	1599	95.10	59
44.00	131	69.00	29458	81.00	2227	96.10	110
50.10	6582	70.00	245	82.00	426	98.00	2560
51.10	24857	71.10	46	83.05	771	99.00	2154
52.10	1333	73.05	261	85.05	513	100.00	109
56.05	894	74.10	2793	86.00	610	101.00	1250
57.10	1822	75.05	4403	87.00	278	103.00	342
61.05	268	76.10	1566	91.00	445	104.00	705
62.00	334	77.10	30453	92.05	586	105.05	1016

Average of 2.632 to 2.643 min.: z137238.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
106.00	394	123.95	457	141.00	1794	154.00	333
107.00	10076	125.05	599	142.00	658	155.00	1136
108.00	1468	127.00	34800	142.95	466	156.10	1400
110.00	17143	128.05	2699	145.10	100	157.15	395
111.00	2921	129.00	13951	146.00	158	158.00	145
112.05	324	130.00	1357	147.00	1057	159.00	107
116.10	588	131.00	407	148.00	1940	160.00	632
117.00	7332	134.05	477	149.05	470	161.00	890
118.00	630	135.05	1330	151.10	140	162.00	157
122.00	740	136.00	458	151.90	105	165.05	803
123.00	1146	137.00	410	153.00	671	166.05	538

Average of 2.632 to 2.643 min.: z137238.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
167.00	3364	179.00	2644	194.00	147	206.10	15311
168.00	1613	180.05	1719	196.00	1700	207.05	2063
169.00	380	181.00	803	196.90	167	208.00	696
171.10	122	184.00	110	198.00	62744	209.00	320
172.05	324	185.00	1287	199.00	4171	209.95	248
173.00	411	186.00	9245	200.05	328	210.30	138
174.00	774	187.00	2717	201.50	108	210.95	520
175.05	1456	189.00	754	201.70	114	215.00	113
176.05	458	191.00	412	203.00	625	216.00	430
177.00	569	192.00	866	204.00	2289	217.00	4477
177.95	242	193.00	1066	205.00	3975	218.00	691

Average of 2.632 to 2.643 min.: z137238.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
221.00	2977	235.00	133	255.00	34939	277.00	1363
222.00	355	237.00	246	256.00	5121	285.10	255
223.00	1101	242.00	580	257.00	441	293.00	110
224.00	8327	243.05	545	258.00	2312	296.00	4582
225.00	2165	244.05	6369	259.00	184	296.95	708
226.00	259	245.10	925	265.00	848	303.00	601
227.00	3811	246.00	1451	266.00	119	315.00	605
228.00	529	247.00	219	273.00	1085	316.10	119
229.00	788	249.00	124	274.00	2719	323.05	1442
231.05	281	253.00	121	275.00	14642	324.00	112
234.00	133	254.00	122	276.00	1948	326.90	263

Average of 2.632 to 2.643 min.: z137238.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
334.00	957	403.00	334				
335.00	124	421.00	262				
345.90	231	422.10	110				
352.00	316	423.00	1716				

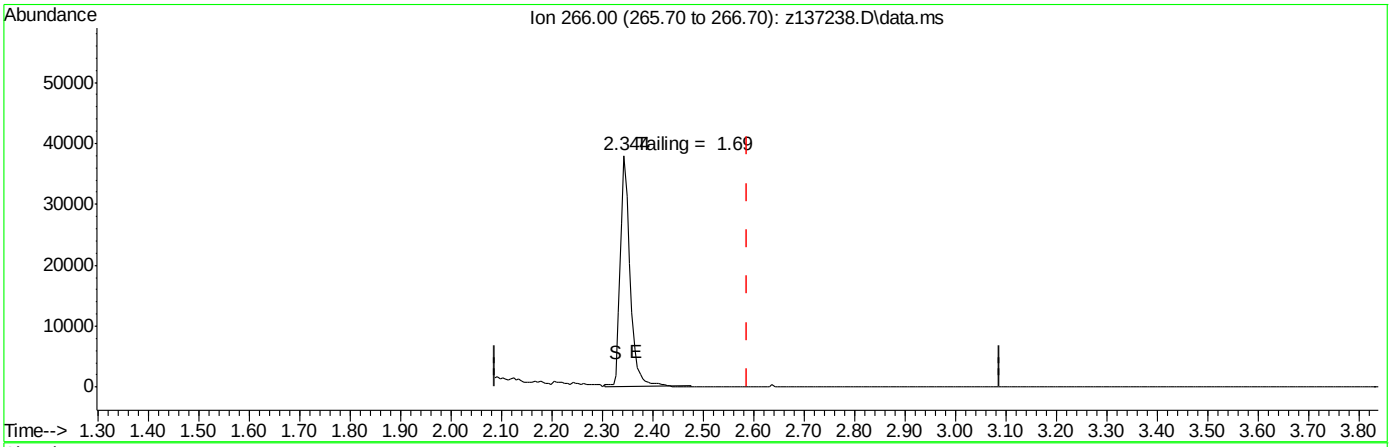
DFTPPZ.M Thu Apr 25 09:21:18 2019 Page: 0

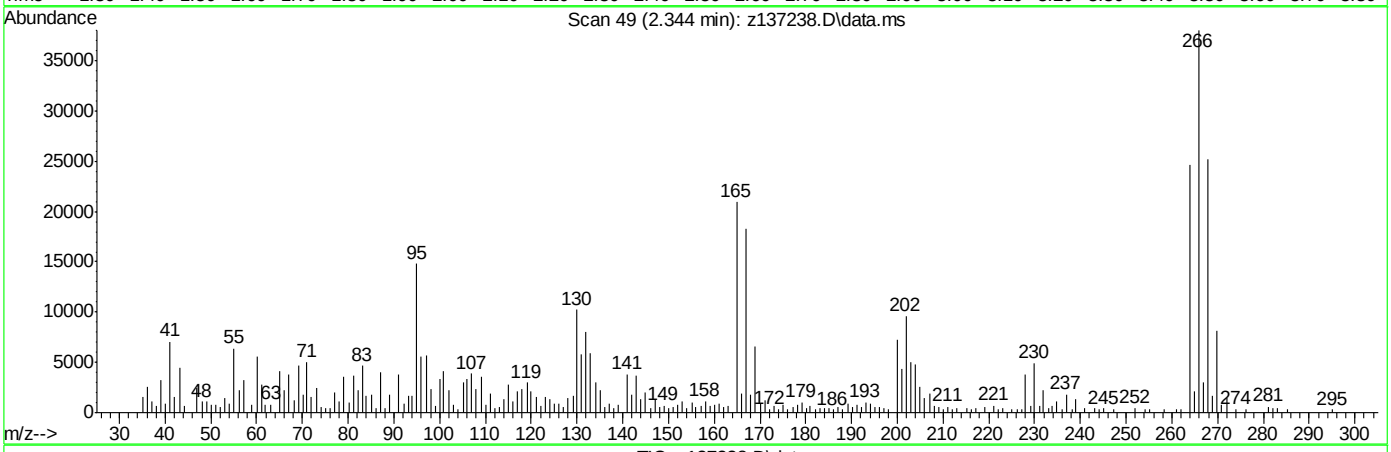
352.90	120	424.05	261
354.05	429	441.00	4480
365.00	1931	442.00	29558
365.90	142	443.00	5348
372.00	719	444.00	531
382.90	113		
402.00	133		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137238.D
Acq On : 25 Apr 2019 3:59 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 25 04:04:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137238.D\data.ms

(1) Pentachlorophenol

2.344min (-0.245) 16.60 m

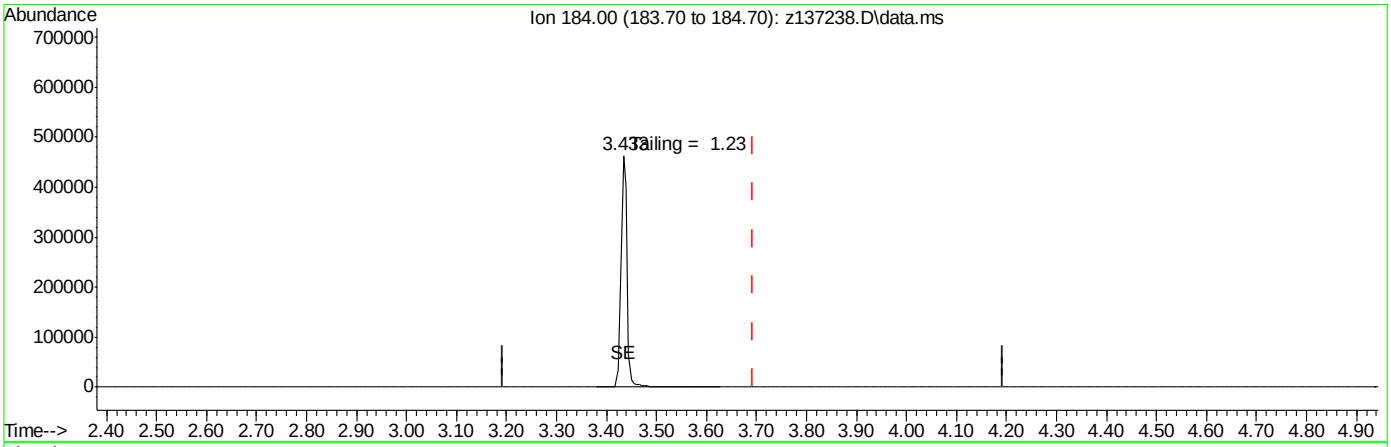
response 508917

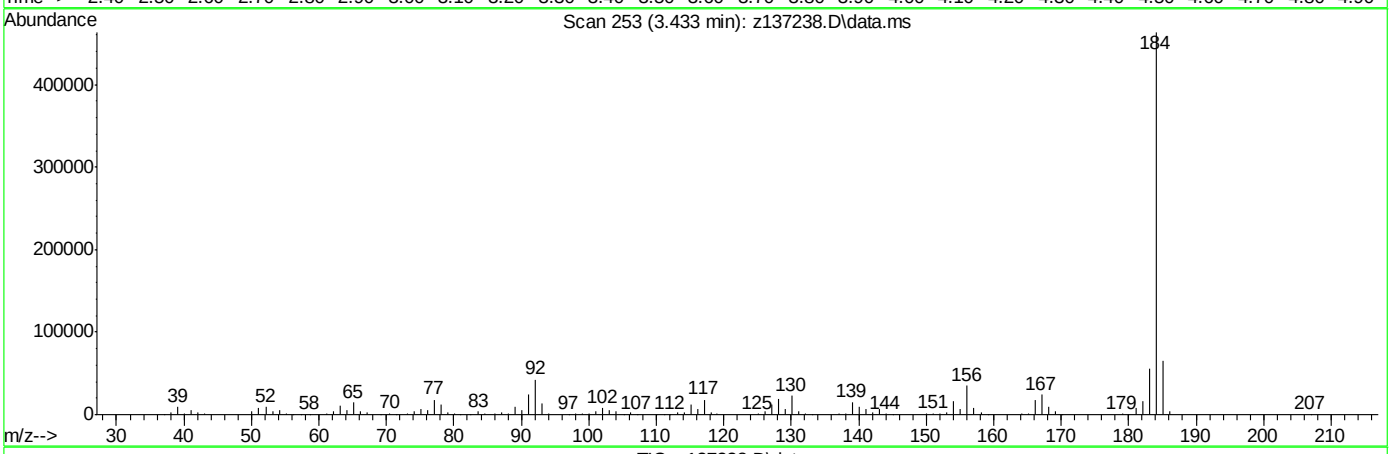
Ion	Exp%	Act%
266.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137238.D
Acq On : 25 Apr 2019 3:59 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 25 04:04:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137238.D\data.ms

(2) Benzidine

3.433min (-0.260) 21.62 m

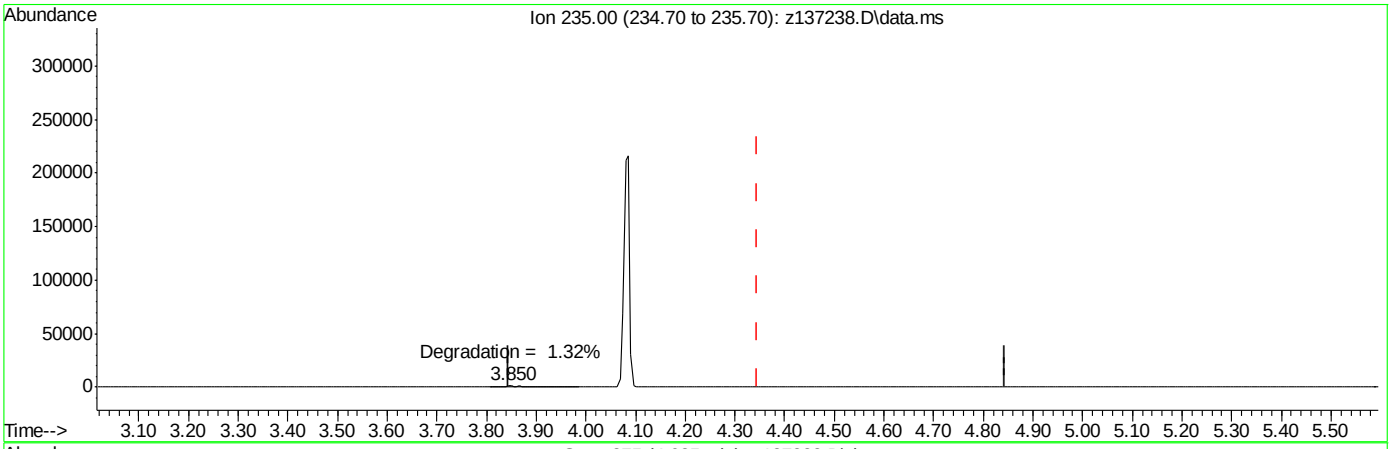
response 3902623

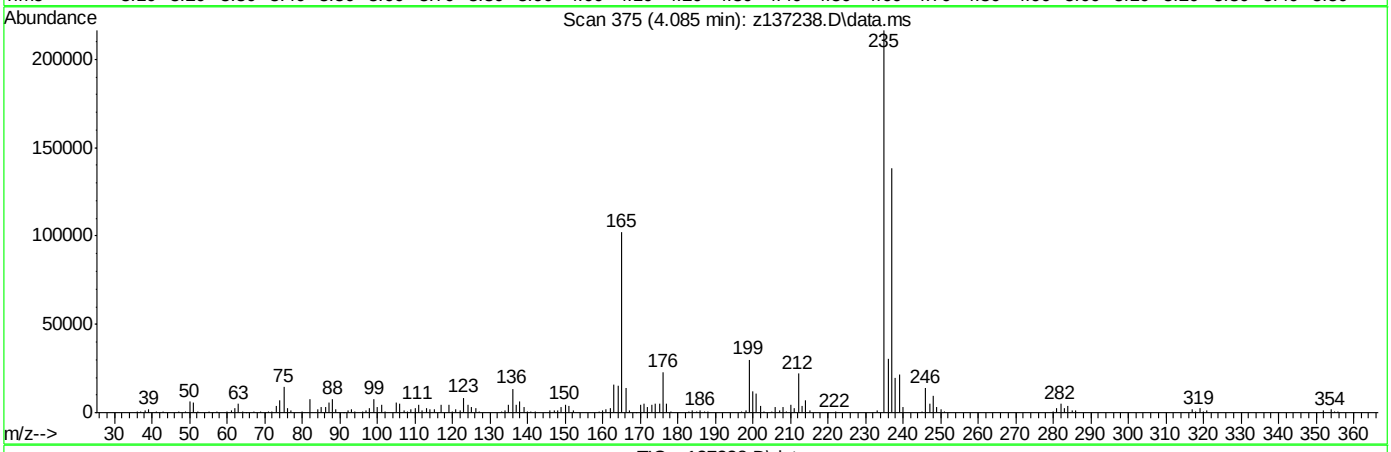
Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137238.D
Acq On : 25 Apr 2019 3:59 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 25 04:04:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137238.D\data.ms

(3) PP-DDT

4.085min (-0.260) 20.44 m

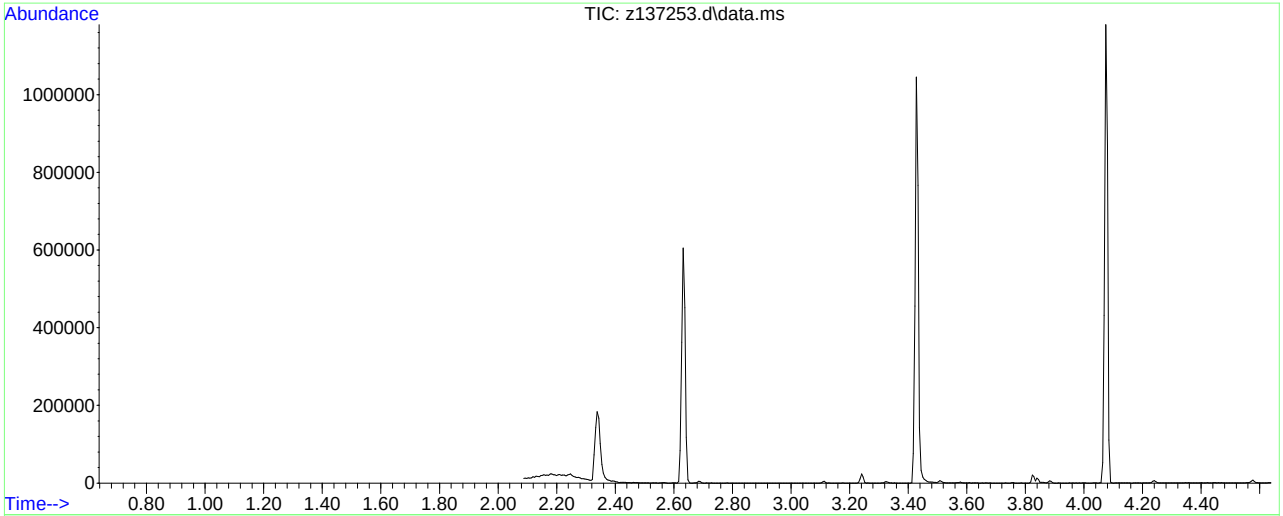
response 1720877

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\data\michellc\ez6762\z137253.d Vial: 1
Acq On : 25 Apr 2019 2:45 pm Operator: angelar
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6762,1000,,,1,1 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M (ChemStation Integrator)
Title : column rtx-5msi 30mx0.25mmx0.25um



AutoFind: Scans 103, 104, 105; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	41.0	18666	PASS
68	69	0.00	2	0.6	136	PASS
69	198	0.00	100	47.2	21492	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	54.3	24736	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	45561	PASS
199	198	5	9	6.8	3087	PASS
275	198	10	30	24.7	11269	PASS
365	198	1	100	3.0	1351	PASS
441	443	0.01	100	81.2	3666	PASS
442	198	40	100	53.3	24291	PASS
443	442	17	23	18.6	4513	PASS

z137253.d DFTPPZ.M Fri Apr 26 03:15:44 2019

Average of 2.632 to 2.643 min.: z137253.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.10	157	63.05	783	80.00	1188	96.00	102
39.10	1762	65.05	396	81.00	1837	98.00	1970
41.10	210	68.10	136	82.00	401	99.00	1545
50.10	4731	69.00	21492	83.00	351	101.00	873
51.10	18666	73.10	271	85.00	244	103.00	264
52.05	928	74.10	2065	86.00	438	104.05	586
55.00	119	75.00	3086	87.10	129	105.00	528
56.00	545	76.10	1003	91.00	420	106.10	122
57.00	1392	77.10	21562	92.05	338	107.00	7347
61.00	108	78.10	1561	93.00	2705	108.00	1009
62.10	169	79.00	1486	94.00	125	110.00	12643

Average of 2.632 to 2.643 min.: z137253.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
111.00	1894	129.00	10244	148.00	1551	162.00	135
111.90	110	130.00	1047	149.00	338	165.00	484
116.05	369	131.00	102	151.00	112	166.00	324
117.00	5998	134.00	293	153.00	383	167.00	2519
118.00	342	135.00	823	153.95	316	168.00	1096
122.00	459	136.00	217	155.05	604	169.00	231
123.00	641	137.00	408	156.05	953	172.00	149
124.00	345	141.00	1332	158.00	132	173.00	272
125.00	311	142.00	394	159.00	101	174.00	502
127.00	24736	143.00	311	160.00	360	175.05	1066
128.00	1978	147.00	559	161.00	556	176.00	178

Average of 2.632 to 2.643 min.: z137253.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.00	373	193.05	527	208.00	348	225.05	1592
179.00	2130	196.00	1383	210.10	128	227.00	3184
180.00	1282	198.00	45561	211.00	504	228.00	360
181.00	536	199.00	3087	216.10	237	229.00	549
184.00	110	200.05	275	217.00	3364	231.00	218
185.00	922	201.40	266	217.95	491	233.90	112
186.00	6134	203.05	421	221.00	1962	235.00	113
187.00	1976	204.00	1817	221.70	177	237.00	111
188.95	404	205.00	3052	222.00	352	242.05	289
191.00	217	206.10	11579	223.00	741	243.00	349
192.00	553	207.10	1754	224.05	6604	244.10	4971

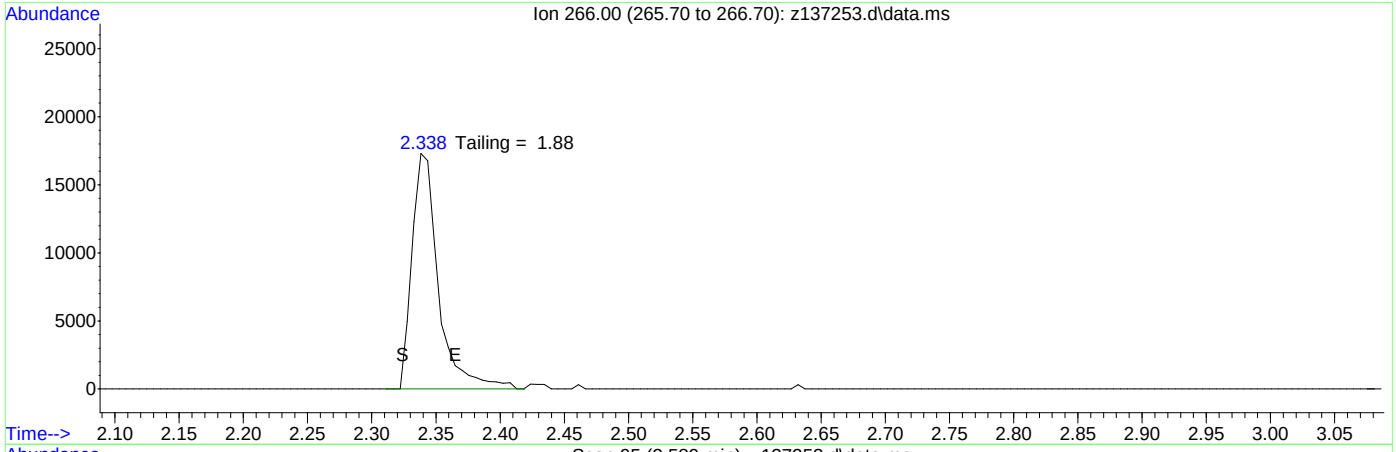
Average of 2.632 to 2.643 min.: z137253.d\data.ms
dftpp
Modified:subtracted

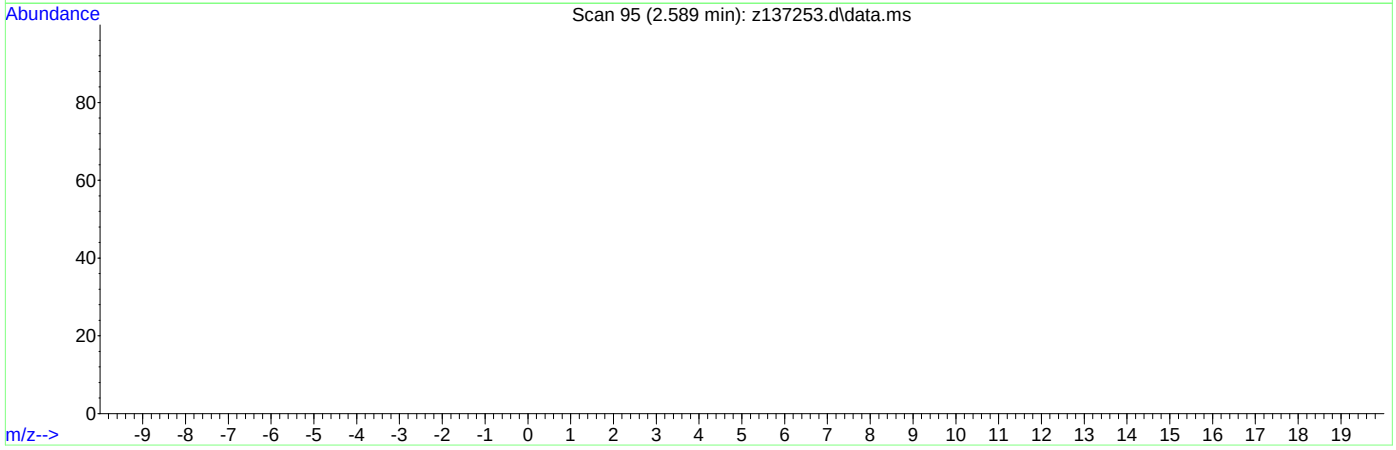
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
245.00	711	274.00	2181	326.90	114	424.05	267
246.00	1161	275.00	11269	334.00	732	441.00	3666
247.00	113	276.00	1464	335.00	101	442.05	24291
255.00	27167	277.00	954	345.90	111	443.00	4513
256.00	3998	285.10	115	352.05	280	444.00	329
257.00	292	293.00	111	354.00	234		
258.00	1862	296.00	3671	365.00	1351		
259.00	240	297.00	382	372.00	431		
265.00	725	303.00	377	401.90	100		
265.90	104	315.00	394	402.95	233		
273.00	782	323.00	1087	423.00	1307		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137253.d
Acq On : 25 Apr 2019 2:45 pm
Operator : angelar
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Results File: DFTPPZ.RES
Quant Time: Apr 25 14:51:32 2019
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137253.d\data.ms

(1) Pentachlorophenol

2.588min (-2.588) 0.00

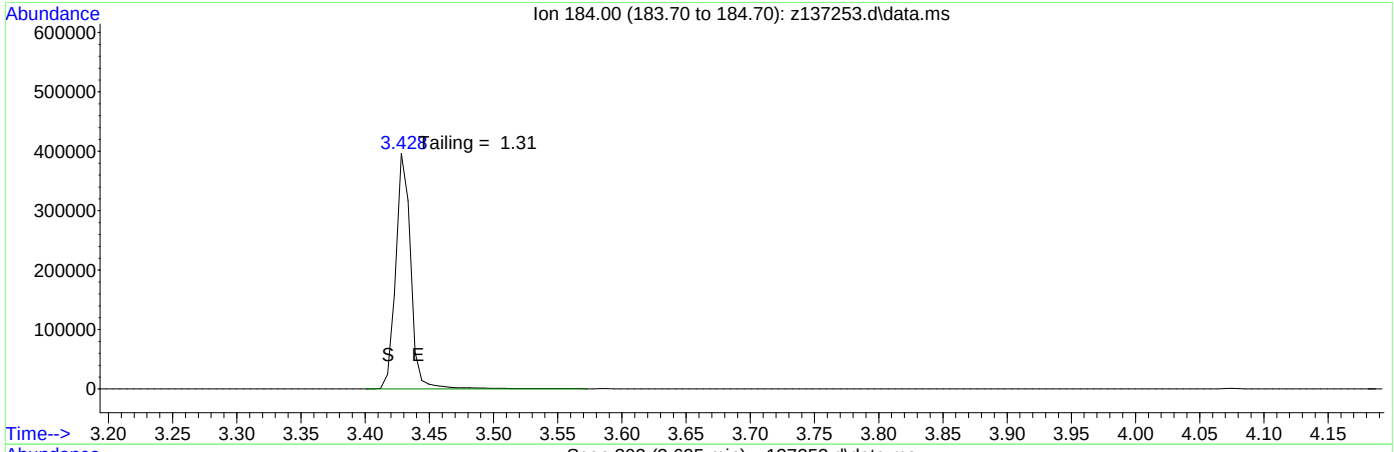
response 0

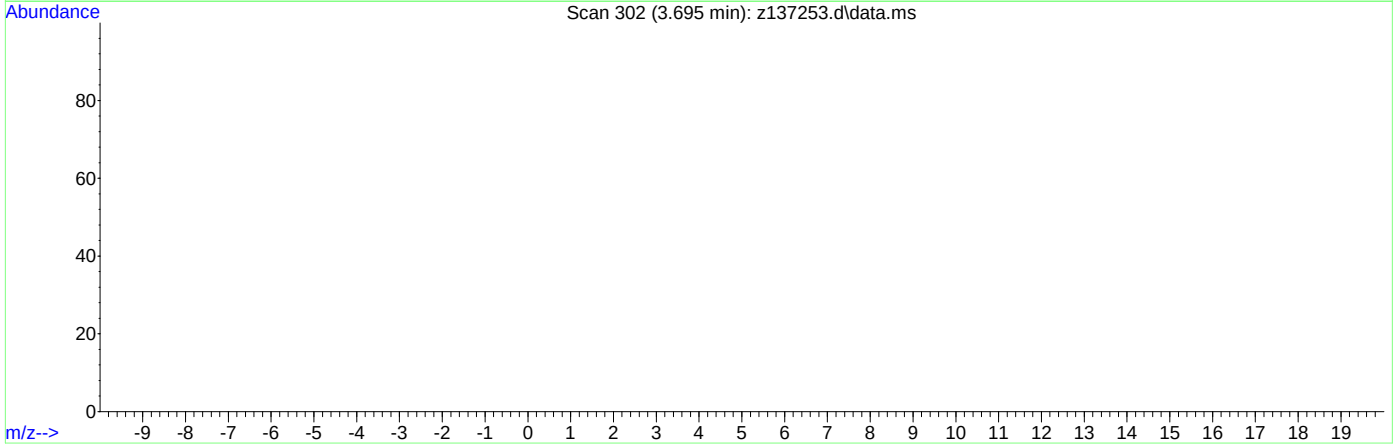
Ion	Exp%	Act%
266.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137253.d
Acq On : 25 Apr 2019 2:45 pm
Operator : angelar
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Results File: DFTPPZ.RES
Quant Time: Apr 25 14:51:32 2019
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137253.d\data.ms

(2) Benzidine

3.693min (-3.693) 0.00

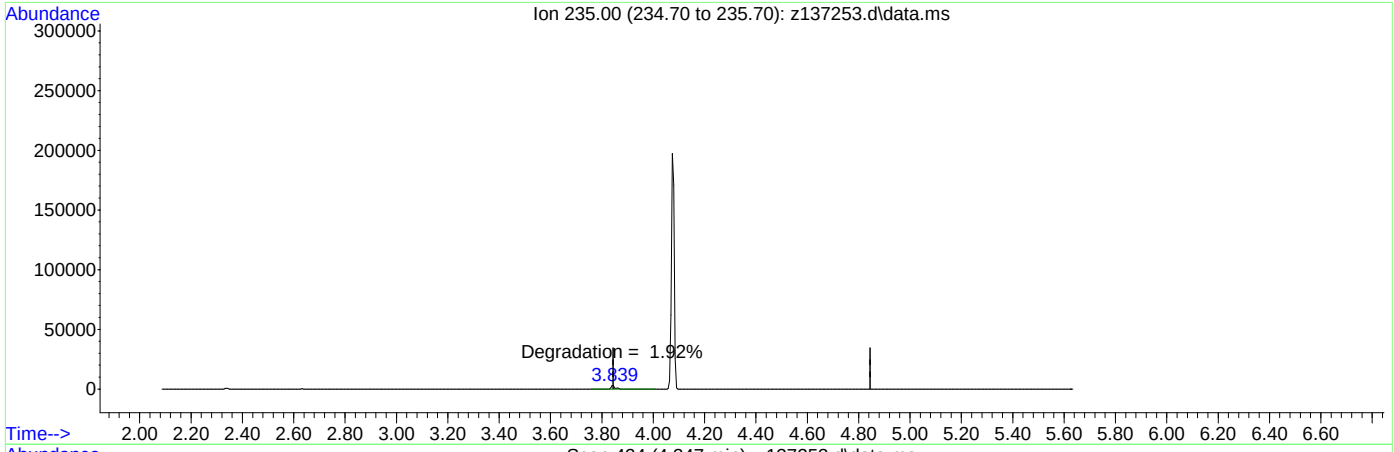
response 0

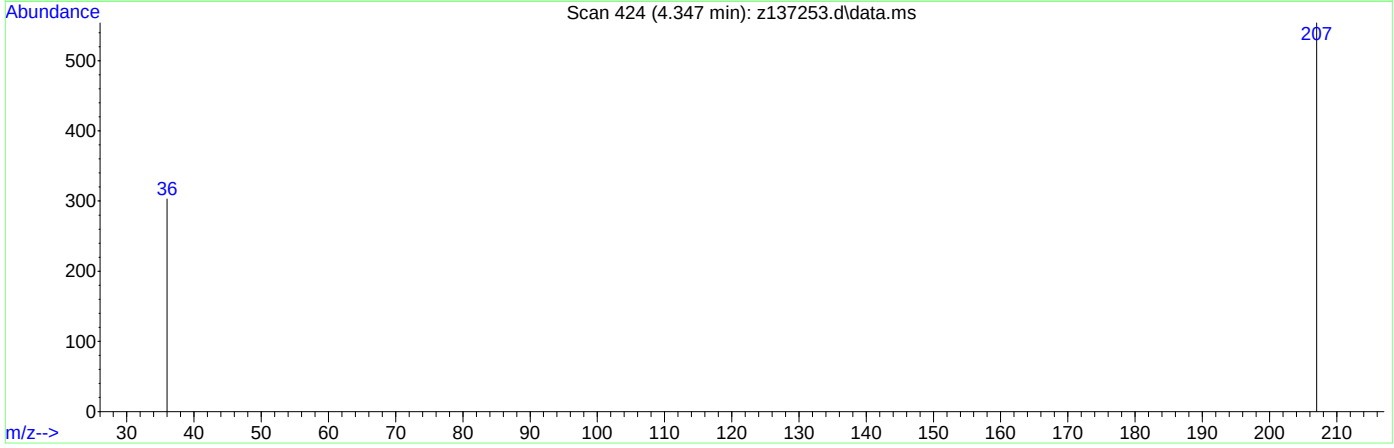
Ion	Exp%	Act%
184.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ez6762\
Data File : z137253.d
Acq On : 25 Apr 2019 2:45 pm
Operator : angelar
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Results File: DFTPPZ.RES
Quant Time: Apr 25 14:51:32 2019
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137253.d\data.ms

(3) PP-DDT

4.345min (-4.345) 0.00

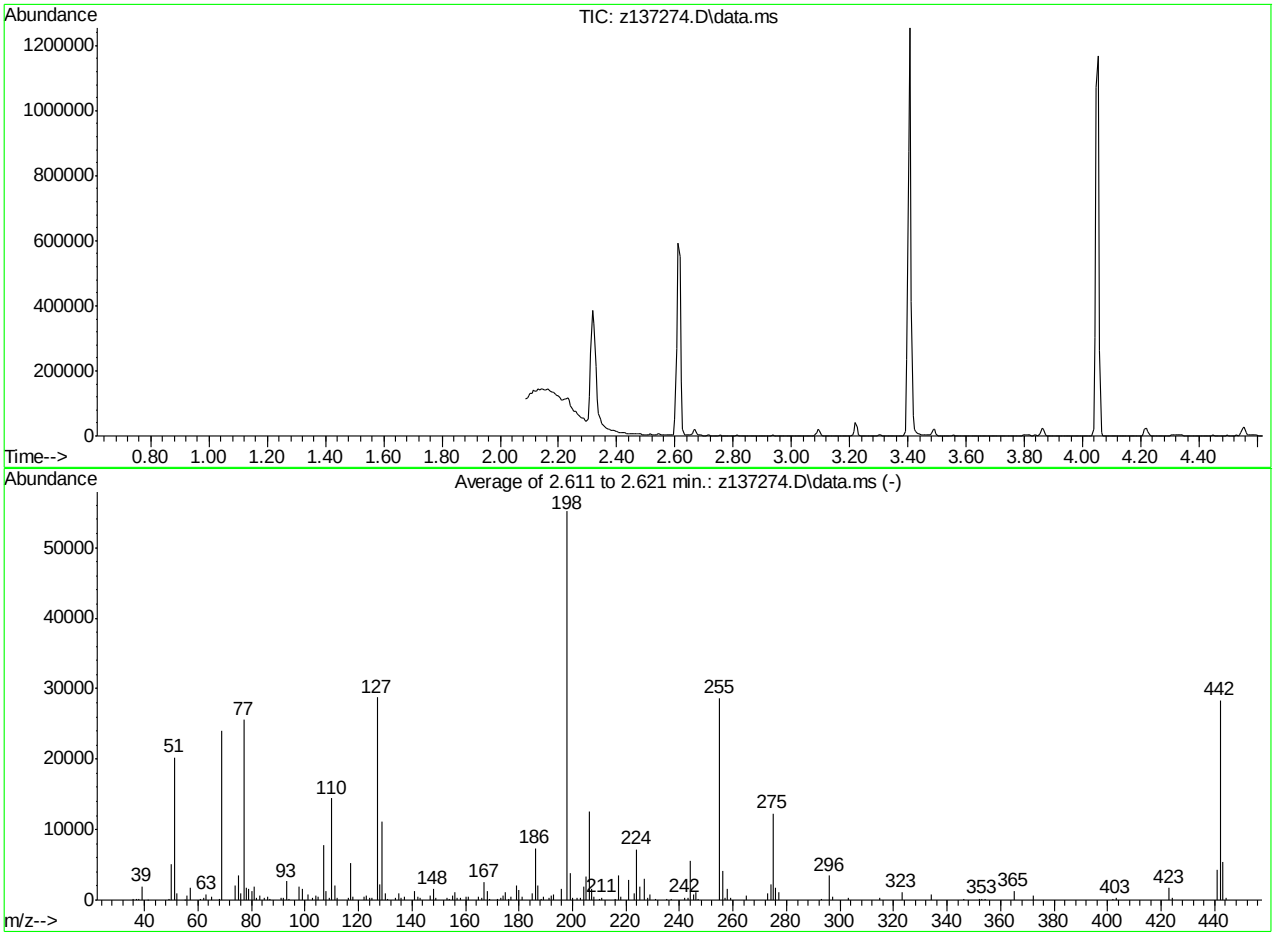
response 0

Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\ez6763\z137274.D Vial: 1
Acq On : 26 Apr 2019 2:46 am Operator: chriss2
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6763,1000,,,1,1 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M (ChemStation Integrator)
Title : column rtx-5msi 30mx0.25mmx0.25um



AutoFind: Scans 99, 100, 101; Background Corrected with Scan 92

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.8	20272	PASS
68	69	0.00	2	0.9	220	PASS
69	198	0.00	100	43.4	23951	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	52.1	28712	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	55133	PASS
199	198	5	9	6.8	3762	PASS
275	198	10	30	22.2	12261	PASS
365	198	1	100	2.4	1343	PASS
441	443	0.01	100	82.0	4377	PASS
442	198	40	100	51.5	28387	PASS
443	442	17	23	18.8	5338	PASS

z137274.D DFTPPZ.M Fri Apr 26 08:14:54 2019

Average of 2.611 to 2.621 min.: z137274.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	153	57.00	1677	78.10	1824	93.00	2645
37.10	105	61.05	241	79.05	1580	94.00	137
38.00	180	62.10	269	80.00	1267	98.00	1882
39.10	1913	63.10	848	81.00	1939	99.00	1542
41.10	61	65.05	406	82.00	379	101.00	867
49.10	108	68.00	220	83.05	646	103.00	309
50.10	5141	69.00	23951	85.00	281	104.00	624
51.10	20272	74.10	2115	86.00	500	105.00	543
52.05	889	75.00	3465	86.90	105	107.00	7843
55.10	23	76.05	1018	91.00	378	108.00	1260
56.00	602	77.10	25583	92.05	357	109.10	277

Average of 2.611 to 2.621 min.: z137274.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
110.00	14399	128.00	2167	147.00	663	165.00	517
111.00	2143	129.00	11165	148.00	1552	166.00	318
112.05	248	130.00	946	149.00	271	167.05	2589
116.05	371	131.00	242	153.05	323	168.00	1264
117.00	5317	134.00	289	154.00	238	169.00	120
118.05	441	135.05	897	155.00	637	172.00	130
122.00	473	136.00	365	156.00	1075	173.00	250
123.00	650	137.00	459	157.05	300	174.00	564
124.00	302	141.00	1347	158.05	263	175.05	1072
125.00	262	142.00	430	160.00	406	176.00	176
127.00	28712	143.00	344	161.00	528	177.00	442

Average of 2.611 to 2.621 min.: z137274.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
179.00	2126	196.00	1585	210.20	230	229.00	826
180.05	1404	198.00	55133	211.00	387	231.10	163
181.00	524	199.00	3762	216.00	149	235.00	111
185.05	915	200.00	298	217.00	3450	237.00	223
186.00	7332	201.50	294	218.00	456	242.05	388
187.00	2042	203.00	315	221.00	2872	243.00	317
188.10	126	204.05	1859	223.00	943	244.05	5585
189.00	431	205.00	3327	224.00	7201	245.05	767
191.00	274	206.10	12614	225.00	1924	246.00	1087
192.00	607	207.10	1660	227.00	3075	247.00	125
193.00	801	208.00	559	227.95	396	255.00	28663

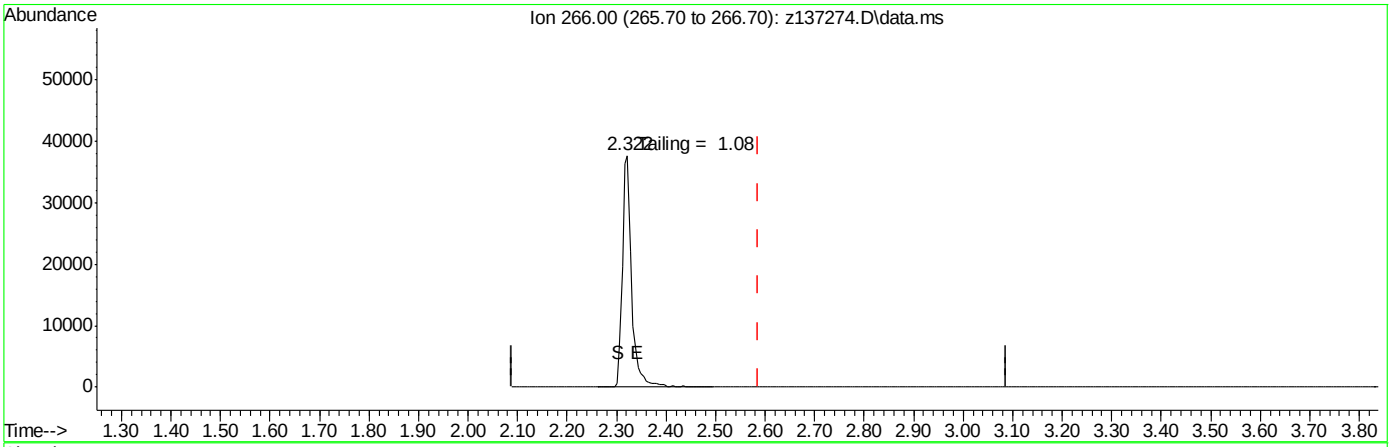
Average of 2.611 to 2.621 min.: z137274.D\data.ms
dftpp
Modified:subtracted

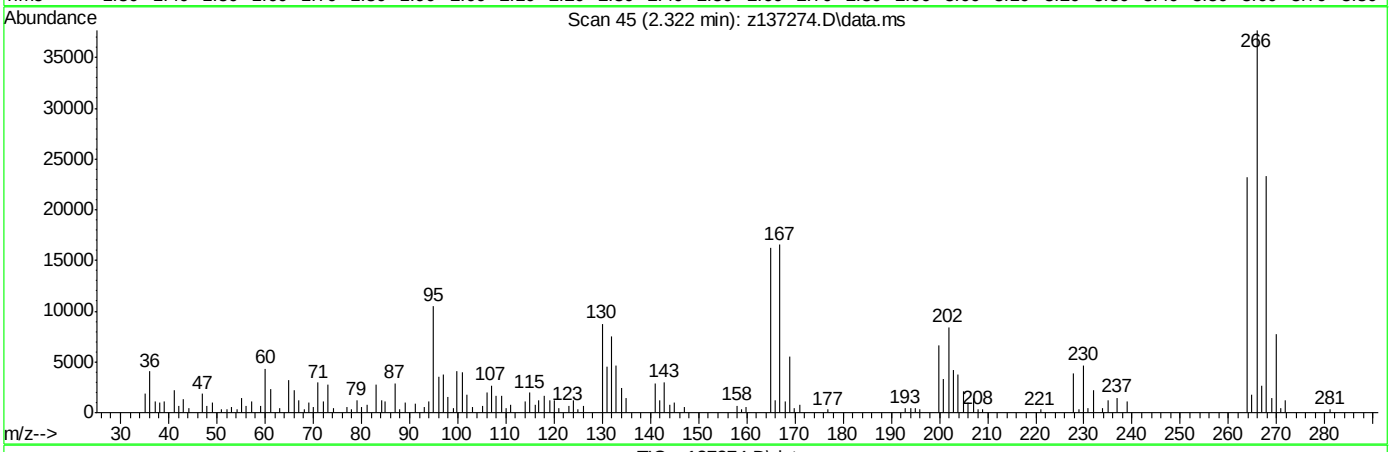
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.00	4127	296.00	3434	372.00	621		
257.00	274	297.00	410	401.90	109		
258.00	1646	303.05	368	403.00	276		
259.05	261	314.95	368	423.00	1686		
265.00	658	323.00	1150	424.05	275		
273.00	1030	334.00	730	441.00	4377		
274.00	2275	346.00	143	442.00	28387		
275.00	12261	352.00	142	443.00	5338		
276.00	1692	353.00	213	444.05	388		
277.00	1059	354.00	135				
293.00	118	365.00	1343				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137274.D
Acq On : 26 Apr 2019 2:46 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 02:52:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137274.D\data.ms

(1) Pentachlorophenol

2.322min (-0.266) 15.84 m

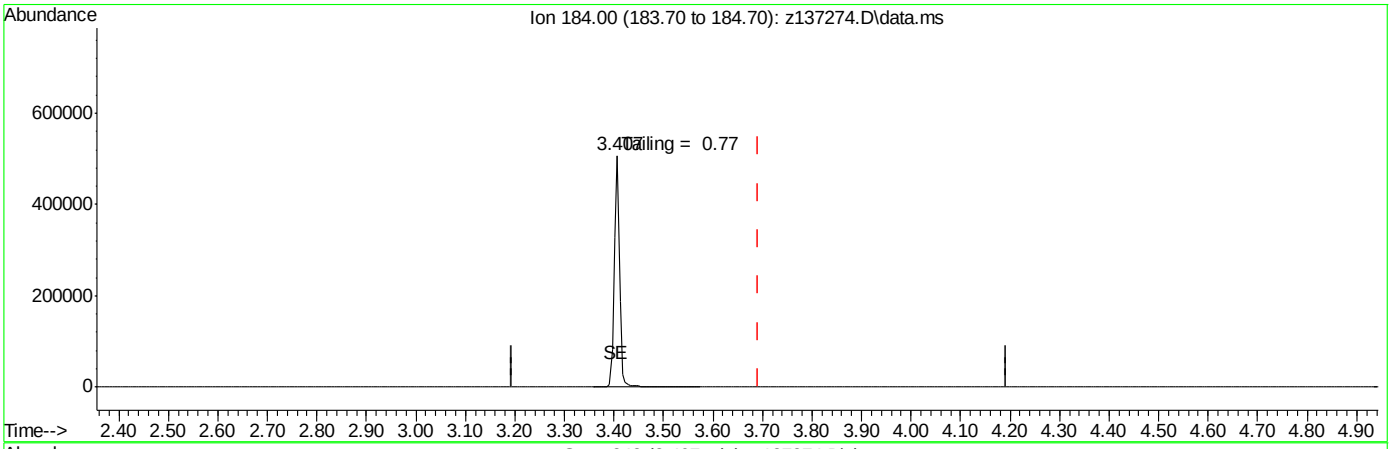
response 485418

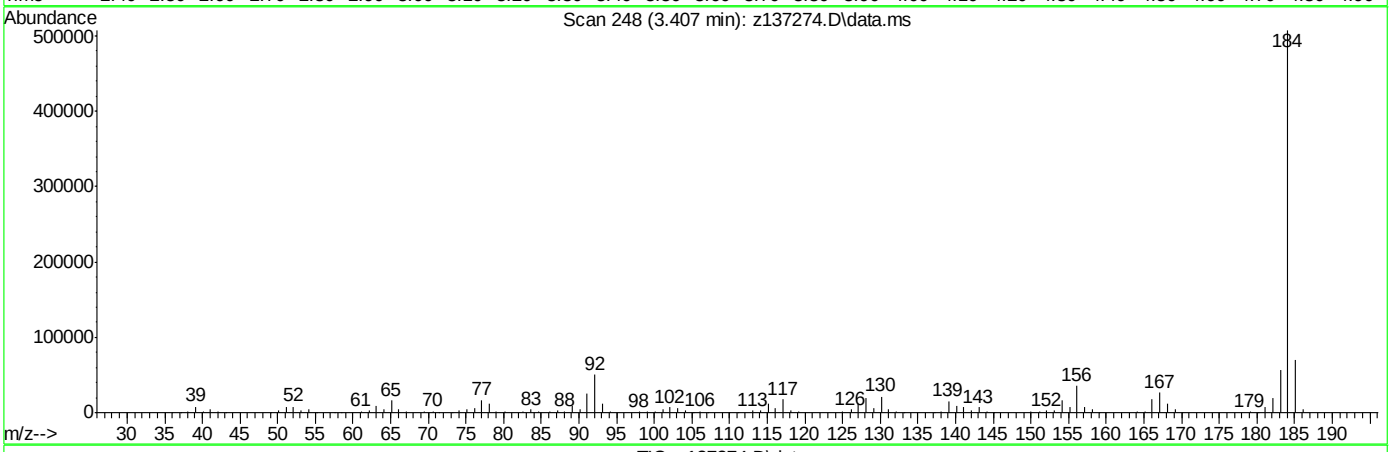
Ion	Exp%	Act%
266.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137274.D
Acq On : 26 Apr 2019 2:46 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 02:52:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137274.D\data.ms

(2) Benzidine

3.407min (-0.287) 21.00 m

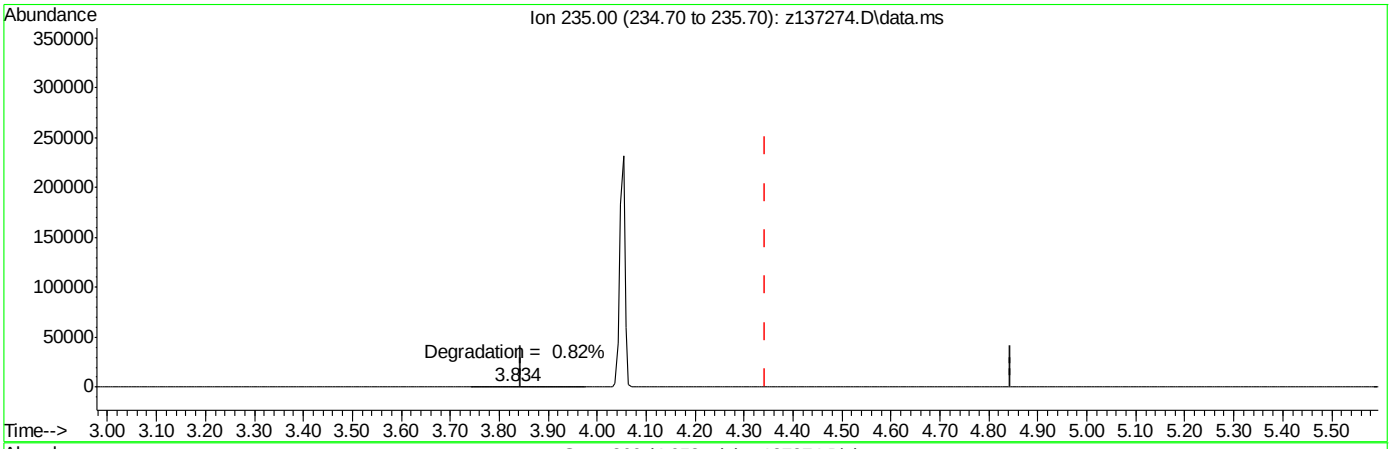
response 3791194

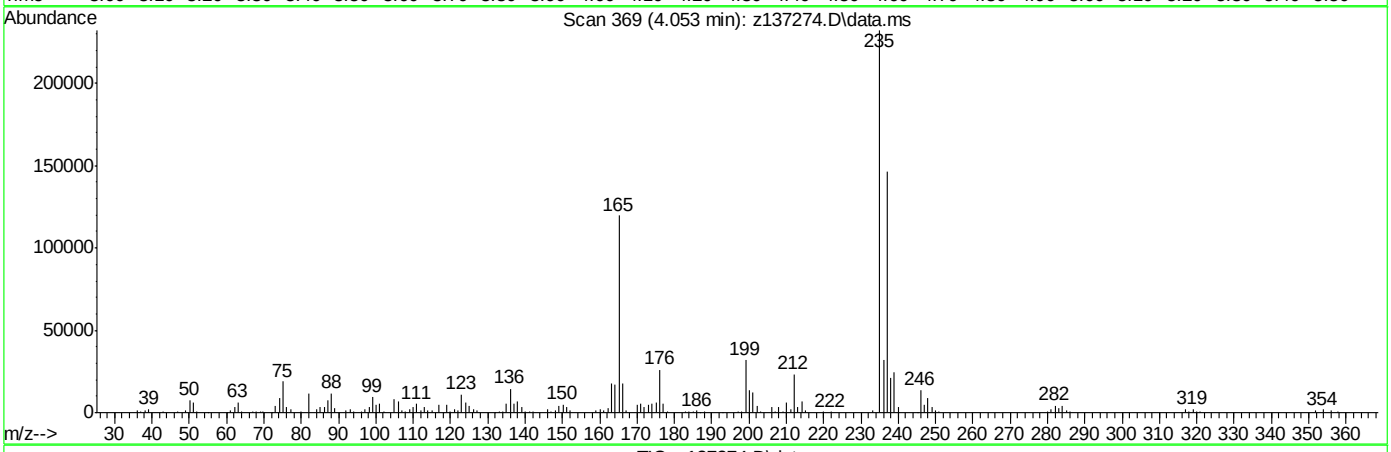
Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137274.D
Acq On : 26 Apr 2019 2:46 am
Operator : chriss2
Sample : dftpp
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 02:52:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137274.D\data.ms

(3) PP-DDT

4.053min (-0.292) 20.02 m

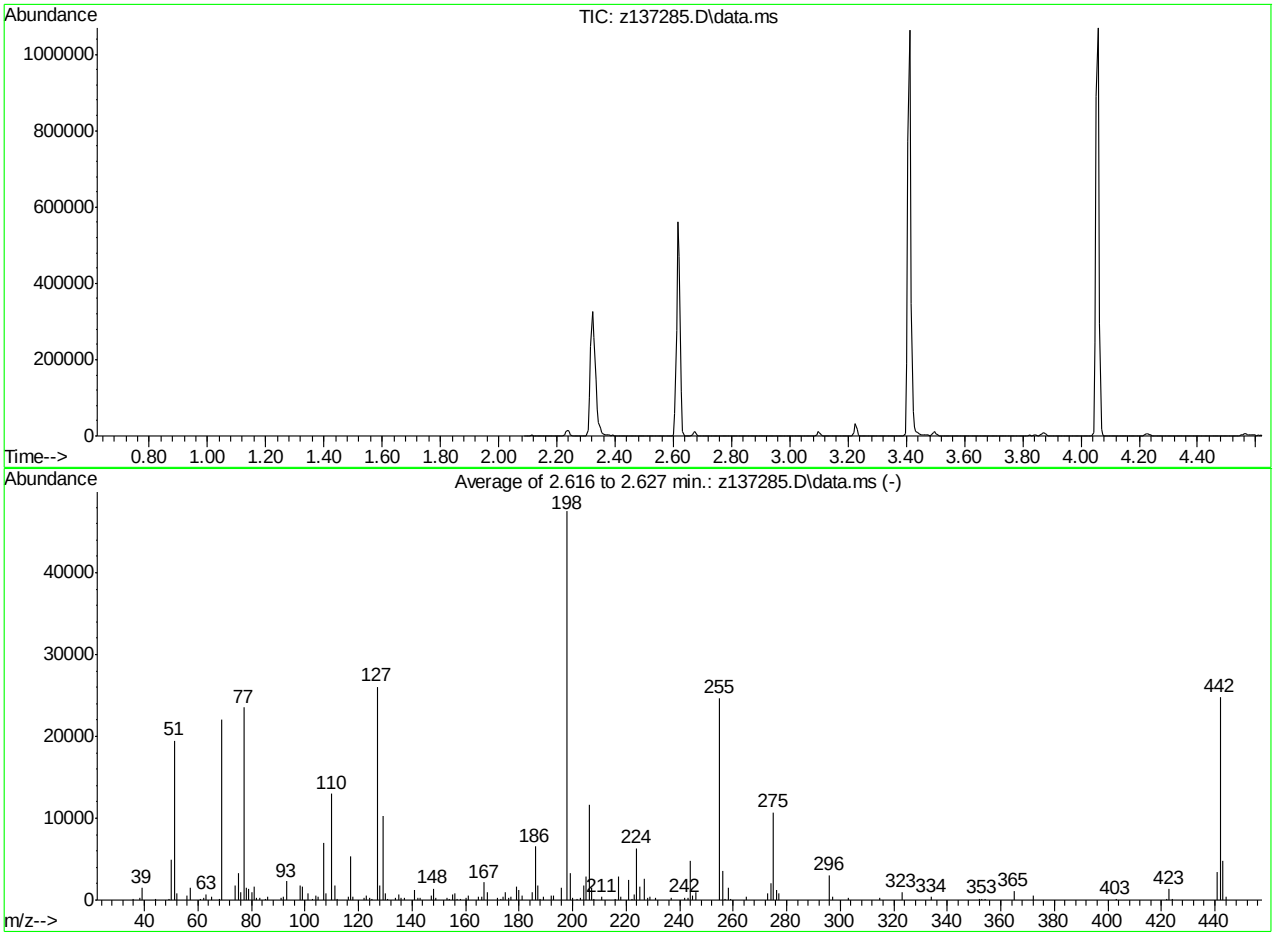
response 1684885

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\ez6764\z137285.D Vial: 1
Acq On : 26 Apr 2019 9:10 am Operator: angelar
Sample : dftpp Inst : GCMSZ
Misc : op17006,ez6764,1000,,,1,1 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M (ChemStation Integrator)
Title : column rtx-5msi 30mx0.25mmx0.25um



AutoFind: Scans 100, 101, 102; Background Corrected with Scan 95

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	41.0	19491	PASS
68	69	0.00	2	0.5	106	PASS
69	198	0.00	100	46.4	22044	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	54.9	26061	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	47500	PASS
199	198	5	9	7.1	3350	PASS
275	198	10	30	22.6	10742	PASS
365	198	1	100	2.5	1169	PASS
441	443	0.01	100	73.0	3474	PASS
442	198	40	100	52.2	24808	PASS
443	442	17	23	19.2	4756	PASS

z137285.D DFTPPZ.M Fri Apr 26 14:15:54 2019

Average of 2.616 to 2.627 min.: z137285.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	169	62.00	307	80.00	957	101.00	881
38.10	337	63.10	736	81.00	1701	102.90	156
39.10	1501	65.00	404	82.00	327	104.00	532
44.00	122	68.10	106	83.00	309	105.05	477
49.00	103	69.00	22044	85.10	161	107.00	7058
50.10	4953	74.05	1801	86.00	427	108.00	891
51.10	19491	75.00	3342	91.00	296	110.00	12969
52.10	873	76.10	949	92.05	398	111.00	1848
56.00	507	77.10	23557	93.00	2296	112.00	137
57.05	1459	78.10	1504	98.00	1763	116.05	400
61.10	136	79.00	1353	99.00	1588	117.00	5297

Average of 2.616 to 2.627 min.: z137285.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
118.00	362	135.00	699	155.00	640	173.00	128
122.00	339	135.95	262	156.00	812	174.05	414
123.00	570	137.00	326	157.00	116	175.05	972
124.00	261	141.00	1187	157.90	100	176.05	262
125.00	148	142.00	265	160.00	323	177.00	408
127.00	26061	142.90	211	161.00	542	179.00	1694
128.00	1842	147.00	565	164.90	393	180.00	1211
129.00	10263	148.00	1405	166.00	353	181.00	534
130.00	872	149.00	251	167.00	2148	185.00	912
131.00	111	153.00	347	168.00	983	186.00	6528
133.95	254	154.00	165	172.05	226	187.00	1831

Average of 2.616 to 2.627 min.: z137285.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
188.00	147	205.00	2903	224.05	6357	246.00	932
188.95	425	206.10	11591	225.00	1653	255.00	24699
192.00	532	207.05	1512	227.00	2602	256.00	3598
193.00	614	208.00	207	228.00	299	257.00	122
196.00	1557	211.00	372	229.00	443	258.00	1473
198.00	47500	216.00	149	230.95	242	259.00	131
199.00	3350	217.00	2938	237.00	219	265.00	455
200.00	221	218.00	366	242.00	333	273.00	824
201.50	116	221.00	2487	243.05	331	274.00	2046
203.00	306	222.00	165	244.05	4795	275.00	10742
204.05	1803	223.00	678	245.00	567	276.05	1283

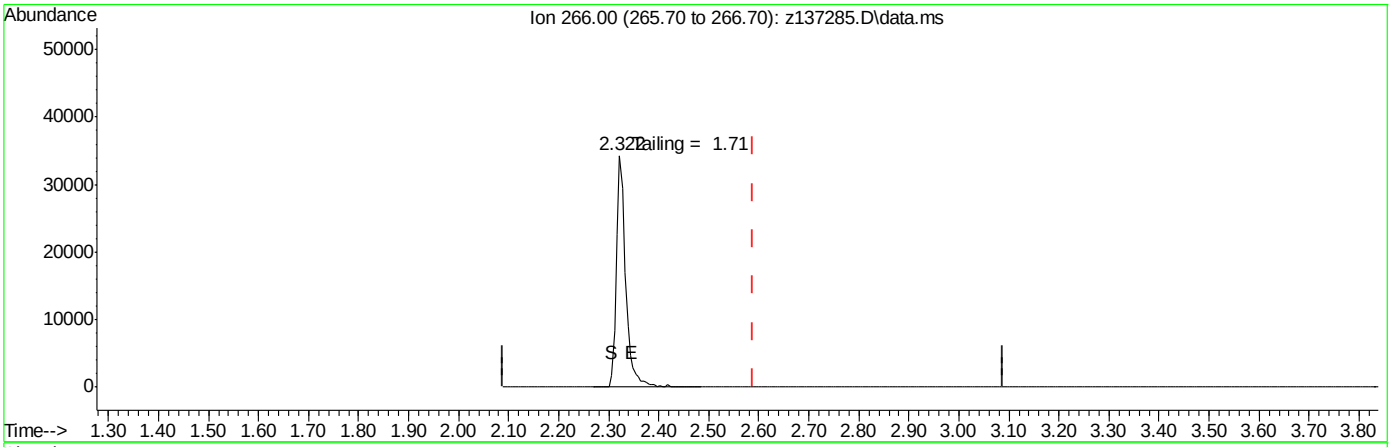
Average of 2.616 to 2.627 min.: z137285.D\data.ms
dftpp
Modified:subtracted

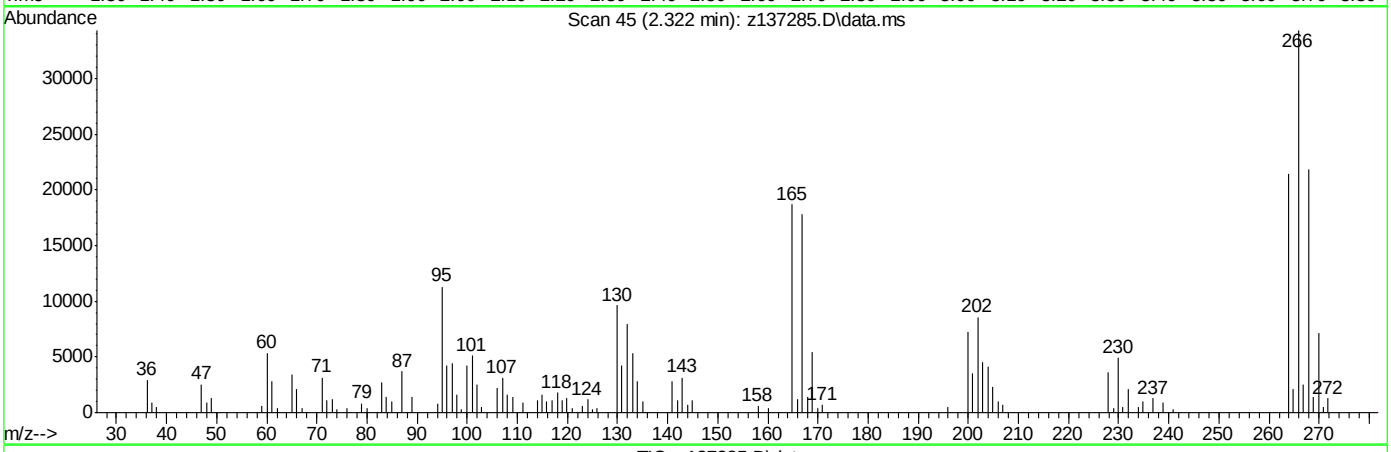
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.00	788	372.00	523				
296.00	3085	403.00	127				
297.00	360	422.00	104				
303.00	276	423.00	1321				
314.95	266	424.10	150				
323.05	1023	441.00	3474				
334.05	387	442.00	24808				
352.00	121	443.00	4756				
353.00	149	444.00	474				
354.00	114						
365.00	1169						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137285.D
Acq On : 26 Apr 2019 9:10 am
Operator : angelar
Sample : dftpp
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 14:14:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137285.D\data.ms

(1) Pentachlorophenol

2.322min (-0.266) 14.42 m

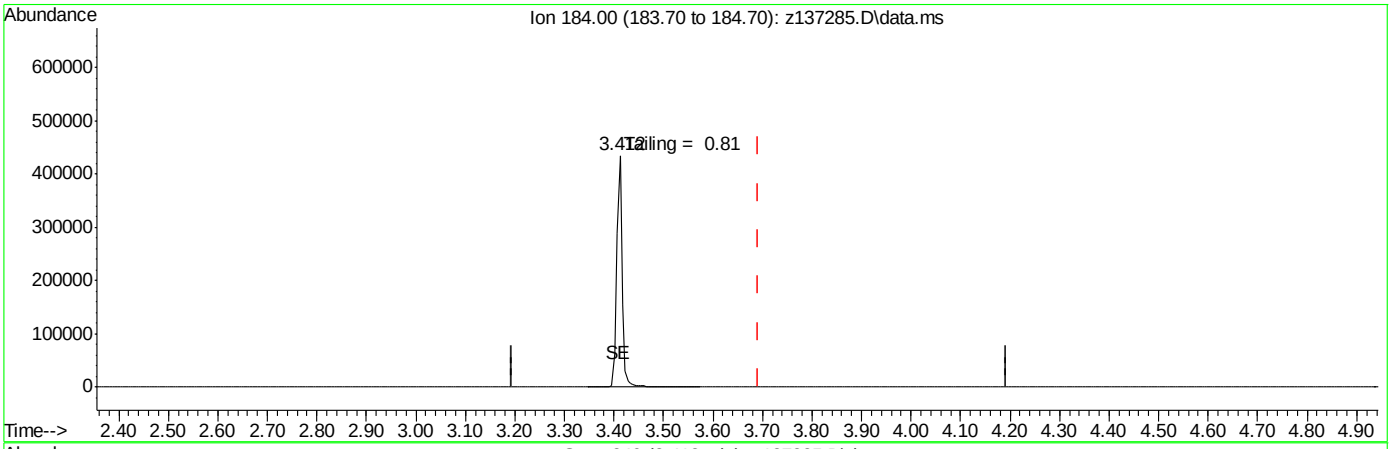
response 441827

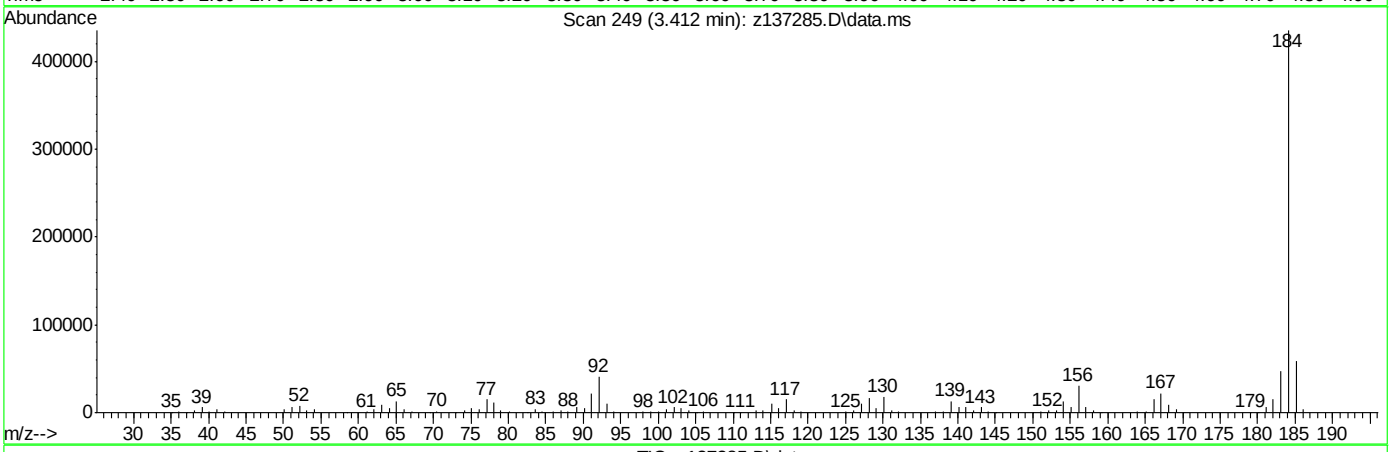
Ion	Exp%	Act%
266.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137285.D
Acq On : 26 Apr 2019 9:10 am
Operator : angelar
Sample : dftpp
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 14:14:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137285.D\data.ms

(2) Benzidine

3.412min (-0.281) 18.19 m

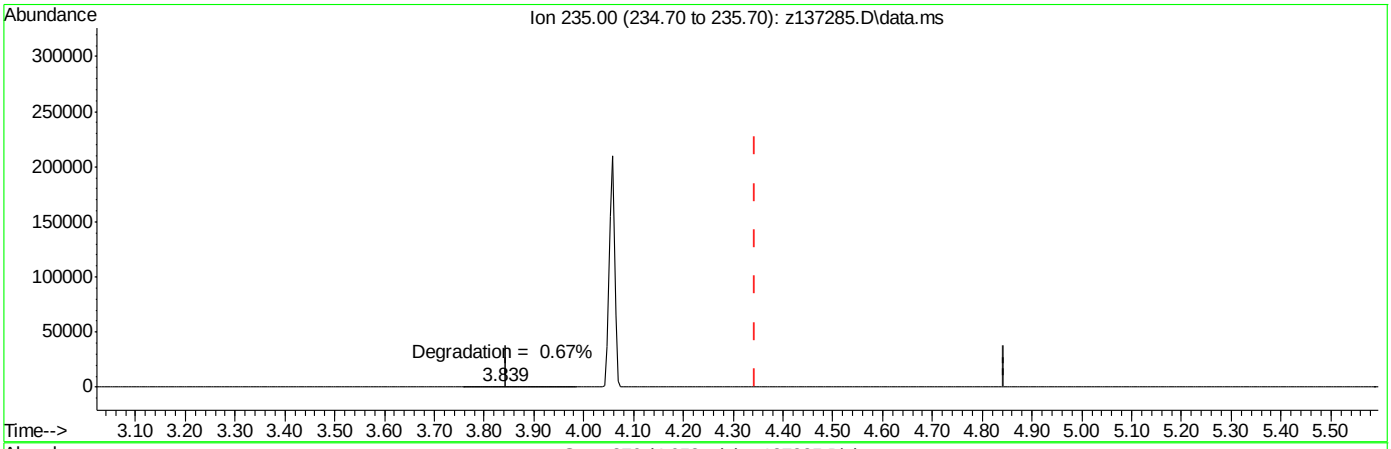
response 3282725

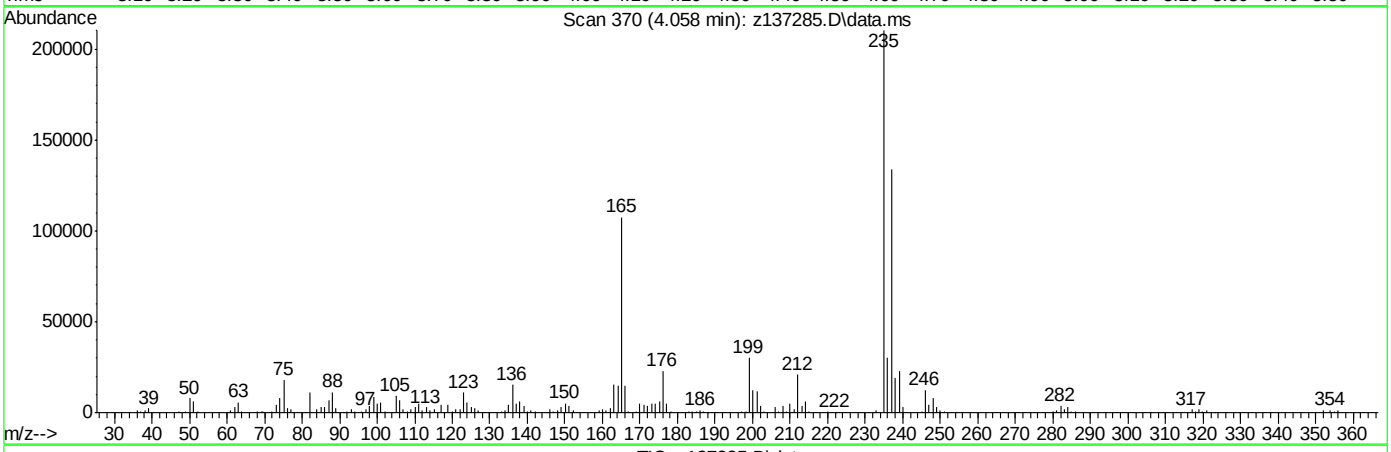
Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137285.D
Acq On : 26 Apr 2019 9:10 am
Operator : angelar
Sample : dftpp
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 26 14:14:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPZ.M
Quant Title : column rtx-5msi 30mx0.25mmx0.25um
QLast Update : Sat Apr 06 19:32:42 2019
Response via : Initial Calibration





TIC: z137285.D\data.ms

(3) PP-DDT

4.058min (-0.287) 18.11 m

response 1524606

Ion	Exp%	Act%
235.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85594.D
Acq On : 8 Mar 2019 3:24 am
Operator : chriss2
Sample : ic3783-100
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 08 17:27:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

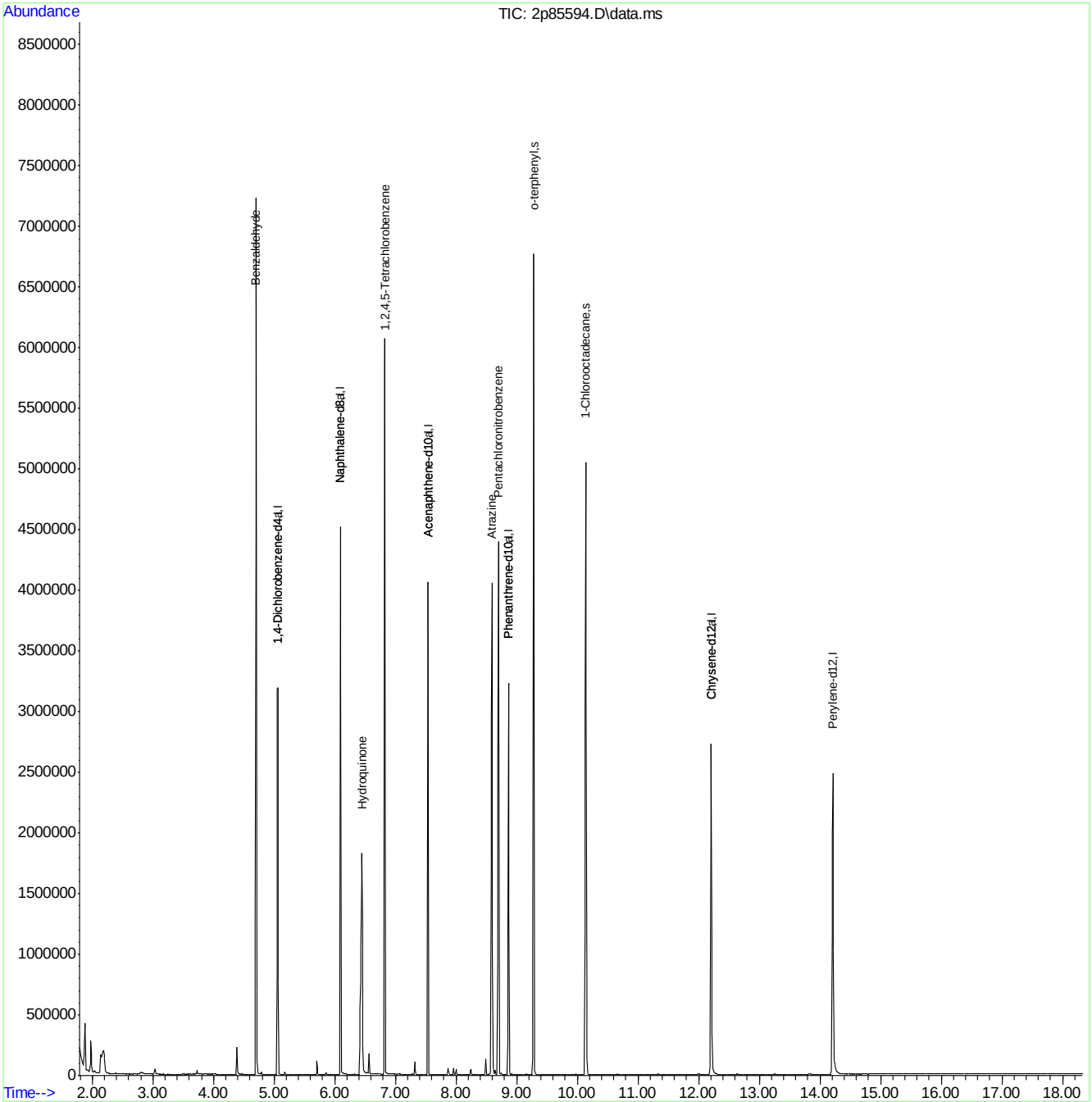
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.060	152	409481	40.00	ppm	0.00
24) Naphthalene-d8	6.092	136	1545600	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	679720	40.00	ppm	0.00
69) Phenanthrene-d10	8.868	188	1053139	40.00	ppm	0.00
83) Chrysene-d12	12.206	240	1050677	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1102107	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.060	152	409481	40.00	ppm	0.00
103) Naphthalene-d8a	6.092	136	1545600	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	679720	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1050677	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.868	188	1053139	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.141	57	727660	100.00	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	200.00%#		
112) o-terphenyl	9.280	230	1394763	100.00	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	200.00%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.702	105	1332386	100.00	ppm	93
104) Hydroquinone	6.451	110	1278284	100.00	ppm	93
106) Atrazine	8.596	215	284802	100.00	ppm	96
107) 1,2,4,5-Tetrachloroben...	6.825	216	926511	100.00	ppm	98
113) Pentachloronitrobenzene	8.697	295	119475	100.00	ppm	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85594.D
Acq On : 8 Mar 2019 3:24 am
Operator : chriss2
Sample : ic3783-100
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 08 17:27:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85595.D
Acq On : 8 Mar 2019 3:48 am
Operator : chriss2
Sample : ic3783-80
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 08 17:27:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

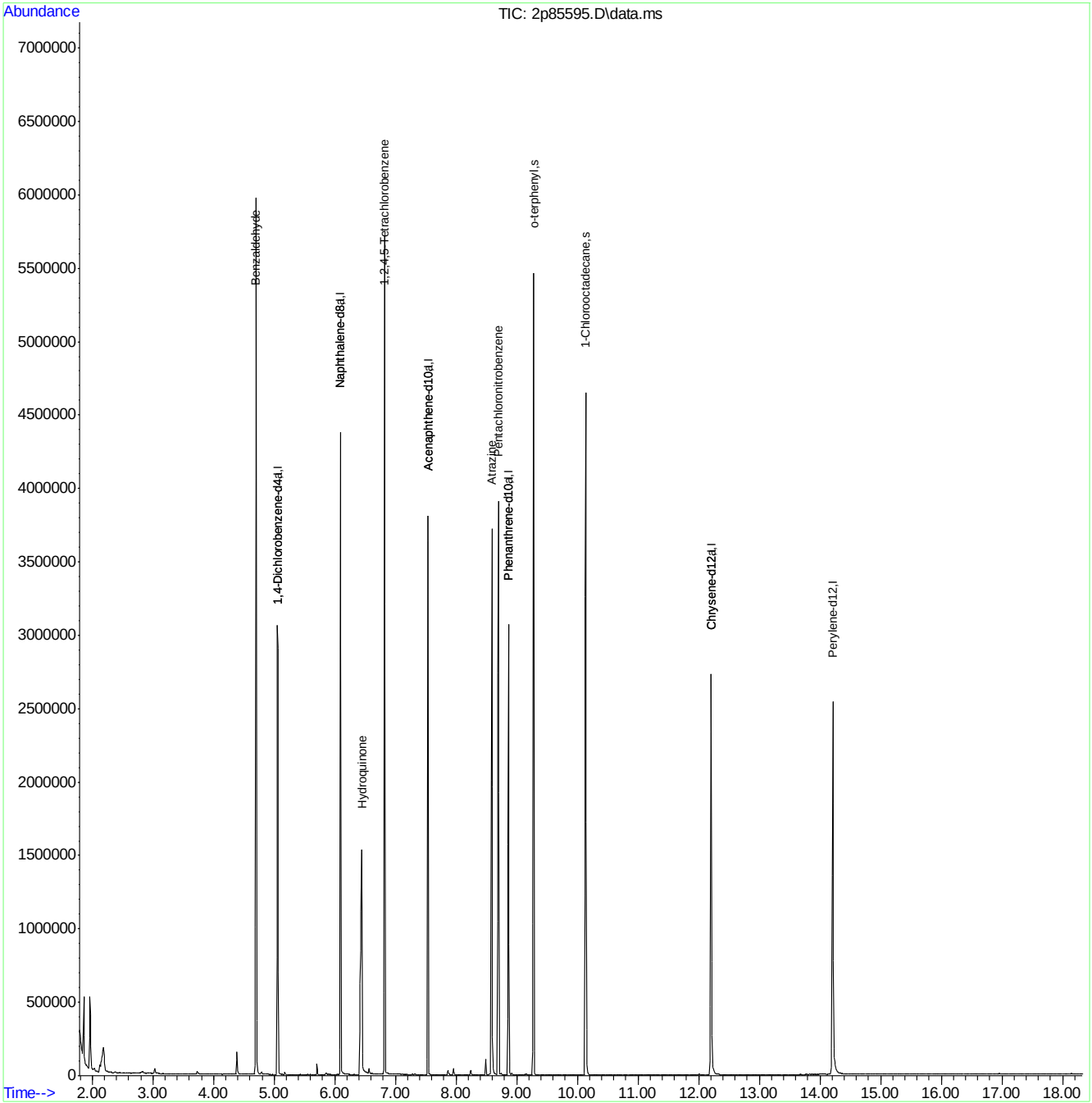
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.060	152	385682	40.00	ppm	0.00
24) Naphthalene-d8	6.092	136	1463225	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	668934	40.00	ppm	0.00
69) Phenanthrene-d10	8.863	188	1042716	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1037310	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1110618	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.060	152	385682	40.00	ppm	0.00
103) Naphthalene-d8a	6.092	136	1463225	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	668934	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1037310	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1042716	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.136	57	623827	86.59	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	173.18%#		
112) o-terphenyl	9.280	230	1164638	84.34	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	168.68%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.702	105	1026958	81.83	ppm	93
104) Hydroquinone	6.445	110	989366	81.76	ppm	94
106) Atrazine	8.590	215	227575	81.19	ppm	95
107) 1,2,4,5-Tetrachloroben...	6.820	216	756775	83.00	ppm	99
113) Pentachloronitrobenzene	8.697	295	98182	83.00	ppm	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85595.D
Acq On : 8 Mar 2019 3:48 am
Operator : chriss2
Sample : ic3783-80
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 08 17:27:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85596.D
Acq On : 8 Mar 2019 4:11 am
Operator : chriss2
Sample : icc3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 08 17:28:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

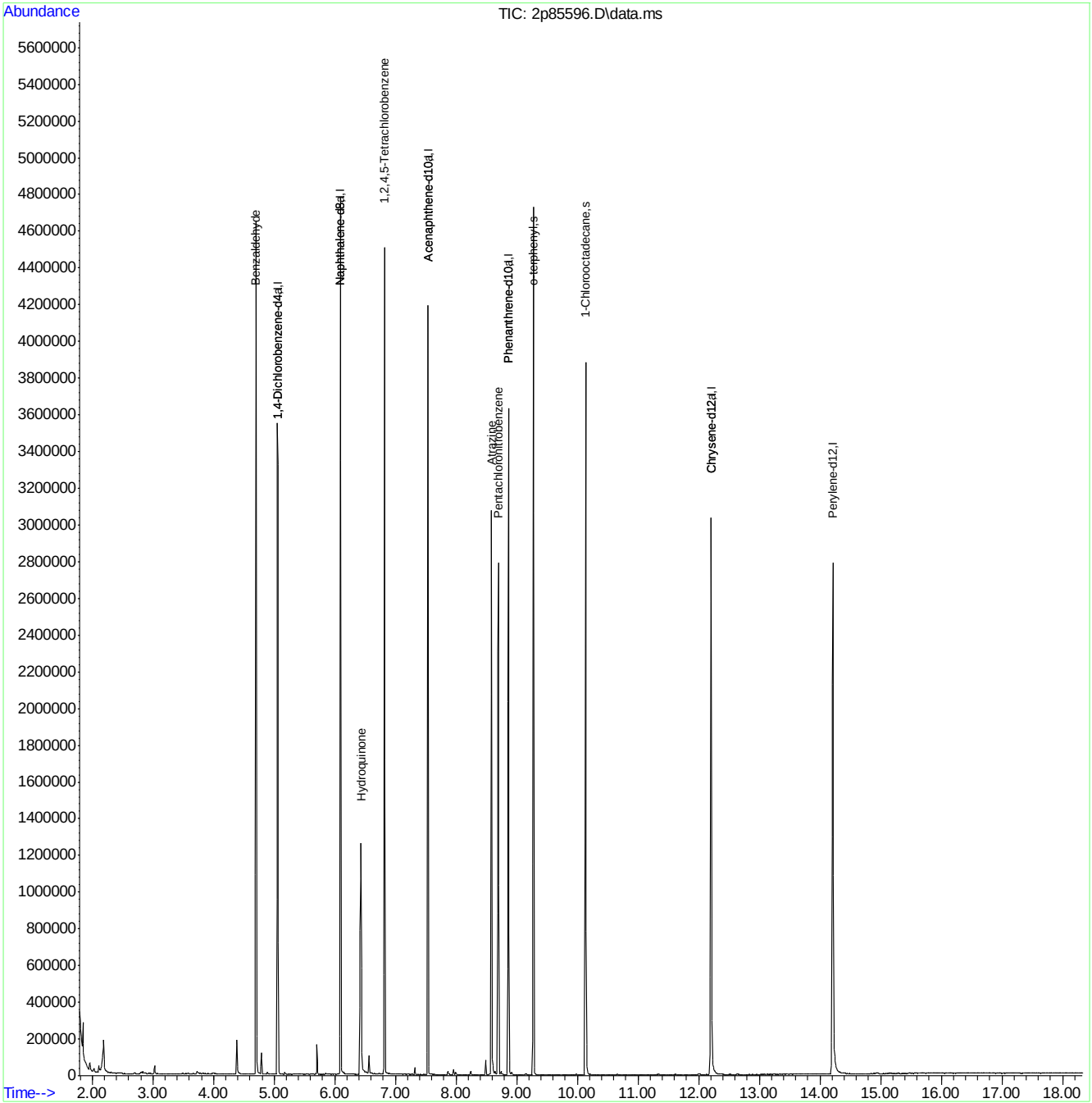
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.060	152	436663	40.00	ppm	0.00
24) Naphthalene-d8	6.093	136	1636213	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	736974	40.00	ppm	0.00
69) Phenanthrene-d10	8.863	188	1194426	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1153078	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1225425	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.060	152	436663	40.00	ppm	0.00
103) Naphthalene-d8a	6.093	136	1636213	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	736974	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1153078	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1194426	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.136	57	492300	59.65	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	119.30%#		
112) o-terphenyl	9.275	230	858620	54.28	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	108.56%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.702	105	788789	55.52	ppm	92
104) Hydroquinone	6.435	110	643091	47.52	ppm	94
106) Atrazine	8.585	215	158499	51.33	ppm	87
107) 1,2,4,5-Tetrachloroben...	6.820	216	554368	55.19	ppm	97
113) Pentachloronitrobenzene	8.697	295	66438	49.03	ppm #	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85596.D
Acq On : 8 Mar 2019 4:11 am
Operator : chriss2
Sample : icc3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 08 17:28:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85597.D
Acq On : 8 Mar 2019 4:34 am
Operator : chriss2
Sample : ic3783-25
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 08 17:29:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

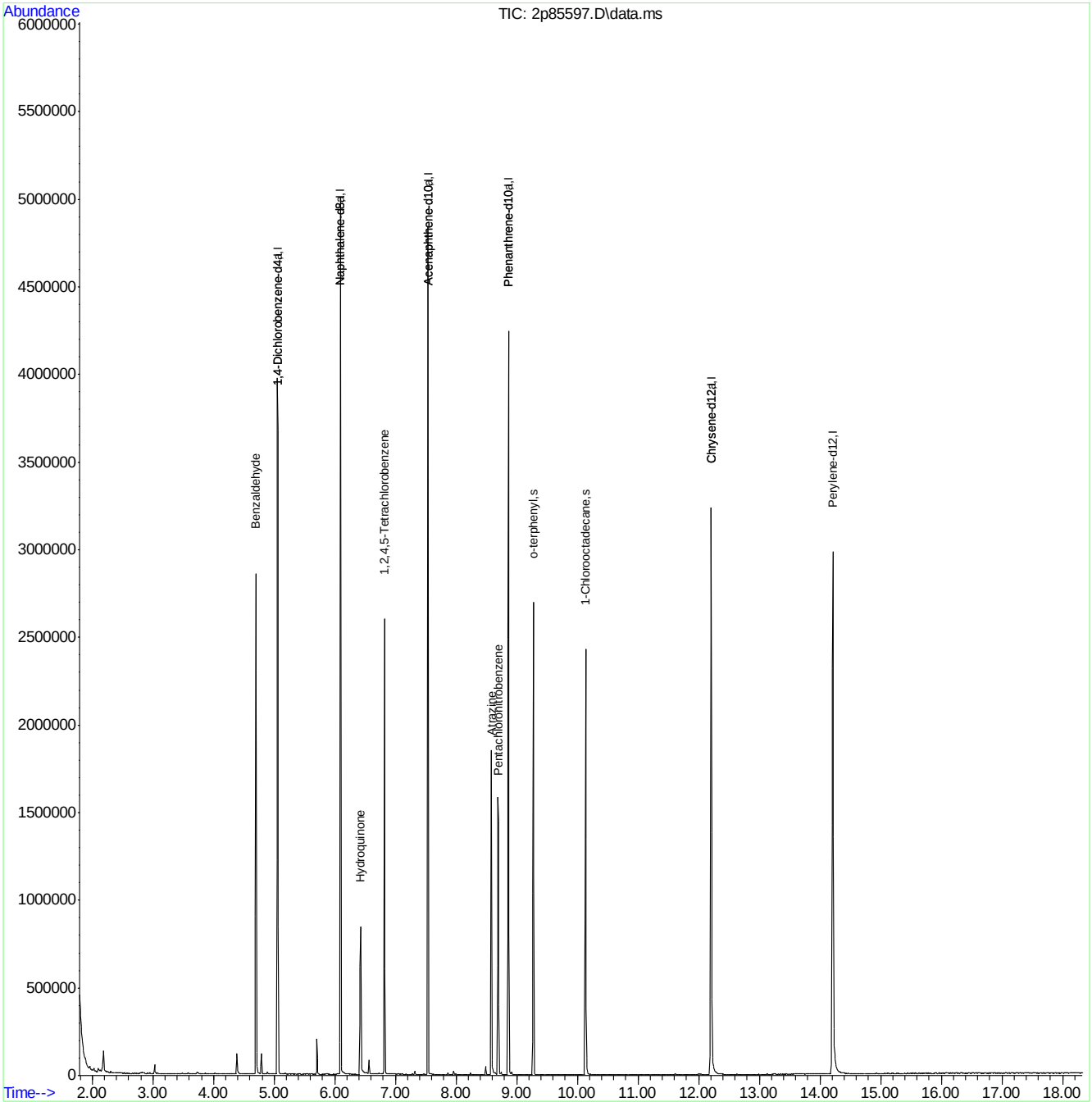
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.060	152	500841	40.00	ppm	0.00
24) Naphthalene-d8	6.093	136	1815114	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	834788	40.00	ppm	0.00
69) Phenanthrene-d10	8.863	188	1383708	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1307471	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1396641	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.060	152	500841	40.00	ppm	0.00
103) Naphthalene-d8a	6.093	136	1815114	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	834788	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1307471	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1383708	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.136	57	311940	32.63	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	65.26%		
112) o-terphenyl	9.275	230	491370	26.81	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	53.62%		
Target Compounds						Qvalue
102) Benzaldehyde	4.697	105	476233	29.22	ppm	90
104) Hydroquinone	6.424	110	340124	22.66	ppm	93
106) Atrazine	8.585	215	88640	25.34	ppm	97
107) 1,2,4,5-Tetrachloroben...	6.820	216	319999	28.12	ppm	97
113) Pentachloronitrobenzene	8.697	295	36703	23.38	ppm #	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85597.D
Acq On : 8 Mar 2019 4:34 am
Operator : chriss2
Sample : ic3783-25
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 08 17:29:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85598.D
Acq On : 8 Mar 2019 4:58 am
Operator : chriss2
Sample : ic3783-10
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 08 17:29:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

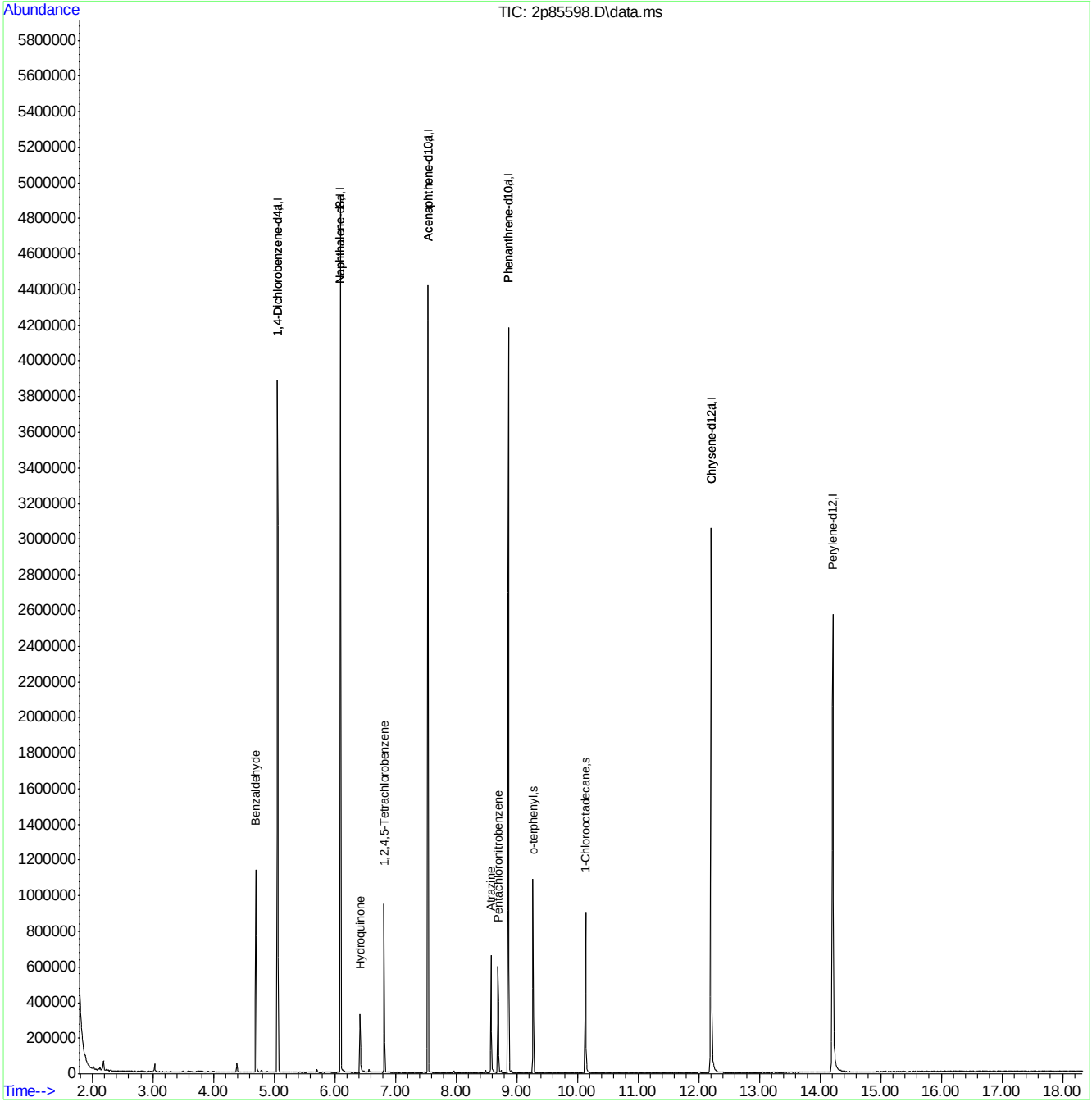
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.055	152	462547	40.00	ppm	0.00
24) Naphthalene-d8	6.093	136	1675091	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	777566	40.00	ppm	0.00
69) Phenanthrene-d10	8.863	188	1339975	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1172622	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1146869	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.055	152	462547	40.00	ppm	0.00
103) Naphthalene-d8a	6.093	136	1675091	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	777566	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1172622	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1339975	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.131	57	120265	12.99	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	25.98%		
112) o-terphenyl	9.275	230	186600	10.51	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	21.02%		
Target Compounds						Qvalue
102) Benzaldehyde	4.697	105	177902	11.82	ppm	88
104) Hydroquinone	6.419	110	94580	6.83	ppm	95
106) Atrazine	8.580	215	27943	8.58	ppm	87
107) 1,2,4,5-Tetrachloroben...	6.820	216	122143	11.52	ppm	97
113) Pentachloronitrobenzene	8.692	295	11677	7.68	ppm #	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85598.D
Acq On : 8 Mar 2019 4:58 am
Operator : chriss2
Sample : ic3783-10
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 08 17:29:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85599.D
Acq On : 8 Mar 2019 5:21 am
Operator : chriss2
Sample : ic3783-5
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 08 17:30:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

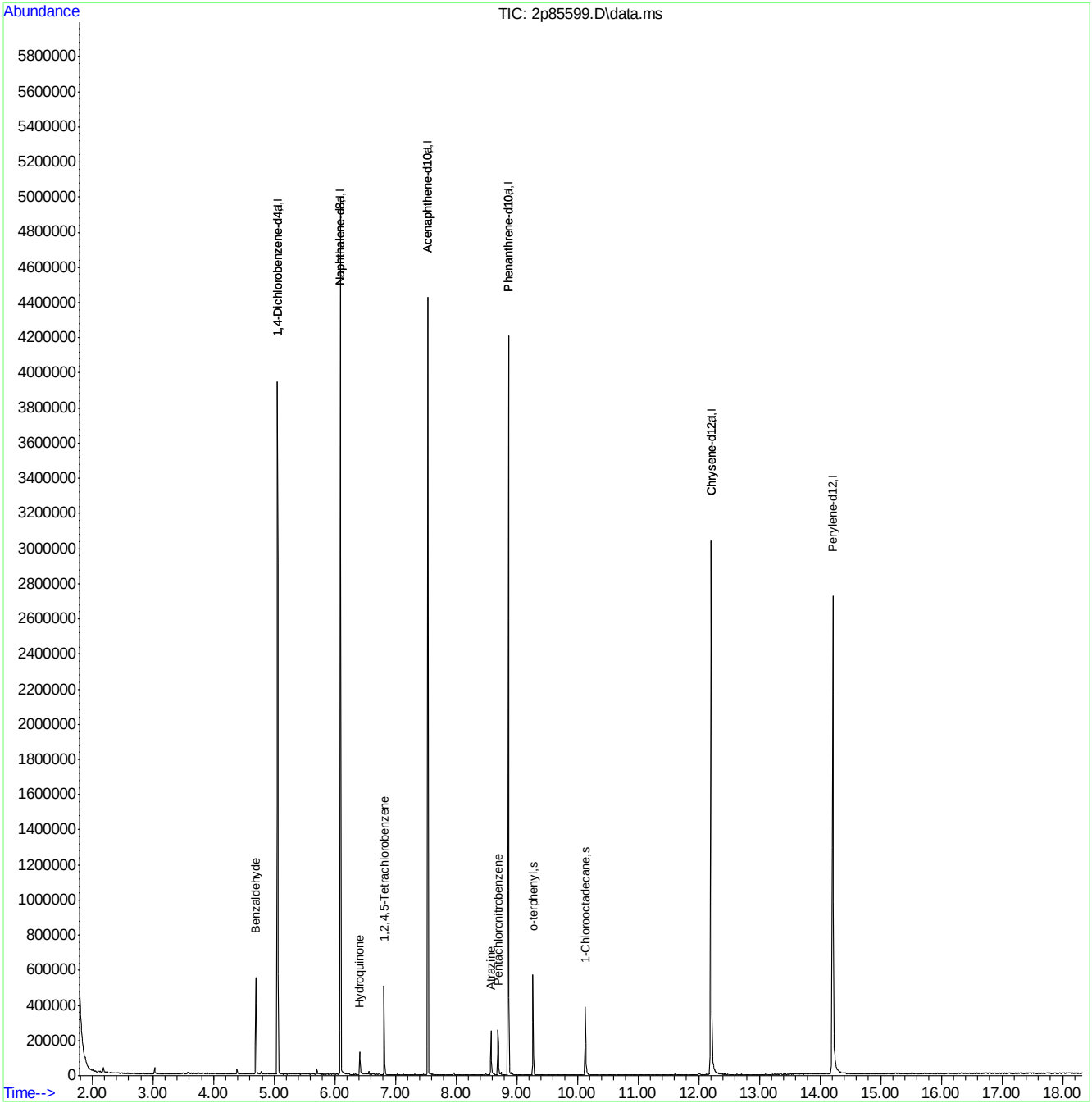
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.055	152	464958	40.00	ppm	0.00
24) Naphthalene-d8	6.092	136	1647696	40.00	ppm	0.00
47) Acenaphthene-d10	7.531	164	774219	40.00	ppm	-0.01
69) Phenanthrene-d10	8.863	188	1340128	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1168329	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1199858	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.055	152	464958	40.00	ppm	0.00
103) Naphthalene-d8a	6.092	136	1647696	40.00	ppm	0.00
105) Acenaphthene-d10a	7.531	164	774219	40.00	ppm	-0.01
108) Chrysene-d12a	12.206	240	1168329	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1340128	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.131	57	52350	5.65	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	11.30%#		
112) o-terphenyl	9.270	230	88562	4.99	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	9.98%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.696	105	86555	5.72	ppm	86
104) Hydroquinone	6.413	110	33178	2.43	ppm #	89
106) Atrazine	8.580	215	11029	3.40	ppm	82
107) 1,2,4,5-Tetrachloroben...	6.815	216	59795	5.67	ppm	99
113) Pentachloronitrobenzene	8.692	295	4365	2.87	ppm #	74

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85599.D
Acq On : 8 Mar 2019 5:21 am
Operator : chriss2
Sample : ic3783-5
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 08 17:30:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85600.D
Acq On : 8 Mar 2019 5:45 am
Operator : chriss2
Sample : ic3783-2
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 08 17:30:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

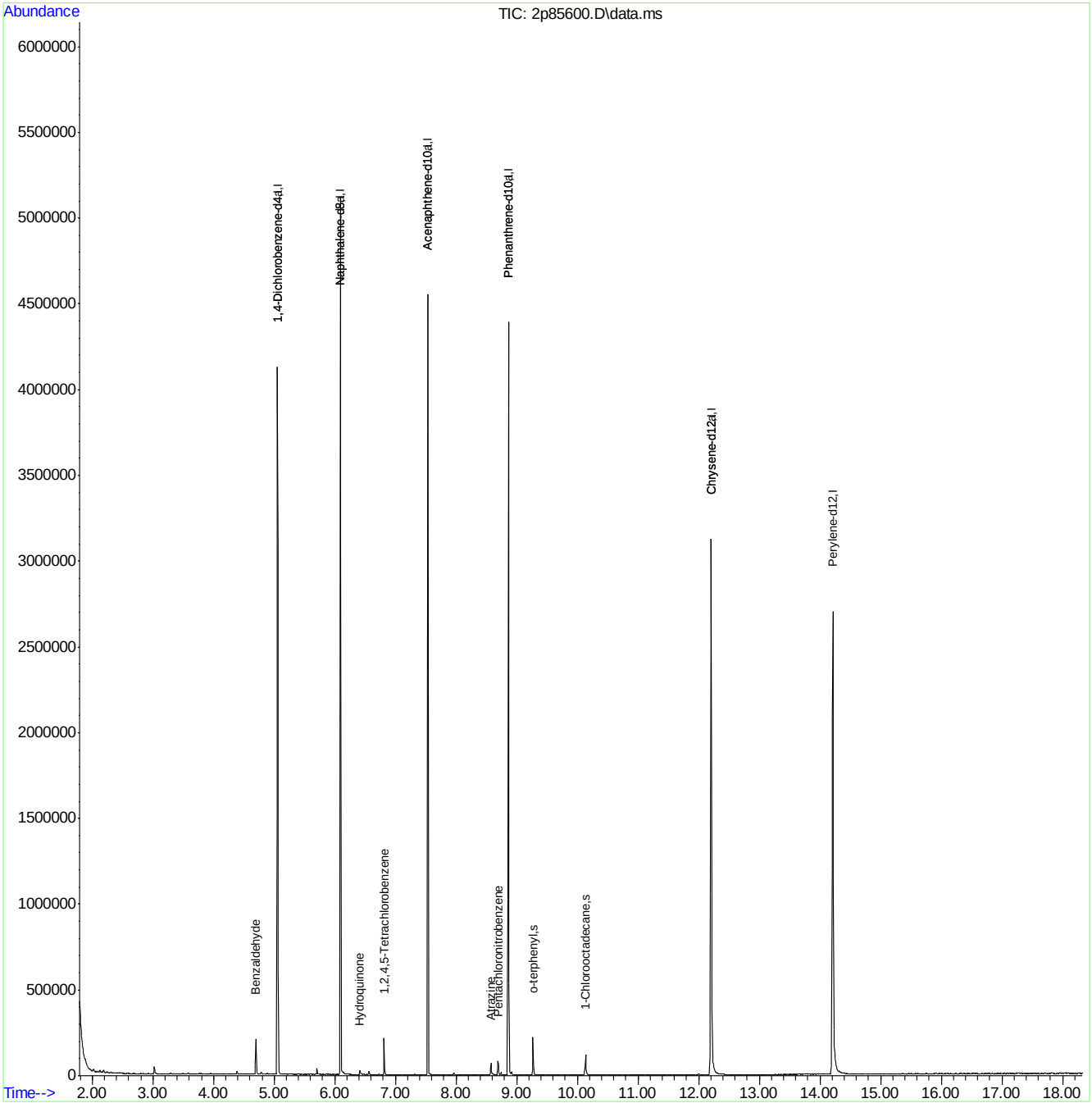
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.055	152	482657	40.00	ppm	0.00
24) Naphthalene-d8	6.093	136	1705500	40.00	ppm	0.00
47) Acenaphthene-d10	7.531	164	796145	40.00	ppm	-0.01
69) Phenanthrene-d10	8.863	188	1381891	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1220716	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1206301	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.055	152	482657	40.00	ppm	0.00
103) Naphthalene-d8a	6.093	136	1705500	40.00	ppm	0.00
105) Acenaphthene-d10a	7.531	164	796145	40.00	ppm	-0.01
108) Chrysene-d12a	12.206	240	1220716	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1381891	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.136	57	18073	1.89	ppm	-0.04
Spiked Amount 50.000	Range 20 - 70		Recovery =	3.78%#		
112) o-terphenyl	9.270	230	34258	1.87	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	3.74%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.697	105	34972	2.23	ppm	89
104) Hydroquinone	6.413	110	6499	0.46	ppm #	89
106) Atrazine	8.580	215	3306	0.99	ppm	87
107) 1,2,4,5-Tetrachloroben...	6.815	216	23739	2.19	ppm	97
113) Pentachloronitrobenzene	8.692	295	1340	0.85	ppm #	48

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85600.D
Acq On : 8 Mar 2019 5:45 am
Operator : chriss2
Sample : ic3783-2
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 08 17:30:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85601.D
Acq On : 8 Mar 2019 6:08 am
Operator : chriss2
Sample : ic3783-1
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 08 17:32:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration

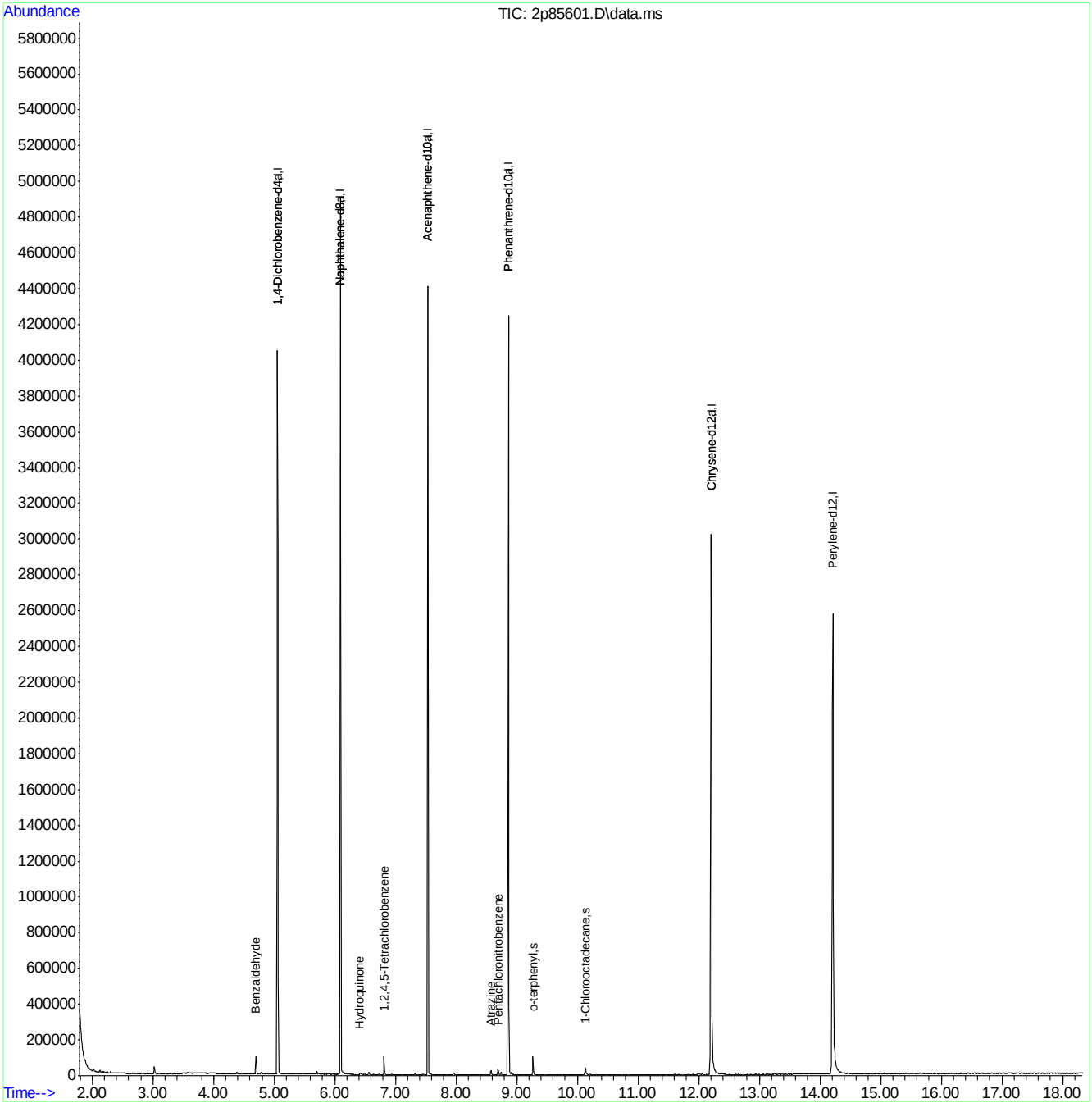
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.055	152	466521	40.00	ppm	0.00
24) Naphthalene-d8	6.092	136	1644079	40.00	ppm	0.00
47) Acenaphthene-d10	7.531	164	763586	40.00	ppm	-0.01
69) Phenanthrene-d10	8.863	188	1317408	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1143523	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1147348	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.055	152	466521	40.00	ppm	0.00
103) Naphthalene-d8a	6.092	136	1644079	40.00	ppm	0.00
105) Acenaphthene-d10a	7.531	164	763586	40.00	ppm	-0.01
108) Chrysene-d12a	12.206	240	1143523	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.863	188	1317408	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	10.131	57	6812	0.75	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	1.50%#		
112) o-terphenyl	9.270	230	16070	0.92	ppm	-0.05
Spiked Amount 50.000	Range 20 - 70		Recovery =	1.84%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.702	105	17430	1.15	ppm	90
104) Hydroquinone	6.413	110	1994	0.15	ppm #	83
106) Atrazine	8.574	215	999	0.31	ppm #	44
107) 1,2,4,5-Tetrachloroben...	6.814	216	11865	1.14	ppm	96
113) Pentachloronitrobenzene	8.692	295	398	0.27	ppm #	49

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85601.D
Acq On : 8 Mar 2019 6:08 am
Operator : chriss2
Sample : ic3783-1
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 08 17:32:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:26:42 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85602.D
Acq On : 8 Mar 2019 6:31 am
Operator : chriss2
Sample : icv3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 08 17:45:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:37:17 2019
Response via : Initial Calibration

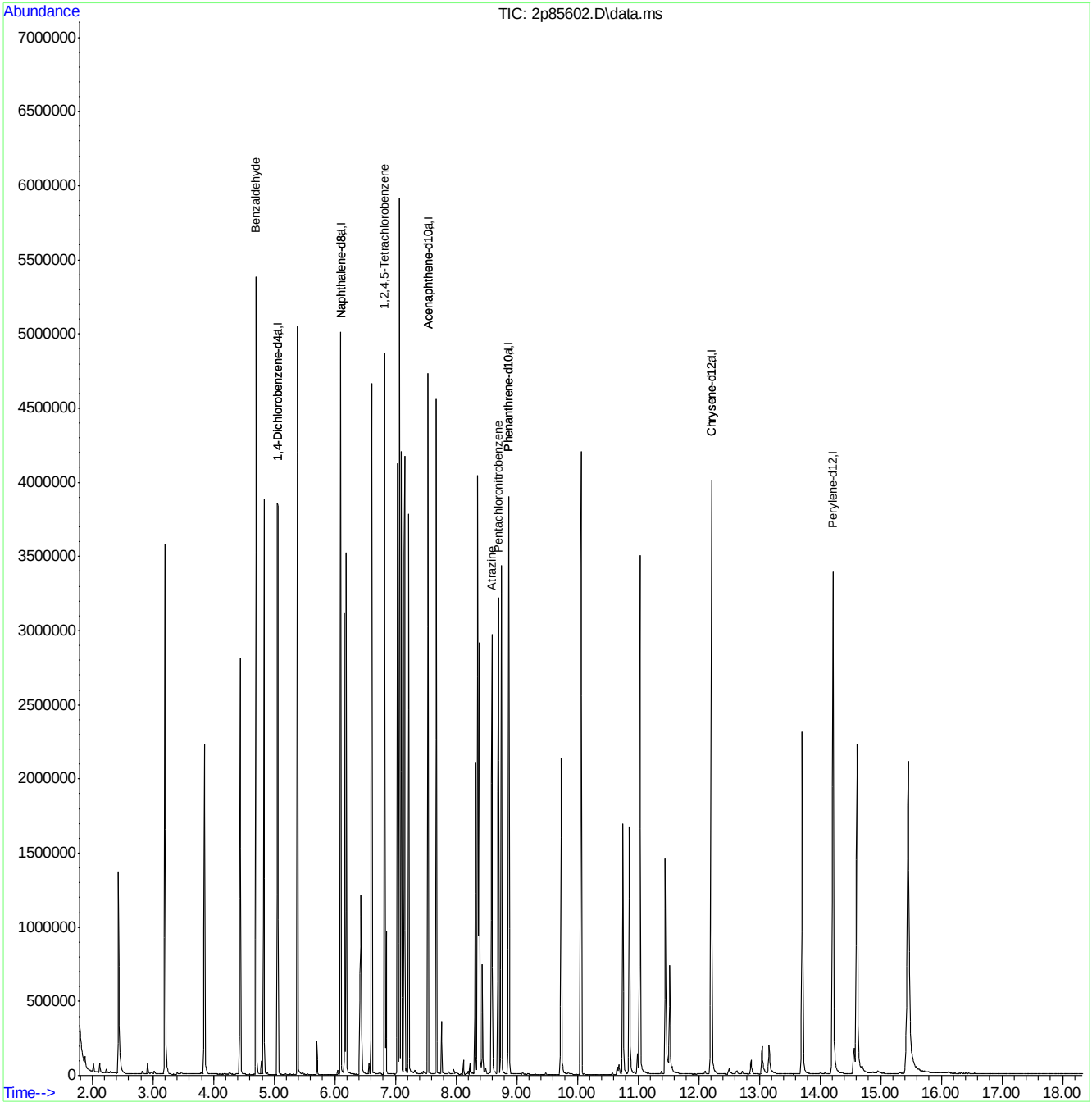
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.060	152	509417	40.00	ppm	0.00
24) Naphthalene-d8	6.098	136	1938199	40.00	ppm	0.00
47) Acenaphthene-d10	7.537	164	763102	40.00	ppm	0.00
69) Phenanthrene-d10	8.868	188	1452392	40.00	ppm	0.00
83) Chrysene-d12	12.211	240	1748769	40.00	ppm	-0.02
91) Perylene-d12	14.217	264	1691097	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.060	152	509417	40.00	ppm	0.00
103) Naphthalene-d8a	6.098	136	1938199	40.00	ppm	0.00
105) Acenaphthene-d10a	7.537	164	763102	40.00	ppm	0.00
108) Chrysene-d12a	12.211	240	1748769	40.00	ppm	0.00
110) Phenanthrene-d10a	8.868	188	1452392	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.702	105	927578	50.36	ppm	98
106) Atrazine	8.596	215	188431	57.56	ppm #	84
107) 1,2,4,5-Tetrachloroben...	6.820	216	638450	55.89	ppm	98
113) Pentachloronitrobenzene	8.697	295	78612	47.69	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85602.D
Acq On : 8 Mar 2019 6:31 am
Operator : chriss2
Sample : icv3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 08 17:45:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:37:17 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85603.D
Acq On : 8 Mar 2019 6:54 am
Operator : chriss2
Sample : icv3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 17:45:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:37:17 2019
Response via : Initial Calibration

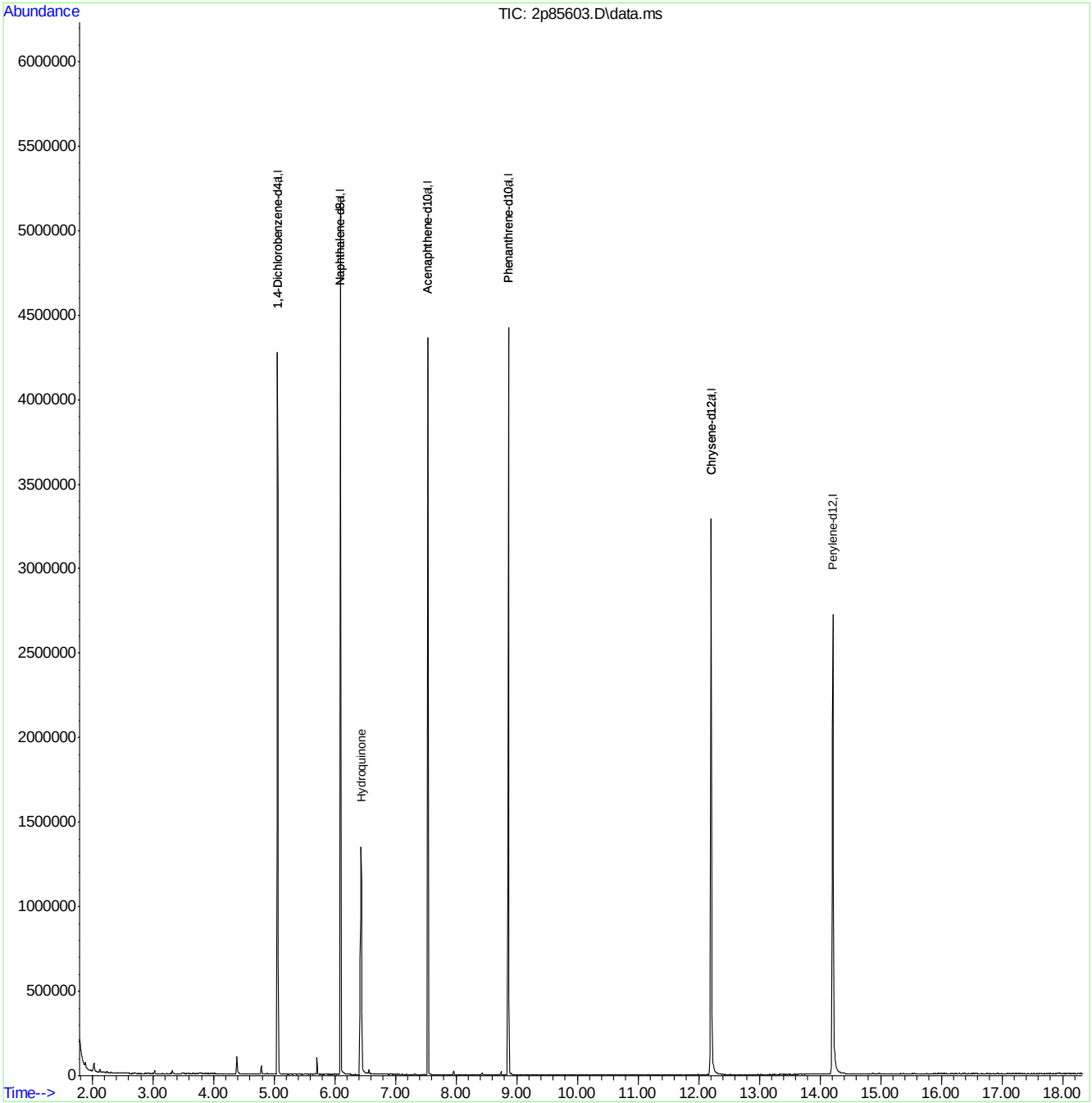
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.055	152	505530	40.00	ppm	0.00
24) Naphthalene-d8	6.092	136	1783887	40.00	ppm	0.00
47) Acenaphthene-d10	7.531	164	747607	40.00	ppm	-0.01
69) Phenanthrene-d10	8.863	188	1442500	40.00	ppm	-0.01
83) Chrysene-d12	12.206	240	1316102	40.00	ppm	-0.02
91) Perylene-d12	14.212	264	1215460	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	5.055	152	505530	40.00	ppm	0.00
103) Naphthalene-d8a	6.092	136	1783887	40.00	ppm	0.00
105) Acenaphthene-d10a	7.531	164	747607	40.00	ppm	0.00
108) Chrysene-d12a	12.206	240	1316102	40.00	ppm	0.00
110) Phenanthrene-d10a	8.863	188	1442500	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
104) Hydroquinone	6.435	110	713487	53.01	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3783\
Data File : 2p85603.D
Acq On : 8 Mar 2019 6:54 am
Operator : chriss2
Sample : icv3783-50
Misc : op13652,e2p3783,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 17:45:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3781.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 08 17:37:17 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/09/19 16:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.841	152	456795	40.00	ppm		-0.07
24) Naphthalene-d8	5.879	136	1557038	40.00	ppm		-0.07
47) Acenaphthene-d10	7.317	164	862455	40.00	ppm		-0.07
69) Phenanthrene-d10	8.612	188	1553734	40.00	ppm		-0.09
83) Chrysene-d12	11.907	240	1417107	40.00	ppm		-0.11
91) Perylene-d12	13.902	264	1464645	40.00	ppm		-0.12
101) 1,4-Dichlorobenzene-d4a	4.841	152	456795	40.00	ppm		-0.07
103) Naphthalene-d8a	5.879	136	1557038	40.00	ppm		-0.07
105) Acenaphthene-d10a	7.317	164	862455	40.00	ppm		-0.07
108) Chrysene-d12a	11.907	240	1417107	40.00	ppm		-0.11
110) Phenanthrene-d10a	8.612	188	1553734	40.00	ppm		-0.09
System Monitoring Compounds							
5) 2-Fluorophenol	3.793	112	2828974	130.76	ppm		-0.08
Spiked Amount 50.000	Range 11 - 58		Recovery = 261.52%#				
8) Phenol-d5	4.590	99	2529007	102.31	ppm		-0.04
Spiked Amount 50.000	Range 10 - 59		Recovery = 204.62%#				
25) Nitrobenzene-d5	5.301	82	1881995	108.69	ppm		-0.08
Spiked Amount 50.000	Range 19 - 61		Recovery = 217.38%#				
51) 2-Fluorobiphenyl	6.772	172	2895801	102.67	ppm		-0.07
Spiked Amount 50.000	Range 21 - 58		Recovery = 205.34%#				
73) 2,4,6-Tribromophenol	7.981	330	647737	119.21	ppm		-0.06
Spiked Amount 50.000	Range 12 - 68		Recovery = 238.42%#				
85) Terphenyl-d14	10.468	244	4086874	124.02	ppm		-0.11
Spiked Amount 50.000	Range 16 - 65		Recovery = 248.04%#				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.167	88	2330086	132.89	ppm		93
3) Pyridine	2.514	79	3909561	129.92	ppm		98
4) N-Nitrosodimethylamine	2.509	74	2578428	143.74	ppm		91
6) Indene	5.050	116	2463819	106.86	ppm		99
7) Cumene	4.188	105	5917918	115.06	ppm		96
9) Phenol	4.600	94	2478241	95.18	ppm		95
10) Aniline	4.579	93	2772182	103.08	ppm		98
11) bis(2-Chloroethyl)ether	4.638	93	1689022	87.36	ppm		98
12) 2-Chlorophenol	4.686	128	1672611	100.18	ppm		97
13) Decane	4.723	57	1376507	86.11	ppm		98
14) 1,3-Dichlorobenzene	4.793	146	1829397	101.26	ppm		98
15) 1,4-Dichlorobenzene	4.857	146	1750606	107.42	ppm		99
16) Benzyl alcohol	4.975	108	980497	77.18	ppm	#	69
17) 1,2-Dichlorobenzene	4.975	146	1717128	111.11	ppm		98
18) Acetophenone	5.183	105	2272936	106.26	ppm	#	43
19) 2-Methylphenol	5.082	108	1283734	103.16	ppm		97
20) 2,2'-oxybis(1-Chloropr...	5.071	121	384261	98.43	ppm	#	70
21) 3&4-Methylphenol	5.205	108	1351575	106.91	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.194	70	1065831	103.99	ppm		97
23) Hexachloroethane	5.247	201	593393	106.66	ppm		95
26) Nitrobenzene	5.317	77	1709472	95.67	ppm		98
27) Quinoline	6.194	129	2954610	110.57	ppm		100
28) Isophorone	5.520	82	3422027	109.09	ppm		99
29) 2-Nitrophenol	5.574	139	882041	116.24	ppm		81
30) 2,4-Dimethylphenol	5.633	107	1554698	122.08	ppm		99
31) Benzoic acid	5.809	105	1416250m	108.99	ppm		
32) bis(2-Chloroethoxy)met...	5.691	93	1808227	92.77	ppm		95
33) 2,4-Dichlorophenol	5.782	162	1291772	120.30	ppm		97
34) 2,6-Dichlorophenol	5.959	162	1168300	123.61	ppm		100
35) 1,3,5-Trichlorobenzene	5.584	180	1470473	105.07	ppm		98
36) 1,2,4-Trichlorobenzene	5.836	180	1309203	98.90	ppm		98
37) 1,2,3-Trichlorobenzene	6.018	180	1196968	103.03	ppm		99
38) Naphthalene	5.900	128	3813125	105.57	ppm		99
39) 4-Chloroaniline	5.954	127	1577254	105.35	ppm		98
40) 2,3-Dichloroaniline	6.697	161	1577477	119.73	ppm		97
41) Caprolactam	6.301	113	580673m	128.34	ppm		
42) Hexachlorobutadiene	6.007	225	830933	114.73	ppm		99
43) 4-Chloro-3-methylphenol	6.376	107	1572507	126.26	ppm		97
44) 2-Methylnaphthalene	6.462	141	2420132	113.09	ppm		99
45) 1-Methylnaphthalene	6.547	141	2551873	108.75	ppm		99
46) Dimethylnaphthalene	6.980	156	2383597	108.18	ppm		98
48) Hexachlorocyclopentadiene	6.601	237	1783233	239.53	ppm		99
49) 2,4,6-Trichlorophenol	6.713	196	871466	106.90	ppm		98
50) 2,4,5-Trichlorophenol	6.750	196	930685	108.06	ppm		99
52) 2-Chloronaphthalene	6.868	162	2357554	96.75	ppm		98
53) Biphenyl	6.852	154	3388919	103.95	ppm		100
54) 2-Nitroaniline	6.964	65	985000	115.94	ppm		91
55) Dimethylphthalate	7.109	163	3127371	110.13	ppm		100
56) Acenaphthylene	7.205	152	4106291	101.81	ppm		98
57) 2,6-Dinitrotoluene	7.157	165	721279	119.93	ppm		91
58) 3-Nitroaniline	7.301	138	810446	110.56	ppm		99
59) Acenaphthene	7.349	153	2634165	108.67	ppm		100
60) 2,4-Dinitrophenol	7.392	184	838338	248.02	ppm		75
61) 4-Nitrophenol	7.473	109	642076	144.87	ppm		84
62) Dibenzofuran	7.494	168	3607328	113.00	ppm		94
63) 2,4-Dinitrotoluene	7.494	165	933723	122.53	ppm	#	60
64) 2,3,4,6-Tetrachlorophenol	7.601	232	940872	118.55	ppm		97
65) Diethylphthalate	7.692	149	3235282	112.00	ppm		99
66) Fluorene	7.772	166	2960432	110.12	ppm		100
67) 4-Chlorophenyl-phenyle...	7.772	204	1579885	115.07	ppm		89
68) 4-Nitroaniline	7.826	138	692272	101.59	ppm		89
70) 4,6-Dinitro-2-methylph...	7.842	198	545675	154.87	ppm		91
71) n-Nitrosodiphenylamine	7.879	169	2137352	114.37	ppm		99
72) 1,2-Diphenylhydrazine	7.906	77	3101460	90.19	ppm		96
74) 4-Bromophenyl-phenylether	8.195	248	1132341	123.87	ppm		100
75) Hexachlorobenzene	8.259	284	1228264	114.93	ppm		96
76) Pentachlorophenol	8.451	266	1755400	227.39	ppm		99
77) Phenanthrene	8.644	178	4215580	111.79	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

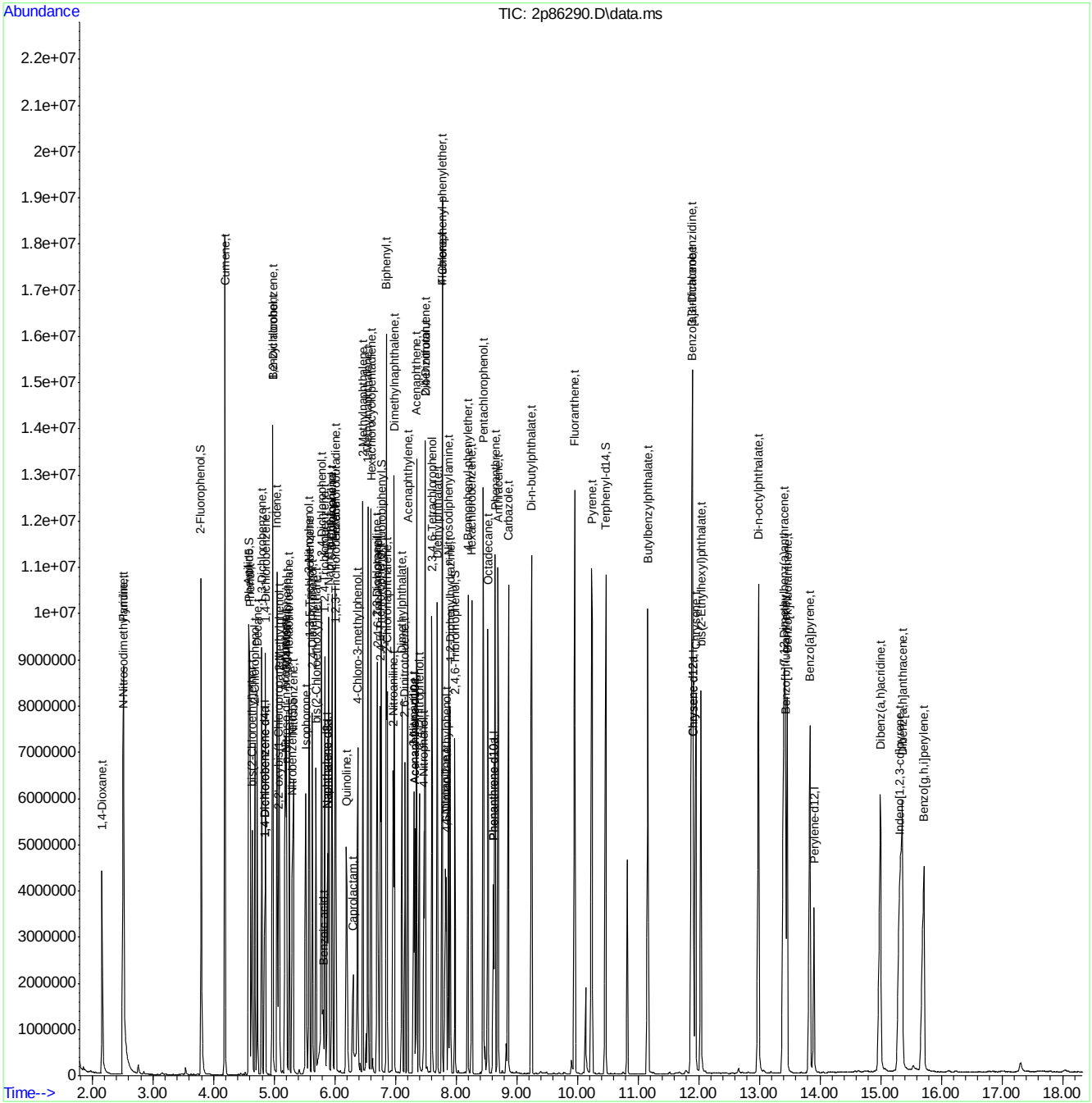
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.692	178	4183828	110.66	ppm	99
79) Carbazole	8.863	167	4393330	121.36	ppm	99
80) Di-n-butylphthalate	9.243	149	6579891	126.61	ppm	98
81) Fluoranthene	9.960	202	6340438	122.43	ppm	99
82) Octadecane	8.526	43	967717	89.54	ppm	95
84) Pyrene	10.238	202	5828661	122.79	ppm	98
86) Butylbenzylphthalate	11.163	149	3271161	138.95	ppm	97
87) Benzo[a]anthracene	11.890	228	5803294	120.48	ppm	100
88) 3,3'-Dichlorobenzidine	11.896	252	2188311	126.45	ppm	99
89) Chrysene	11.955	228	4041380	106.95	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.040	149	3277169	133.07	ppm	99
92) Di-n-octylphthalate	12.987	149	7918615	151.53	ppm	98
93) Benzo[b]fluoranthene	13.431	252	5578001	112.81	ppm	96
94) Benzo[k]fluoranthene	13.463	252	3644512	95.70	ppm	99
95) Benzo[a]pyrene	13.837	252	4674454	128.36	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.319	276	5497470	128.33	ppm	92
97) Dibenz(a,h)acridine	14.998	279	4698249	110.51	ppm	98
98) Dibenz[a,h]anthracene	15.362	278	4312020	116.68	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.404	256	2561699	132.12	ppm	98
100) Benzo[g,h,i]perylene	15.715	276	4196779	107.88	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration



Manual Integration Approval Summary

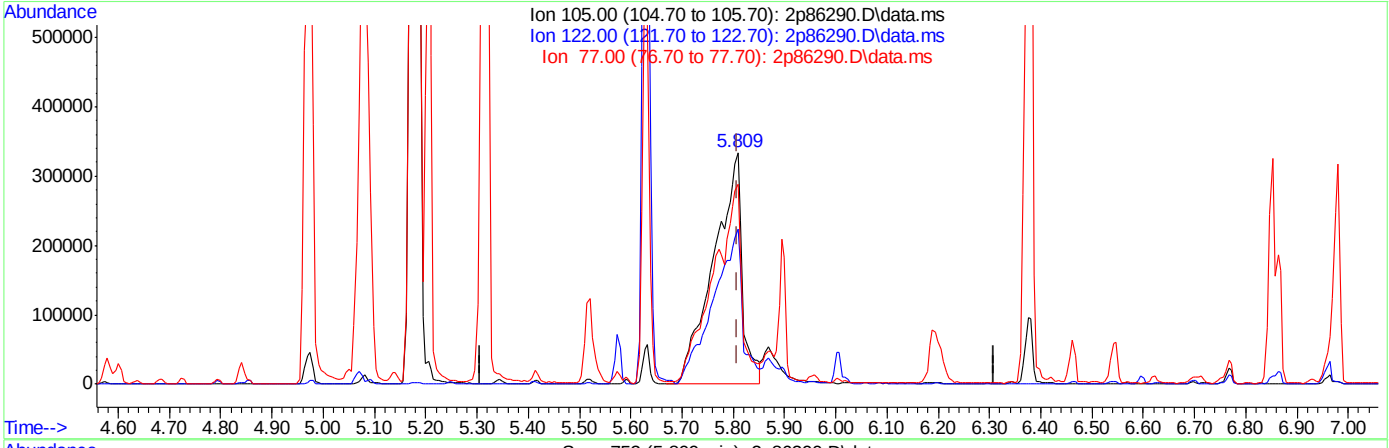
Sample Number:	E2P3816-IC3816	**Method:**	SW846 8270D
Lab FileID:	2P86290.D	**Analyst approved:**	04/08/19 13:30 Kristi Schollenberger
Injection Time:	04/05/19 06:54	**Supervisor approved:**	04/09/19 16:32 Nina Pandya

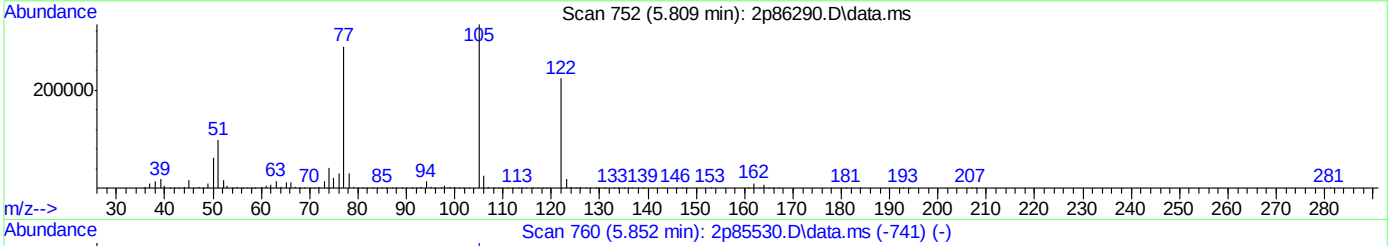
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.81	Split peak
Caprolactam	105-60-2		6.30	Split peak

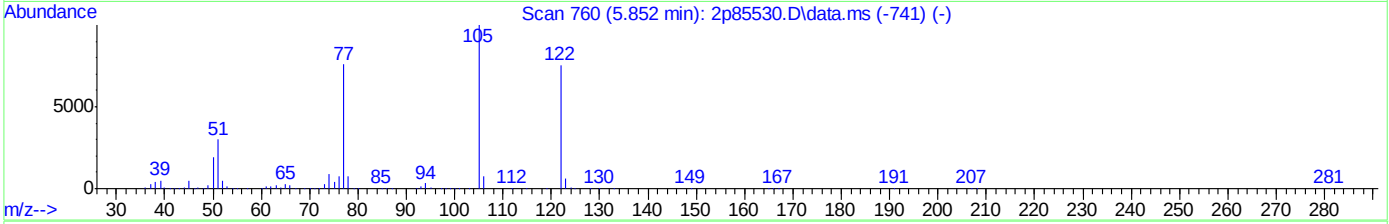
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:40:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86290.D\data.ms

(31) Benzoic acid (t)

5.809min (+0.001) 99.07ppm

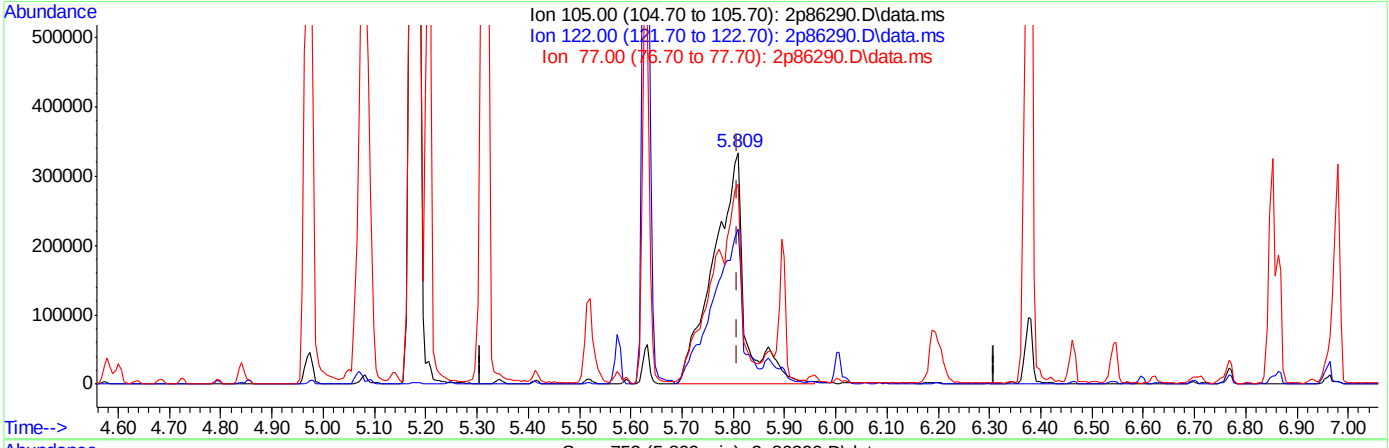
response 1287301

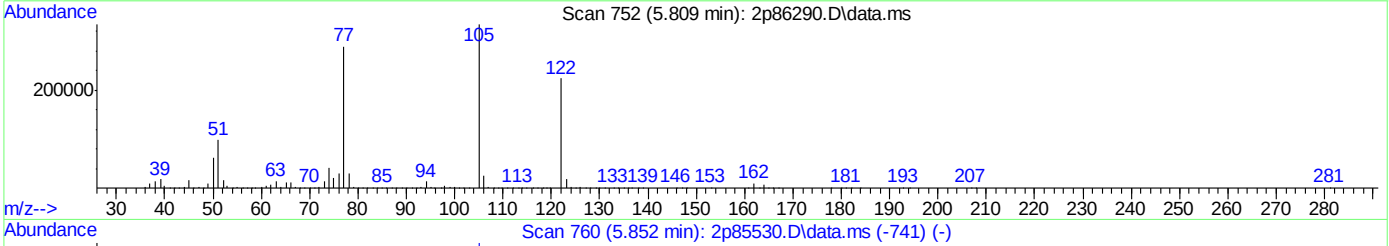
Ion	Exp%	Act%
105.00	100	100
122.00	70.50	66.07
77.00	78.20	85.56
0.00	0.00	0.00

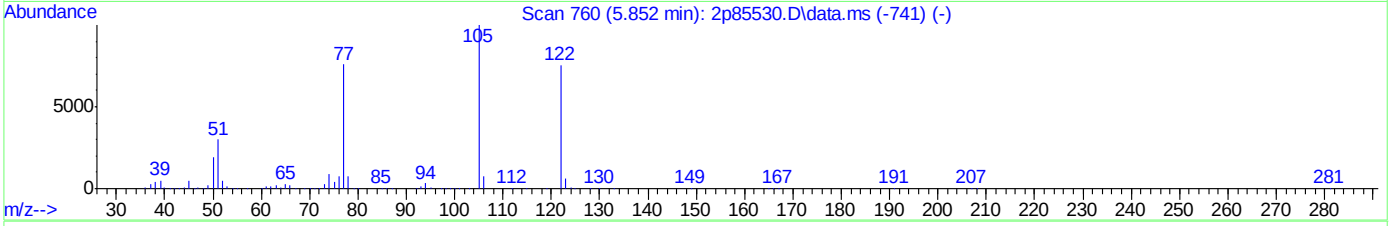
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:40:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86290.D\data.ms

(31) Benzoic acid (t)

5.809min (+0.001) 108.99ppm m

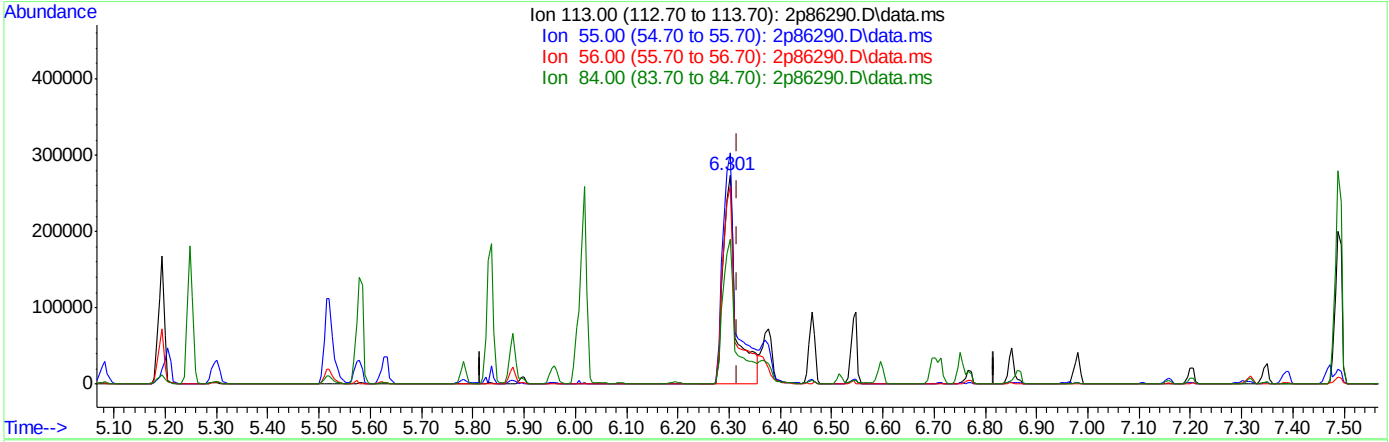
response 1416250

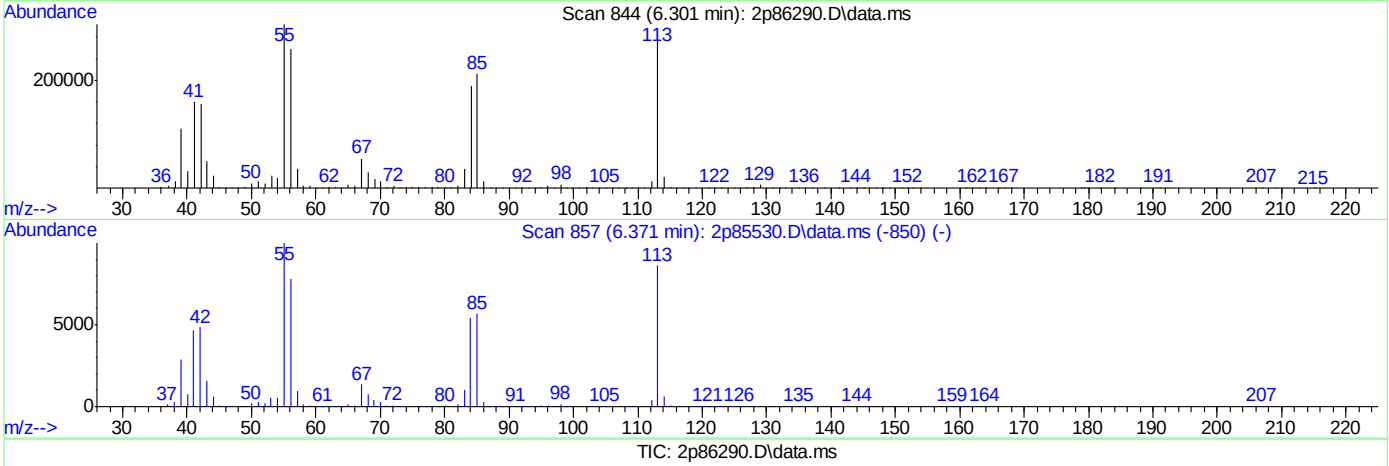
Ion	Exp%	Act%
105.00	100	100
122.00	70.50	66.91
77.00	78.20	86.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:40:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration





TIC: 2p86290.D\data.ms

(41) Caprolactam (t)

6.301min (-0.015) 105.48ppm

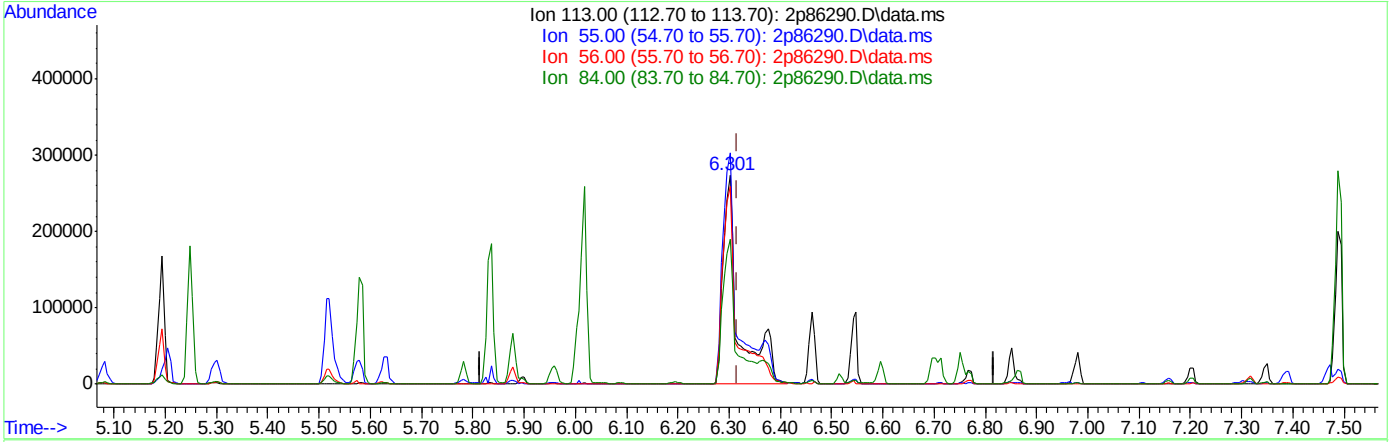
response 477253

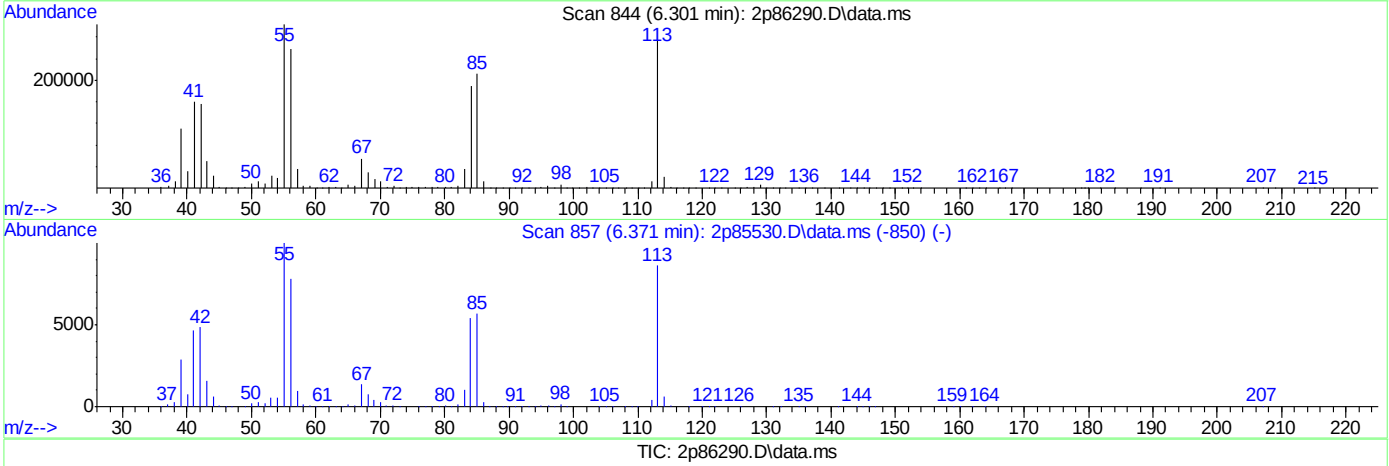
Ion	Exp%	Act%
113.00	100	100
55.00	118.90	110.24
56.00	93.00	94.09
84.00	67.20	68.88

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86290.D
Acq On : 5 Apr 2019 6:54 am
Operator : chriss2
Sample : ic3816-100
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 13:40:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration





TIC: 2p86290.D\data.ms

(41) Caprolactam (t)

6.301min (-0.015) 128.34ppm m

response 580673

Ion	Exp%	Act%
113.00	100	100
55.00	118.90	110.79
56.00	93.00	94.35
84.00	67.20	69.10

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/09/19 16:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:46:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.836	152	496594	40.00	ppm		-0.07
24) Naphthalene-d8	5.879	136	1686728	40.00	ppm		-0.07
47) Acenaphthene-d10	7.317	164	930862	40.00	ppm		-0.07
69) Phenanthrene-d10	8.612	188	1653343	40.00	ppm		-0.09
83) Chrysene-d12	11.901	240	1531669	40.00	ppm		-0.11
91) Perylene-d12	13.896	264	1666059	40.00	ppm		-0.12
101) 1,4-Dichlorobenzene-d4a	4.836	152	496594	40.00	ppm		-0.07
103) Naphthalene-d8a	5.879	136	1686728	40.00	ppm		-0.07
105) Acenaphthene-d10a	7.317	164	930787	40.00	ppm		-0.07
108) Chrysene-d12a	11.901	240	1531669	40.00	ppm		-0.11
110) Phenanthrene-d10a	8.612	188	1653343	40.00	ppm		-0.09
System Monitoring Compounds							
5) 2-Fluorophenol	3.793	112	2173922	92.43	ppm		-0.08
Spiked Amount 50.000	Range 11 - 58		Recovery = 184.86%#				
8) Phenol-d5	4.584	99	2248173	83.66	ppm		-0.05
Spiked Amount 50.000	Range 10 - 59		Recovery = 167.32%#				
25) Nitrobenzene-d5	5.296	82	1655055	88.23	ppm		-0.08
Spiked Amount 50.000	Range 19 - 61		Recovery = 176.46%#				
51) 2-Fluorobiphenyl	6.767	172	2475658	81.32	ppm		-0.08
Spiked Amount 50.000	Range 21 - 58		Recovery = 162.64%#				
73) 2,4,6-Tribromophenol	7.981	330	531023	91.84	ppm		-0.06
Spiked Amount 50.000	Range 12 - 68		Recovery = 183.68%#				
85) Terphenyl-d14	10.462	244	3472950	97.51	ppm		-0.11
Spiked Amount 50.000	Range 16 - 65		Recovery = 195.02%#				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.156	88	1557838	89.96	ppm		94
3) Pyridine	2.509	79	3008971	91.98	ppm		96
4) N-Nitrosodimethylamine	2.498	74	1879580	96.38	ppm		93
6) Indene	5.050	116	2180547	86.99	ppm		99
7) Cumene	4.183	105	5159323	92.27	ppm		98
9) Phenol	4.595	94	2190104	77.38	ppm		98
10) Aniline	4.574	93	2422693	82.86	ppm		99
11) bis(2-Chloroethyl)ether	4.632	93	1498830	71.31	ppm		97
12) 2-Chlorophenol	4.681	128	1450116	79.89	ppm		99
13) Decane	4.723	57	1204369	69.31	ppm		97
14) 1,3-Dichlorobenzene	4.793	146	1614878	82.22	ppm		99
15) 1,4-Dichlorobenzene	4.852	146	1522385	85.93	ppm		100
16) Benzyl alcohol	4.969	108	875959	63.43	ppm	#	77
17) 1,2-Dichlorobenzene	4.975	146	1495747	89.03	ppm		99
18) Acetophenone	5.178	105	2001635	86.08	ppm		95
19) 2-Methylphenol	5.076	108	1137710	84.10	ppm		98
20) 2,2'-oxybis(1-Chloropr...	5.071	121	332305	78.30	ppm	#	48
21) 3&4-Methylphenol	5.205	108	1201964	87.45	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:46:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	5.189	70	948901	85.16	ppm	96
23) Hexachloroethane	5.247	201	530907	87.78	ppm	97
26) Nitrobenzene	5.312	77	1547788	79.96	ppm	95
27) Quinoline	6.189	129	2549501	88.07	ppm	99
28) Isophorone	5.515	82	3017329	88.79	ppm	99
29) 2-Nitrophenol	5.574	139	795716	96.80	ppm	75
30) 2,4-Dimethylphenol	5.627	107	1338861	97.05	ppm	99
31) Benzoic acid	5.793	105	1214870m	86.31	ppm	
32) bis(2-Chloroethoxy)met...	5.686	93	1625580	76.99	ppm	96
33) 2,4-Dichlorophenol	5.782	162	1121413	96.41	ppm	94
34) 2,6-Dichlorophenol	5.959	162	1005042	98.16	ppm	99
35) 1,3,5-Trichlorobenzene	5.579	180	1299868	85.74	ppm	98
36) 1,2,4-Trichlorobenzene	5.836	180	1165541	81.28	ppm	99
37) 1,2,3-Trichlorobenzene	6.018	180	1034584	82.21	ppm	98
38) Naphthalene	5.895	128	3284044	83.93	ppm	99
39) 4-Chloroaniline	5.954	127	1383736	85.32	ppm	95
40) 2,3-Dichloroaniline	6.697	161	1363377	95.53	ppm	98
41) Caprolactam	6.290	113	496340m	101.27	ppm	
42) Hexachlorobutadiene	6.002	225	738937	94.18	ppm	99
43) 4-Chloro-3-methylphenol	6.376	107	1373547	101.80	ppm	97
44) 2-Methylnaphthalene	6.462	141	2124507	91.64	ppm	98
45) 1-Methylnaphthalene	6.542	141	2253282	88.64	ppm	98
46) Dimethylnaphthalene	6.980	156	2135314	89.46	ppm	98
48) Hexachlorocyclopentadiene	6.595	237	1550987	193.03	ppm	100
49) 2,4,6-Trichlorophenol	6.708	196	755646	85.88	ppm	98
50) 2,4,5-Trichlorophenol	6.750	196	790586	85.05	ppm	100
52) 2-Chloronaphthalene	6.863	162	2039303	77.54	ppm	99
53) Biphenyl	6.847	154	3037774	86.33	ppm	99
54) 2-Nitroaniline	6.959	65	854879	93.23	ppm	99
55) Dimethylphthalate	7.103	163	2724641	88.90	ppm	100
56) Acenaphthylene	7.200	152	3625749	83.29	ppm	99
57) 2,6-Dinitrotoluene	7.157	165	608613	93.76	ppm	99
58) 3-Nitroaniline	7.296	138	703723	88.95	ppm	94
59) Acenaphthene	7.344	153	2331932	89.13	ppm	99
60) 2,4-Dinitrophenol	7.387	184	692280	192.11	ppm	77
61) 4-Nitrophenol	7.467	109	548605	114.69	ppm	83
62) Dibenzofuran	7.489	168	3147655	91.36	ppm	96
63) 2,4-Dinitrotoluene	7.489	165	829194	100.82	ppm	70
64) 2,3,4,6-Tetrachlorophenol	7.601	232	785447	91.69	ppm	94
65) Diethylphthalate	7.686	149	2798228	89.75	ppm	100
66) Fluorene	7.772	166	2637285	90.89	ppm	100
67) 4-Chlorophenyl-phenyle...	7.767	204	1424433	96.12	ppm	94
68) 4-Nitroaniline	7.815	138	588603	80.03	ppm	87
70) 4,6-Dinitro-2-methylph...	7.836	198	462764	123.42	ppm	94
71) n-Nitrosodiphenylamine	7.879	169	1821482	91.59	ppm	98
72) 1,2-Diphenylhydrazine	7.906	77	2763745	75.53	ppm	91
74) 4-Bromophenyl-phenylether	8.189	248	954395	98.12	ppm	91
75) Hexachlorobenzene	8.259	284	1042429	91.67	ppm	98
76) Pentachlorophenol	8.446	266	1466280	173.52	ppm	99
77) Phenanthrene	8.639	178	3592514	89.53	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:46:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

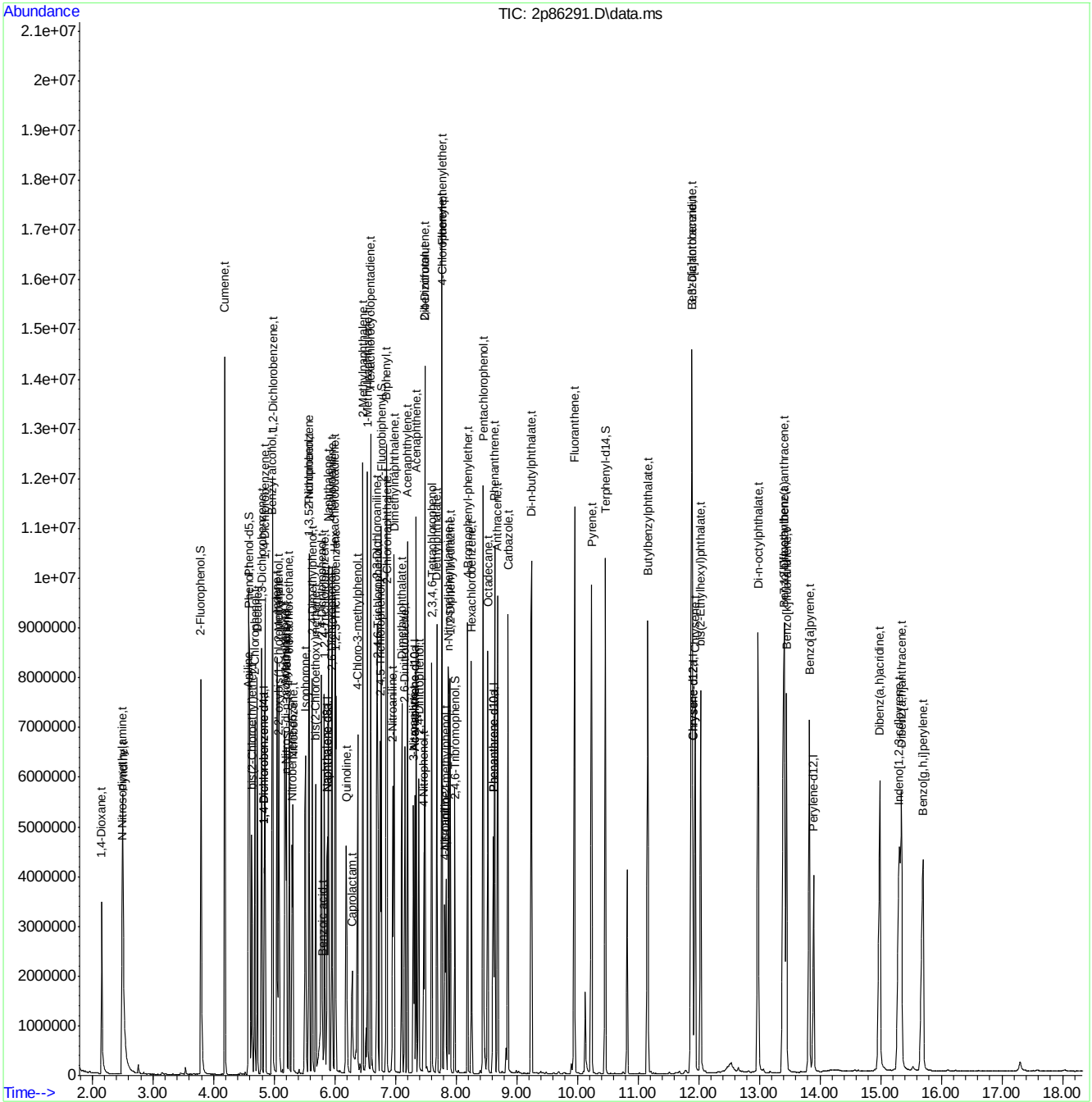
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.687	178	3588821	89.20	ppm	99
79) Carbazole	8.858	167	3772687	97.94	ppm	99
80) Di-n-butylphthalate	9.243	149	5772915	104.39	ppm	99
81) Fluoranthene	9.954	202	5419734	98.35	ppm	99
82) Octadecane	8.521	43	865823	75.28	ppm	97
84) Pyrene	10.238	202	5018579	97.82	ppm	99
86) Butylbenzylphthalate	11.163	149	2825606	111.05	ppm	97
87) Benzo[a]anthracene	11.885	228	5153790	98.99	ppm	100
88) 3,3'-Dichlorobenzidine	11.891	252	1944526	97.02	ppm	97
89) Chrysene	11.944	228	3540702	86.69	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.035	149	2944082	110.60	ppm	98
92) Di-n-octylphthalate	12.982	149	6558713	101.54	ppm	100
93) Benzo[b]fluoranthene	13.415	252	4740048	82.33	ppm	99
94) Benzo[k]fluoranthene	13.452	252	3273148	75.56	ppm	99
95) Benzo[a]pyrene	13.827	252	4188555	101.11	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.308	276	4956741	99.08	ppm	92
97) Dibenz(a,h)acridine	14.987	279	4202142	84.18	ppm	100
98) Dibenz[a,h]anthracene	15.346	278	3799311	85.95	ppm	100
99) 7,12-Dimethylbenz(a)an...	13.404	256	2206963	100.06	ppm	99
100) Benzo[g,h,i]perylene	15.699	276	3831984	83.81	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:46:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration



Manual Integration Approval Summary

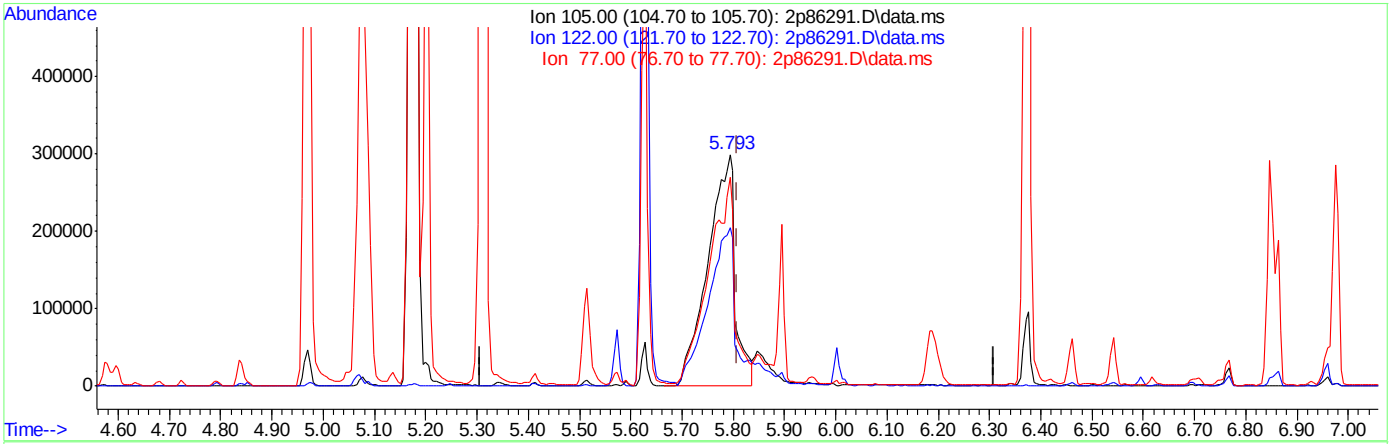
Sample Number:	E2P3816-IC3816	**Method:**	SW846 8270D
Lab FileID:	2P86291.D	**Analyst approved:**	04/08/19 13:30 Kristi Schollenberger
Injection Time:	04/05/19 07:17	**Supervisor approved:**	04/09/19 16:32 Nina Pandya

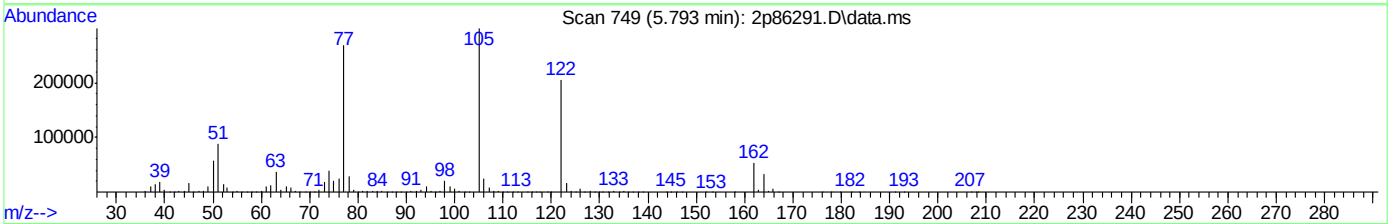
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.79	Split peak
Caprolactam	105-60-2		6.29	Split peak

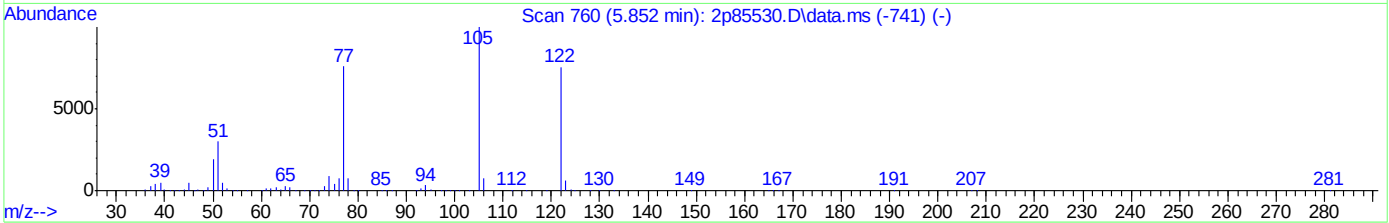
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:44:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86291.D\data.ms

(31) Benzoic acid (t)

5.793min (-0.015) 78.67ppm

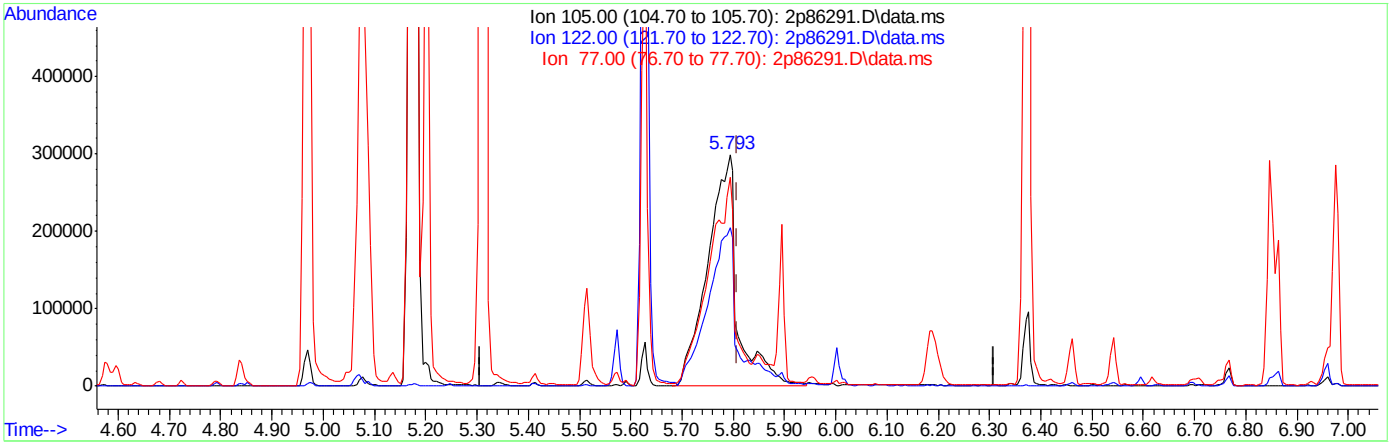
response 1107347

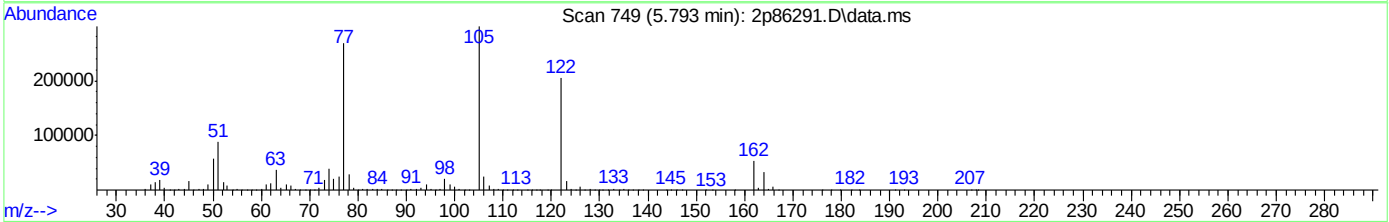
Ion	Exp%	Act%
105.00	100	100
122.00	70.50	65.66
77.00	78.20	89.39
0.00	0.00	0.00

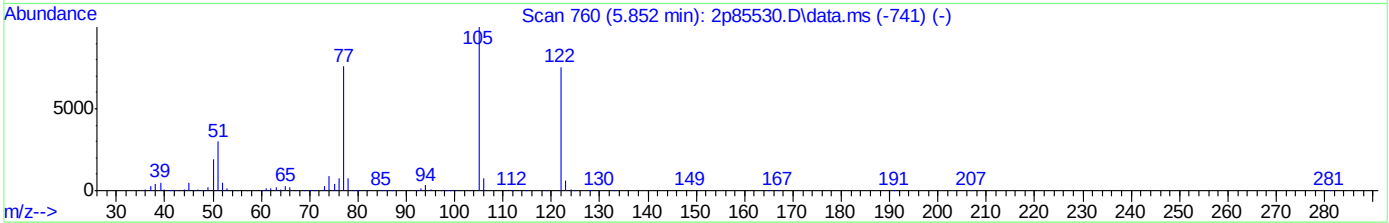
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:44:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86291.D\data.ms

(31) Benzoic acid (t)

5.793min (-0.015) 86.31ppm m

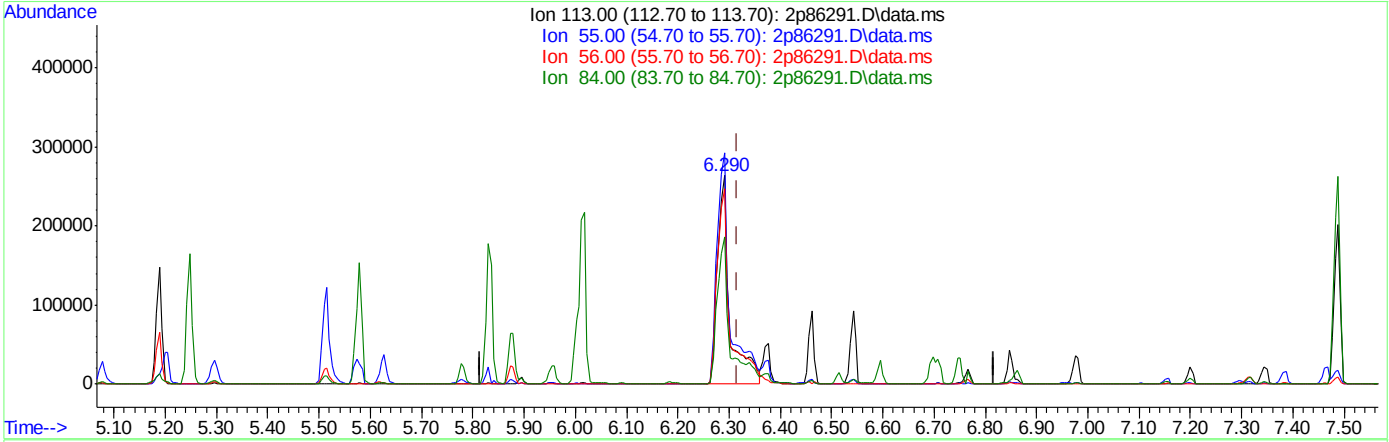
response 1214870

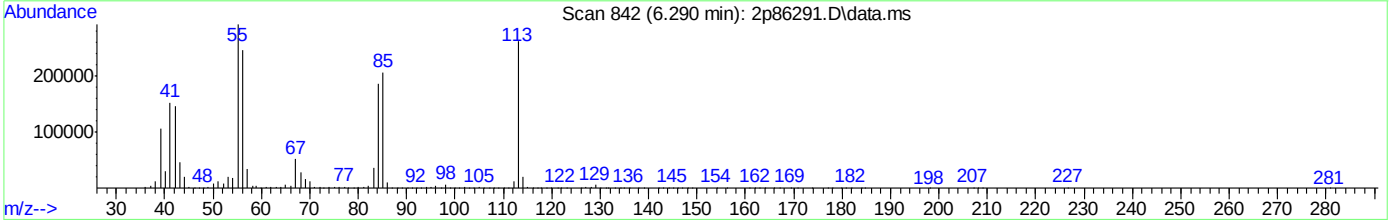
Ion	Exp%	Act%
105.00	100	100
122.00	70.50	68.34
77.00	78.20	89.95
0.00	0.00	0.00

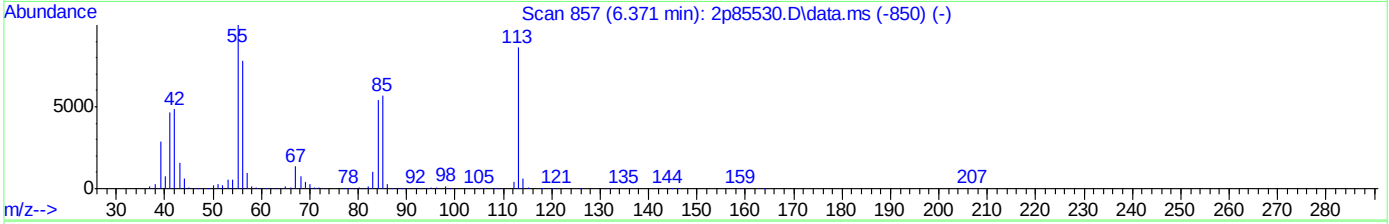
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:44:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86291.D\data.ms

(41) Caprolactam (t)

6.290min (-0.026) 91.21ppm

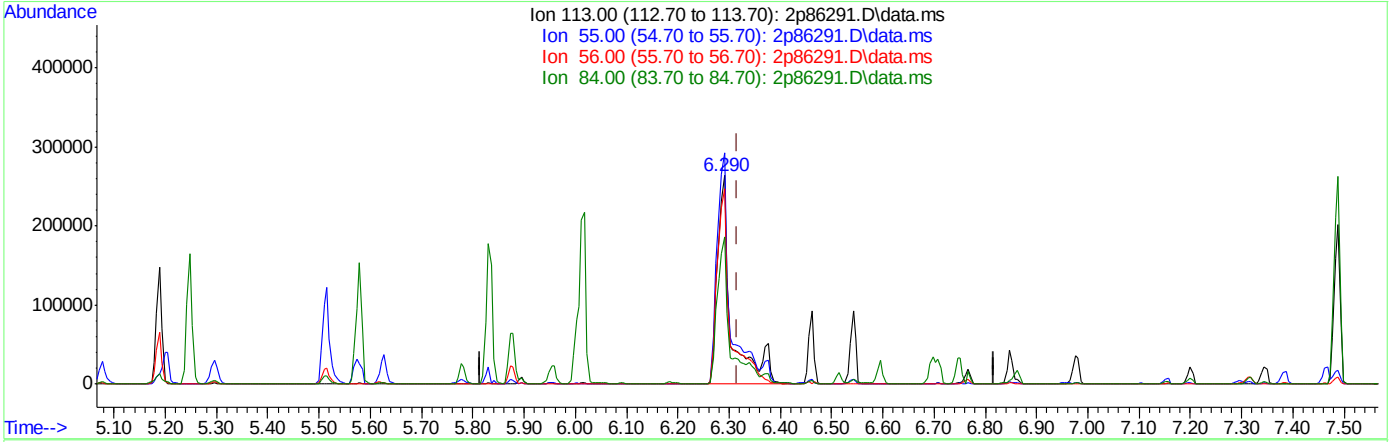
response 447031

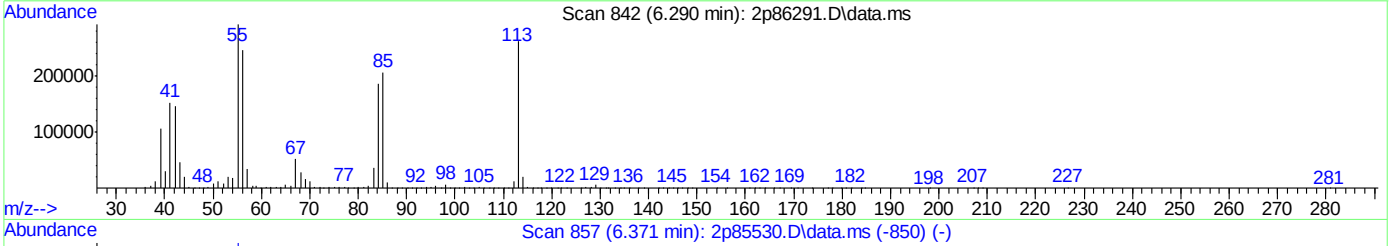
Ion	Exp%	Act%
113.00	100	100
55.00	118.90	111.20
56.00	93.00	94.45
84.00	67.20	70.90

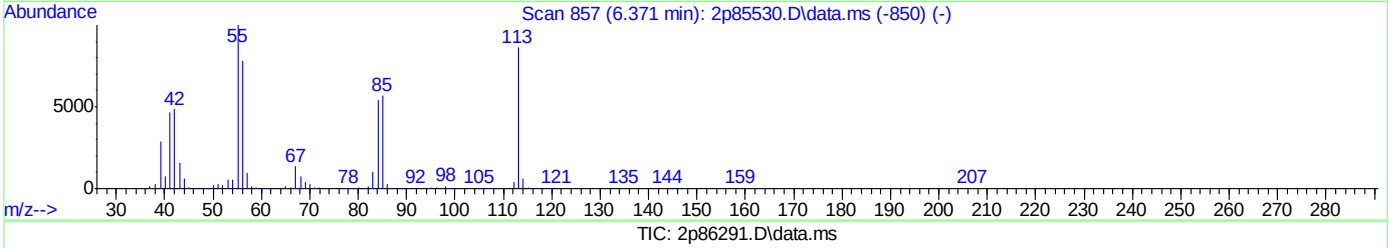
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86291.D
Acq On : 5 Apr 2019 7:17 am
Operator : chriss2
Sample : ic3816-80
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 13:44:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86291.D\data.ms

(41) Caprolactam (t)

6.290min (-0.026) 101.27ppm m

response 496340

Ion	Exp%	Act%
113.00	100	100
55.00	118.90	111.07
56.00	93.00	93.74
84.00	67.20	70.56

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/09/19 16:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:48:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.836	152	580490	40.00	ppm		-0.07
24) Naphthalene-d8	5.873	136	1932000	40.00	ppm		-0.08
47) Acenaphthene-d10	7.312	164	1060482	40.00	ppm		-0.08
69) Phenanthrene-d10	8.606	188	1882648	40.00	ppm		-0.09
83) Chrysene-d12	11.896	240	1621659	40.00	ppm		-0.12
91) Perylene-d12	13.896	264	1727853	40.00	ppm		-0.12
101) 1,4-Dichlorobenzene-d4a	4.836	152	580490	40.00	ppm		-0.07
103) Naphthalene-d8a	5.873	136	1932000	40.00	ppm		-0.08
105) Acenaphthene-d10a	7.312	164	1060482	40.00	ppm		-0.08
108) Chrysene-d12a	11.896	240	1621659	40.00	ppm		-0.12
110) Phenanthrene-d10a	8.606	188	1882648	40.00	ppm		-0.09
System Monitoring Compounds							
5) 2-Fluorophenol	3.787	112	1646263	59.88	ppm		-0.09
Spiked Amount 50.000	Range 11 - 58		Recovery = 119.76%#				
8) Phenol-d5	4.579	99	1719692	54.75	ppm		-0.05
Spiked Amount 50.000	Range 10 - 59		Recovery = 109.50%#				
25) Nitrobenzene-d5	5.290	82	1254209	58.37	ppm		-0.09
Spiked Amount 50.000	Range 19 - 61		Recovery = 116.74%#				
51) 2-Fluorobiphenyl	6.767	172	1800601	51.92	ppm		-0.08
Spiked Amount 50.000	Range 21 - 58		Recovery = 103.84%#				
73) 2,4,6-Tribromophenol	7.975	330	340133	51.66	ppm		-0.07
Spiked Amount 50.000	Range 12 - 68		Recovery = 103.32%#				
85) Terphenyl-d14	10.457	244	2262504	60.00	ppm		-0.12
Spiked Amount 50.000	Range 16 - 65		Recovery = 120.00%#				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.151	88	1095779	58.59	ppm		94
3) Pyridine	2.498	79	2242098	58.63	ppm		98
4) N-Nitrosodimethylamine	2.488	74	1379891	60.53	ppm		91
6) Indene	5.044	116	1619371	55.27	ppm		100
7) Cumene	4.183	105	3992846	61.09	ppm		99
9) Phenol	4.590	94	1710565	51.70	ppm		99
10) Aniline	4.574	93	1828435	53.50	ppm		98
11) bis(2-Chloroethyl)ether	4.627	93	1164004	47.37	ppm		96
12) 2-Chlorophenol	4.675	128	1087108	51.24	ppm		96
13) Decane	4.718	57	945395	46.54	ppm		98
14) 1,3-Dichlorobenzene	4.793	146	1186877	51.69	ppm		98
15) 1,4-Dichlorobenzene	4.852	146	1113577	53.77	ppm		100
16) Benzyl alcohol	4.964	108	654314	40.53	ppm		88
17) 1,2-Dichlorobenzene	4.975	146	1069218	54.44	ppm		98
18) Acetophenone	5.173	105	1496591	55.06	ppm		97
19) 2-Methylphenol	5.071	108	854265	54.02	ppm		98
20) 2,2'-oxybis(1-Chloropr...	5.066	121	247443	49.88	ppm	#	66
21) 3&4-Methylphenol	5.199	108	899193	55.97	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:48:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	5.183	70	744312	57.15	ppm	96
23) Hexachloroethane	5.247	201	377121	53.34	ppm	97
26) Nitrobenzene	5.306	77	1197698	54.02	ppm	91
27) Quinoline	6.178	129	1848924	55.76	ppm	99
28) Isophorone	5.510	82	2254065	57.91	ppm	98
29) 2-Nitrophenol	5.568	139	575650	61.14	ppm	87
30) 2,4-Dimethylphenol	5.622	107	990600	62.69	ppm	94
31) Benzoic acid	5.772	105	889014m	55.14	ppm	
32) bis(2-Chloroethoxy)met...	5.686	93	1222791	50.56	ppm	97
33) 2,4-Dichlorophenol	5.777	162	784313	58.87	ppm	98
34) 2,6-Dichlorophenol	5.954	162	705086	60.12	ppm	98
35) 1,3,5-Trichlorobenzene	5.579	180	934288	53.80	ppm	98
36) 1,2,4-Trichlorobenzene	5.830	180	839433	51.11	ppm	98
37) 1,2,3-Trichlorobenzene	6.012	180	739916	51.33	ppm	98
38) Naphthalene	5.895	128	2411838	53.81	ppm	99
39) 4-Chloroaniline	5.948	127	996622	53.65	ppm	99
40) 2,3-Dichloroaniline	6.692	161	976260	59.72	ppm	94
41) Caprolactam	6.274	113	322148	57.38	ppm	96
42) Hexachlorobutadiene	6.002	225	506967	56.41	ppm	99
43) 4-Chloro-3-methylphenol	6.371	107	1030541	66.68	ppm	77
44) 2-Methylnaphthalene	6.456	141	1571495	59.18	ppm	97
45) 1-Methylnaphthalene	6.542	141	1680564	57.72	ppm	99
46) Dimethylnaphthalene	6.975	156	1551029	56.73	ppm	99
48) Hexachlorocyclopentadiene	6.595	237	1058621	115.65	ppm	99
49) 2,4,6-Trichlorophenol	6.708	196	535875	53.46	ppm	96
50) 2,4,5-Trichlorophenol	6.745	196	551416	52.07	ppm	100
52) 2-Chloronaphthalene	6.857	162	1463763	48.85	ppm	97
53) Biphenyl	6.847	154	2166948	54.06	ppm	99
54) 2-Nitroaniline	6.954	65	643196	61.57	ppm	96
55) Dimethylphthalate	7.103	163	1963492	56.23	ppm	99
56) Acenaphthylene	7.200	152	2624449	52.92	ppm	99
57) 2,6-Dinitrotoluene	7.152	165	442110	59.78	ppm	95
58) 3-Nitroaniline	7.291	138	502367	55.74	ppm	88
59) Acenaphthene	7.344	153	1649268	55.33	ppm	100
60) 2,4-Dinitrophenol	7.382	184	467492	117.31	ppm	90
61) 4-Nitrophenol	7.462	109	399376	73.29	ppm	81
62) Dibenzofuran	7.483	168	2257527	57.51	ppm	99
63) 2,4-Dinitrotoluene	7.483	165	600245	64.06	ppm	76
64) 2,3,4,6-Tetrachlorophenol	7.596	232	524909	53.79	ppm	98
65) Diethylphthalate	7.681	149	2078183	58.51	ppm	98
66) Fluorene	7.767	166	1968379	59.54	ppm	99
67) 4-Chlorophenyl-phenyle...	7.767	204	996830	59.04	ppm	93
68) 4-Nitroaniline	7.804	138	425251	50.75	ppm	86
70) 4,6-Dinitro-2-methylph...	7.826	198	316543	74.14	ppm	82
71) n-Nitrosodiphenylamine	7.874	169	1300320	57.42	ppm	99
72) 1,2-Diphenylhydrazine	7.900	77	2179274	52.30	ppm	99
74) 4-Bromophenyl-phenylether	8.189	248	640386	57.82	ppm	95
75) Hexachlorobenzene	8.253	284	696612	53.80	ppm	93
76) Pentachlorophenol	8.446	266	962864	97.55	ppm	98
77) Phenanthrene	8.633	178	2529408	55.36	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:48:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

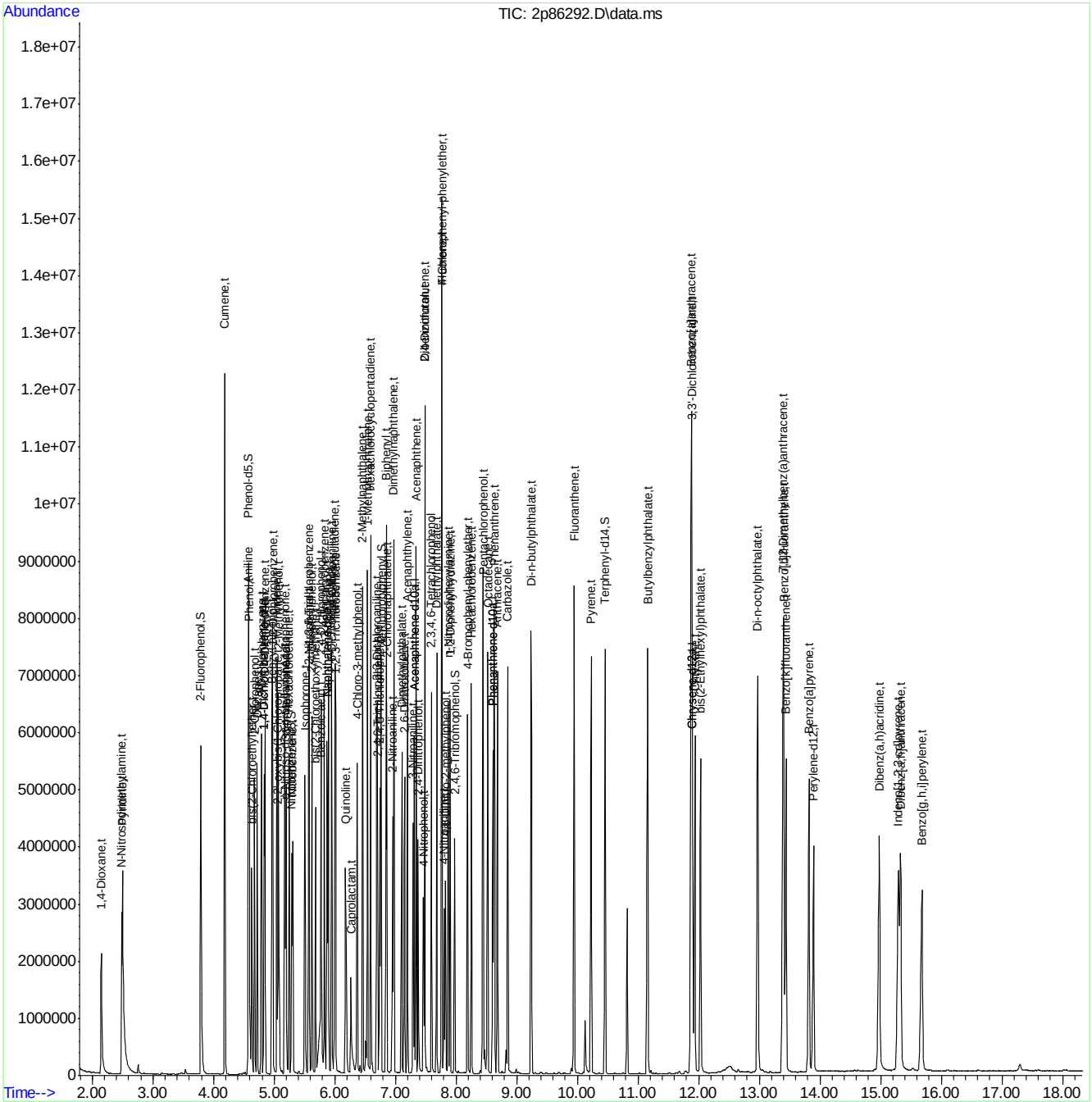
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.687	178	2525644	55.13	ppm	99
79) Carbazole	8.852	167	2688359	61.29	ppm	99
80) Di-n-butylphthalate	9.238	149	3956279	62.83	ppm	99
81) Fluoranthene	9.949	202	3563439	56.79	ppm	99
82) Octadecane	8.521	43	686328	52.41	ppm	97
84) Pyrene	10.232	202	3386354	62.34	ppm	99
86) Butylbenzylphthalate	11.158	149	2011350	74.66	ppm	96
87) Benzo[a]anthracene	11.880	228	3389390	61.49	ppm	99
88) 3,3'-Dichlorobenzidine	11.885	252	1284601	56.14	ppm	98
89) Chrysene	11.939	228	2332142	53.93	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.030	149	2021836	71.74	ppm	98
92) Di-n-octylphthalate	12.971	149	4701040	67.09	ppm	99
93) Benzo[b]fluoranthene	13.404	252	3252222	53.57	ppm	99
94) Benzo[k]fluoranthene	13.442	252	2338417	52.05	ppm	99
95) Benzo[a]pyrene	13.821	252	2633686	61.31	ppm	100
96) Indeno[1,2,3-cd]pyrene	15.292	276	3176278	59.62	ppm	90
97) Dibenz(a,h)acridine	14.982	279	2602642	49.24	ppm	100
98) Dibenz[a,h]anthracene	15.330	278	2433882	50.63	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.399	256	1495682	65.39	ppm	98
100) Benzo[g,h,i]perylene	15.683	276	2477746	50.37	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:48:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration



Manual Integration Approval Summary

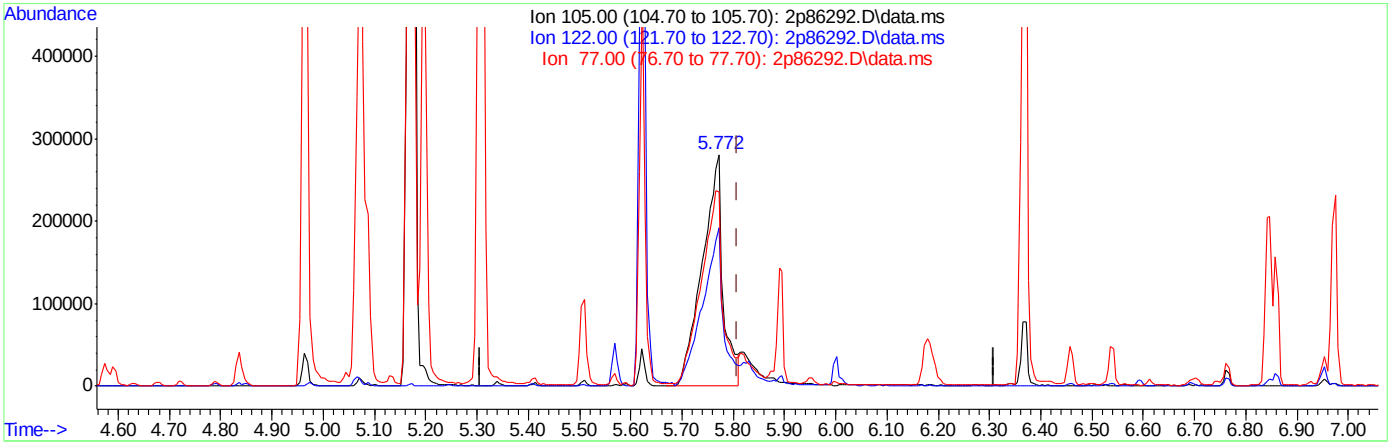
Sample Number:	E2P3816-ICC3816	**Method:**	SW846 8270D
Lab FileID:	2P86292.D	**Analyst approved:**	04/08/19 13:30 Kristi Schollenberger
Injection Time:	04/05/19 07:40	**Supervisor approved:**	04/09/19 16:32 Nina Pandya

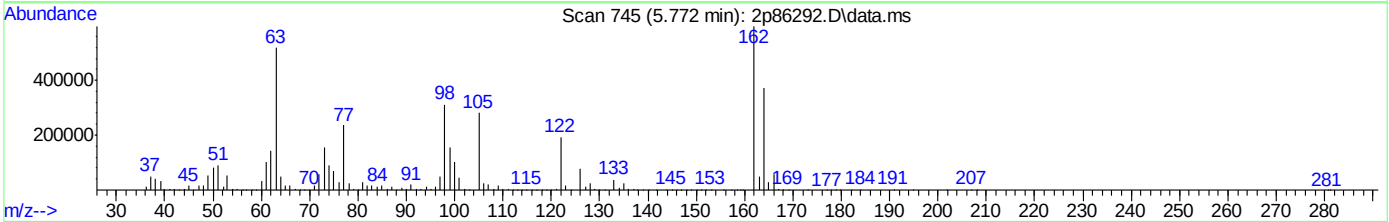
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.77	Split peak

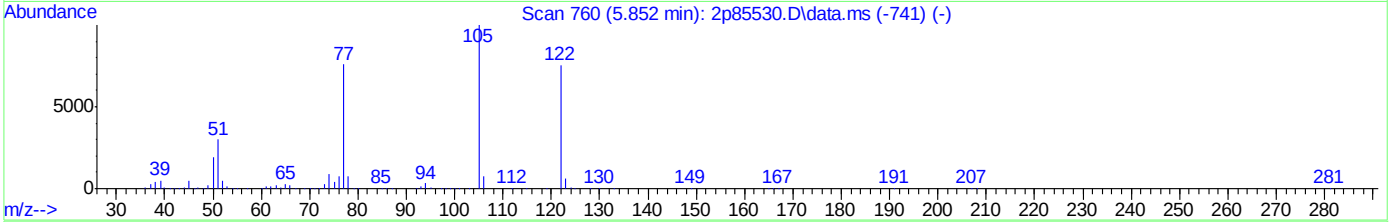
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:46:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86292.D\data.ms

(31) Benzoic acid (t)

5.772min (-0.037) 48.90ppm

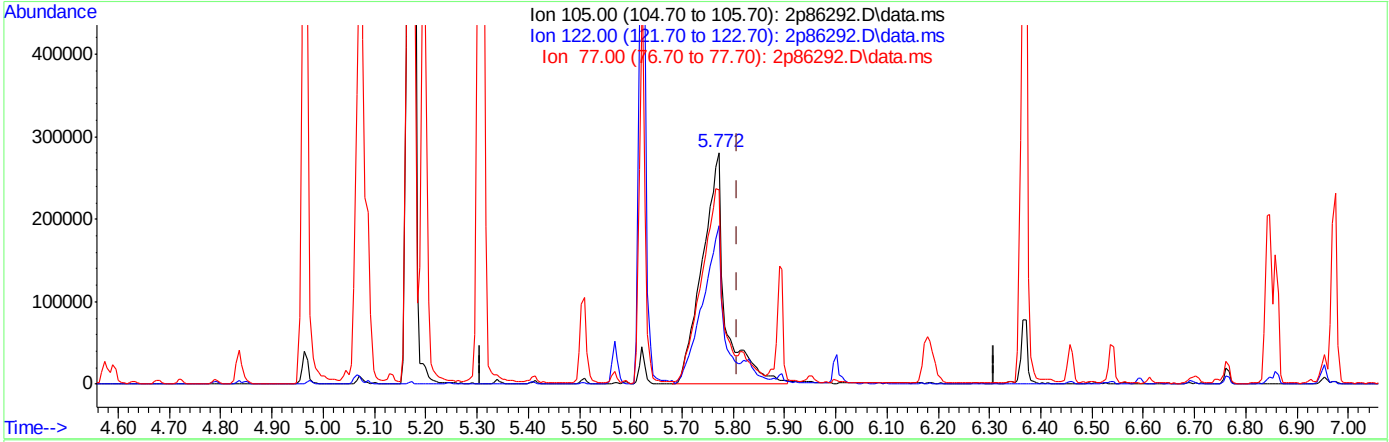
response 788389

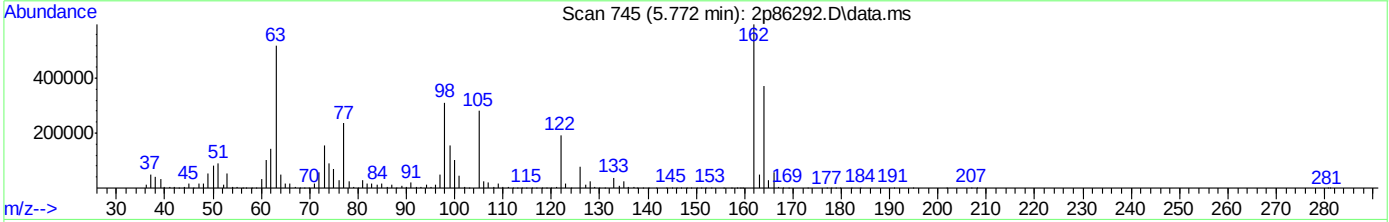
Ion	Exp%	Act%
105.00	100	100
122.00	70.50	68.11
77.00	78.20	82.90
0.00	0.00	0.00

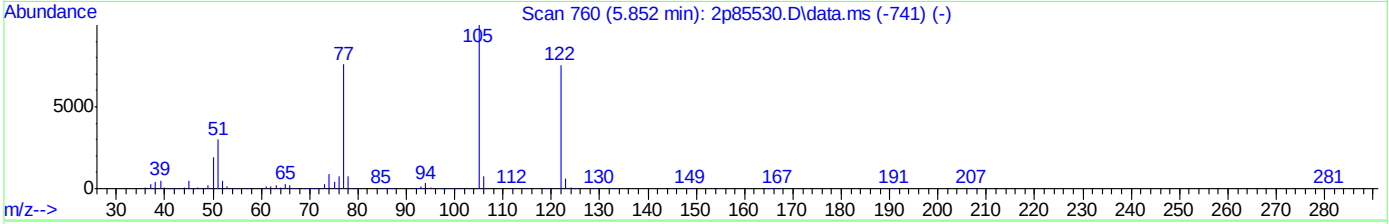
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86292.D
Acq On : 5 Apr 2019 7:40 am
Operator : chriss2
Sample : icc3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 13:46:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration







TIC: 2p86292.D\data.ms

(31) Benzoic acid (t)

5.772min (-0.037) 55.14ppm m

response 889014

Ion	Exp%	Act%
105.00	100	100
122.00	70.50	68.57
77.00	78.20	83.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86293.D
Acq On : 5 Apr 2019 8:03 am
Operator : chriss2
Sample : ic3816-25
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 13:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.835	152	738121	40.00	ppm		-0.07
24) Naphthalene-d8	5.873	136	2410309	40.00	ppm		-0.08
47) Acenaphthene-d10	7.312	164	1304645	40.00	ppm		-0.08
69) Phenanthrene-d10	8.606	188	2273787	40.00	ppm		-0.09
83) Chrysene-d12	11.896	240	2151973	40.00	ppm		-0.12
91) Perylene-d12	13.891	264	2241151	40.00	ppm		-0.13
101) 1,4-Dichlorobenzene-d4a	4.835	152	738121	40.00	ppm		-0.07
103) Naphthalene-d8a	5.873	136	2410309	40.00	ppm		-0.08
105) Acenaphthene-d10a	7.312	164	1304681	40.00	ppm		-0.08
108) Chrysene-d12a	11.896	240	2151973	40.00	ppm		-0.12
110) Phenanthrene-d10a	8.606	188	2273787	40.00	ppm		-0.09
System Monitoring Compounds							
5) 2-Fluorophenol	3.787	112	949087	27.15	ppm		-0.09
Spiked Amount 50.000	Range 11 - 58		Recovery = 54.30%				
8) Phenol-d5	4.579	99	1082260	27.10	ppm		-0.05
Spiked Amount 50.000	Range 10 - 59		Recovery = 54.20%				
25) Nitrobenzene-d5	5.290	82	791636	29.53	ppm		-0.09
Spiked Amount 50.000	Range 19 - 61		Recovery = 59.06%				
51) 2-Fluorobiphenyl	6.761	172	1089932	25.54	ppm		-0.08
Spiked Amount 50.000	Range 21 - 58		Recovery = 51.08%				
73) 2,4,6-Tribromophenol	7.970	330	175924	22.12	ppm		-0.08
Spiked Amount 50.000	Range 12 - 68		Recovery = 44.24%				
85) Terphenyl-d14	10.451	244	1338499	26.75	ppm		-0.12
Spiked Amount 50.000	Range 16 - 65		Recovery = 53.50%				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.156	88	595038	27.56	ppm		93
3) Pyridine	2.503	79	1346305	27.69	ppm		97
4) N-Nitrosodimethylamine	2.487	74	817182	28.19	ppm		91
6) Indene	5.044	116	1015310	27.25	ppm		99
7) Cumene	4.183	105	2424320	29.17	ppm		97
9) Phenol	4.589	94	1106069	26.29	ppm		98
10) Aniline	4.573	93	1161309	26.72	ppm		96
11) bis(2-Chloroethyl)ether	4.627	93	757061	24.23	ppm		94
12) 2-Chlorophenol	4.675	128	699181	25.92	ppm		95
13) Decane	4.718	57	642182	24.86	ppm		98
14) 1,3-Dichlorobenzene	4.787	146	746813	25.58	ppm		97
15) 1,4-Dichlorobenzene	4.846	146	675306	25.64	ppm		97
16) Benzyl alcohol	4.958	108	407461	19.85	ppm		96
17) 1,2-Dichlorobenzene	4.974	146	646679	25.90	ppm		99
18) Acetophenone	5.167	105	938124	27.14	ppm		100
19) 2-Methylphenol	5.065	108	557840	27.74	ppm		99
20) 2,2'-oxybis(1-Chloropr...	5.065	121	156304	24.78	ppm	#	33
21) 3&4-Methylphenol	5.194	108	569482	27.88	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86293.D
Acq On : 5 Apr 2019 8:03 am
Operator : chriss2
Sample : ic3816-25
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 13:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.178	70	491280	29.66	ppm		96
23) Hexachloroethane	5.247	201	224909	25.02	ppm		94
26) Nitrobenzene	5.306	77	779543	28.18	ppm		93
27) Quinoline	6.167	129	1089145	26.33	ppm		98
28) Isophorone	5.499	82	1415755	29.15	ppm		93
29) 2-Nitrophenol	5.568	139	337350	28.72	ppm		78
30) 2,4-Dimethylphenol	5.616	107	599303	30.40	ppm		92
31) Benzoic acid	5.745	105	494886	24.60	ppm		92
32) bis(2-Chloroethoxy)met...	5.681	93	770903	25.55	ppm		97
33) 2,4-Dichlorophenol	5.771	162	462025	27.80	ppm		95
34) 2,6-Dichlorophenol	5.953	162	414429	28.33	ppm		98
35) 1,3,5-Trichlorobenzene	5.574	180	550678	25.42	ppm		97
36) 1,2,4-Trichlorobenzene	5.830	180	500261	24.41	ppm		98
37) 1,2,3-Trichlorobenzene	6.012	180	442895	24.63	ppm		98
38) Naphthalene	5.889	128	1449673	25.93	ppm		100
39) 4-Chloroaniline	5.943	127	612492	26.43	ppm		96
40) 2,3-Dichloroaniline	6.691	161	574032	28.15	ppm		94
41) Caprolactam	6.247	113	190840	27.25	ppm		94
42) Hexachlorobutadiene	6.001	225	289762	25.84	ppm		98
43) 4-Chloro-3-methylphenol	6.360	107	622089	32.27	ppm		87
44) 2-Methylnaphthalene	6.456	141	943890	28.49	ppm		96
45) 1-Methylnaphthalene	6.536	141	1004941	27.67	ppm		97
46) Dimethylnaphthalene	6.970	156	905341	26.54	ppm		97
48) Hexachlorocyclopentadiene	6.595	237	567600	50.40	ppm		98
49) 2,4,6-Trichlorophenol	6.702	196	317420	25.74	ppm		98
50) 2,4,5-Trichlorophenol	6.740	196	321838	24.70	ppm		97
52) 2-Chloronaphthalene	6.857	162	899179	24.39	ppm		98
53) Biphenyl	6.841	154	1275447	25.86	ppm		98
54) 2-Nitroaniline	6.948	65	409886	31.89	ppm		91
55) Dimethylphthalate	7.098	163	1143097	26.61	ppm		99
56) Acenaphthylene	7.194	152	1571900	25.76	ppm		100
57) 2,6-Dinitrotoluene	7.146	165	255378	28.07	ppm		86
58) 3-Nitroaniline	7.285	138	299973	27.05	ppm		90
59) Acenaphthene	7.339	153	931977	25.42	ppm		99
60) 2,4-Dinitrophenol	7.376	184	242702	53.80	ppm		84
61) 4-Nitrophenol	7.451	109	226199	33.74	ppm	#	85
62) Dibenzofuran	7.483	168	1301051	26.94	ppm		99
63) 2,4-Dinitrotoluene	7.478	165	349484	30.32	ppm		86
64) 2,3,4,6-Tetrachlorophenol	7.595	232	277576	23.12	ppm		98
65) Diethylphthalate	7.676	149	1236583	28.30	ppm		96
66) Fluorene	7.761	166	1158562	28.49	ppm		100
67) 4-Chlorophenyl-phenyle...	7.761	204	548557	26.41	ppm		93
68) 4-Nitroaniline	7.793	138	253123	24.56	ppm		82
70) 4,6-Dinitro-2-methylph...	7.820	198	175892	34.11	ppm		79
71) n-Nitrosodiphenylamine	7.868	169	749472	27.40	ppm		99
72) 1,2-Diphenylhydrazine	7.895	77	1453189	28.88	ppm		92
74) 4-Bromophenyl-phenylether	8.184	248	331136	24.75	ppm		85
75) Hexachlorobenzene	8.248	284	375578	24.01	ppm		79
76) Pentachlorophenol	8.440	266	485881	42.19	ppm		99
77) Phenanthrene	8.628	178	1410866	25.57	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86293.D
Acq On : 5 Apr 2019 8:03 am
Operator : chriss2
Sample : ic3816-25
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 13:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration

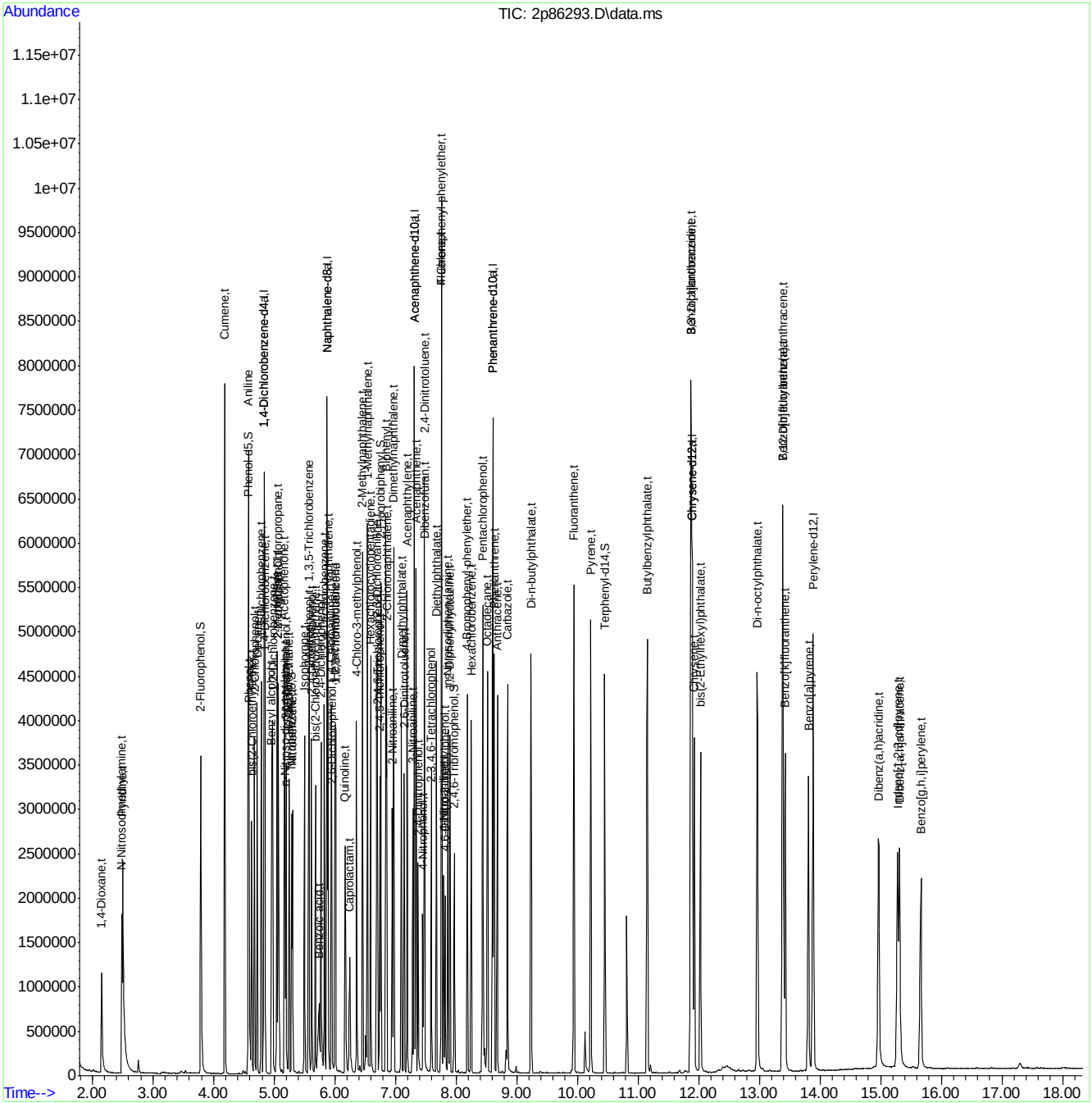
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	8.681	178	1439703	26.02	ppm	99
79)	Carbazole	8.847	167	1527637	28.84	ppm	98
80)	Di-n-butylphthalate	9.237	149	2435746	32.03	ppm	99
81)	Fluoranthene	9.943	202	2187528	28.86	ppm	98
82)	Octadecane	8.515	43	463746	29.32	ppm	98
84)	Pyrene	10.221	202	2112276	29.30	ppm	98
86)	Butylbenzylphthalate	11.152	149	1219903	34.12	ppm	91
87)	Benzo[a]anthracene	11.874	228	2032004	27.78	ppm	100
88)	3,3'-Dichlorobenzidine	11.874	252	731788	24.10	ppm	99
89)	Chrysene	11.928	228	1430581	24.93	ppm	100
90)	bis(2-Ethylhexyl)phtha...	12.029	149	1284277	34.34	ppm	97
92)	Di-n-octylphthalate	12.965	149	2900710	31.60	ppm	98
93)	Benzo[b]fluoranthene	13.388	252	1994672	25.42	ppm	97
94)	Benzo[k]fluoranthene	13.425	252	1479400	25.39	ppm	97
95)	Benzo[a]pyrene	13.810	252	1570208	28.18	ppm	98
96)	Indeno[1,2,3-cd]pyrene	15.281	276	1876048	27.43	ppm	89
97)	Dibenz(a,h)acridine	14.971	279	1503750	23.21	ppm	98
98)	Dibenz[a,h]anthracene	15.313	278	1441561	22.93	ppm	96
99)	7,12-Dimethylbenz(a)an...	13.388	256	838172	28.25	ppm	96
100)	Benzo[g,h,i]perylene	15.666	276	1488608	23.30	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86293.D
Acq On : 5 Apr 2019 8:03 am
Operator : chriss2
Sample : ic3816-25
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 13:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 04 03:01:46 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86294.D
Acq On : 5 Apr 2019 8:26 am
Operator : chriss2
Sample : ic3816-10
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 13:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.835	152	922093	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	2868767	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1521444	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	2636905	40.00	ppm		0.00
83) Chrysene-d12	11.890	240	2482079	40.00	ppm		0.00
91) Perylene-d12	13.891	264	2518804	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.835	152	922093	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	2868767	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1521444	40.00	ppm		0.00
108) Chrysene-d12a	11.890	240	2482079	40.00	ppm		0.00
110) Phenanthrene-d10a	8.606	188	2636905	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.787	112	434331	9.94	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 19.88%				
8) Phenol-d5	4.573	99	528943	10.60	ppm		0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 21.20%				
25) Nitrobenzene-d5	5.285	82	403761	12.66	ppm		0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 25.32%				
51) 2-Fluorobiphenyl	6.761	172	522086	10.49	ppm		0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 20.98%#				
73) 2,4,6-Tribromophenol	7.970	330	69768	7.57	ppm		0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 15.14%				
85) Terphenyl-d14	10.452	244	579968	10.05	ppm		0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 20.10%				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.156	88	243613	10.07	ppm		98
3) Pyridine	2.509	79	595836	9.81	ppm		96
4) N-Nitrosodimethylamine	2.493	74	359456	9.93	ppm		94
6) Indene	5.044	116	485481	10.43	ppm		96
7) Cumene	4.183	105	1203449	11.59	ppm		95
9) Phenol	4.584	94	561488	10.68	ppm		95
10) Aniline	4.573	93	614183	11.31	ppm		92
11) bis(2-Chloroethyl)ether	4.627	93	392064	10.05	ppm		95
12) 2-Chlorophenol	4.675	128	352568	10.46	ppm		96
13) Decane	4.718	57	335973	10.41	ppm		97
14) 1,3-Dichlorobenzene	4.787	146	372289	10.21	ppm		97
15) 1,4-Dichlorobenzene	4.846	146	324373	9.86	ppm		97
16) Benzyl alcohol	4.958	108	184967	7.21	ppm		95
17) 1,2-Dichlorobenzene	4.975	146	307142	9.85	ppm		99
18) Acetophenone	5.167	105	460192	10.66	ppm		98
19) 2-Methylphenol	5.065	108	279124	11.11	ppm		97
20) 2,2'-oxybis(1-Chloropr...	5.065	121	74904	9.51	ppm	#	29
21) 3&4-Methylphenol	5.189	108	278462	10.91	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86294.D
Acq On : 5 Apr 2019 8:26 am
Operator : chriss2
Sample : ic3816-10
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 13:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.172	70	255293	12.34	ppm		95
23) Hexachloroethane	5.247	201	108524	9.66	ppm		92
26) Nitrobenzene	5.301	77	402806	12.24	ppm		88
27) Quinoline	6.162	129	502198	10.20	ppm		97
28) Isophorone	5.499	82	690165	11.94	ppm		96
29) 2-Nitrophenol	5.563	139	156794	11.21	ppm		80
30) 2,4-Dimethylphenol	5.616	107	272319	11.61	ppm		93
31) Benzoic acid	5.718	105	183930	7.68	ppm		91
32) bis(2-Chloroethoxy)met...	5.681	93	389321	10.84	ppm		96
33) 2,4-Dichlorophenol	5.771	162	216115	10.92	ppm		97
34) 2,6-Dichlorophenol	5.948	162	188496	10.82	ppm		96
35) 1,3,5-Trichlorobenzene	5.574	180	254876	9.88	ppm		96
36) 1,2,4-Trichlorobenzene	5.830	180	240668	9.87	ppm		97
37) 1,2,3-Trichlorobenzene	6.007	180	206549	9.65	ppm		96
38) Naphthalene	5.889	128	678414	10.19	ppm		99
39) 4-Chloroaniline	5.937	127	291367	10.56	ppm		91
40) 2,3-Dichloroaniline	6.691	161	268375	11.06	ppm		93
41) Caprolactam	6.221	113	83374	10.00	ppm		91
42) Hexachlorobutadiene	5.996	225	131270	9.84	ppm		97
43) 4-Chloro-3-methylphenol	6.354	107	285257	12.43	ppm	#	64
44) 2-Methylnaphthalene	6.456	141	437586	11.10	ppm		96
45) 1-Methylnaphthalene	6.536	141	485571	11.23	ppm		96
46) Dimethylnaphthalene	6.970	156	432220	10.65	ppm		95
48) Hexachlorocyclopentadiene	6.590	237	218142	16.61	ppm		98
49) 2,4,6-Trichlorophenol	6.697	196	144182	10.03	ppm		99
50) 2,4,5-Trichlorophenol	6.734	196	150499	9.91	ppm		97
52) 2-Chloronaphthalene	6.852	162	432784	10.07	ppm		92
53) Biphenyl	6.841	154	602785	10.48	ppm		98
54) 2-Nitroaniline	6.943	65	201453	13.44	ppm		83
55) Dimethylphthalate	7.093	163	528442	10.55	ppm		99
56) Acenaphthylene	7.194	152	744261	10.46	ppm		99
57) 2,6-Dinitrotoluene	7.141	165	118536	11.17	ppm		78
58) 3-Nitroaniline	7.280	138	139307	10.77	ppm		85
59) Acenaphthene	7.339	153	418853	9.79	ppm		97
60) 2,4-Dinitrophenol	7.371	184	86023	21.32	ppm		73
61) 4-Nitrophenol	7.451	109	98291	12.57	ppm	#	83
62) Dibenzofuran	7.478	168	584695	10.38	ppm		93
63) 2,4-Dinitrotoluene	7.472	165	154349	11.48	ppm		97
64) 2,3,4,6-Tetrachlorophenol	7.590	232	117767	8.41	ppm		89
65) Diethylphthalate	7.670	149	559522	10.98	ppm		95
66) Fluorene	7.761	166	516090	10.88	ppm		99
67) 4-Chlorophenyl-phenyle...	7.761	204	237676	9.81	ppm		90
68) 4-Nitroaniline	7.788	138	120201	10.00	ppm		86
70) 4,6-Dinitro-2-methylph...	7.815	198	76388	12.77	ppm		69
71) n-Nitrosodiphenylamine	7.863	169	350535	11.05	ppm		98
72) 1,2-Diphenylhydrazine	7.895	77	734924	12.59	ppm		94
74) 4-Bromophenyl-phenylether	8.184	248	143879	9.27	ppm		85
75) Hexachlorobenzene	8.248	284	159191	8.78	ppm		85
76) Pentachlorophenol	8.435	266	187397	16.93	ppm		98
77) Phenanthrene	8.628	178	620169	9.69	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86294.D
Acq On : 5 Apr 2019 8:26 am
Operator : chriss2
Sample : ic3816-10
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 13:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

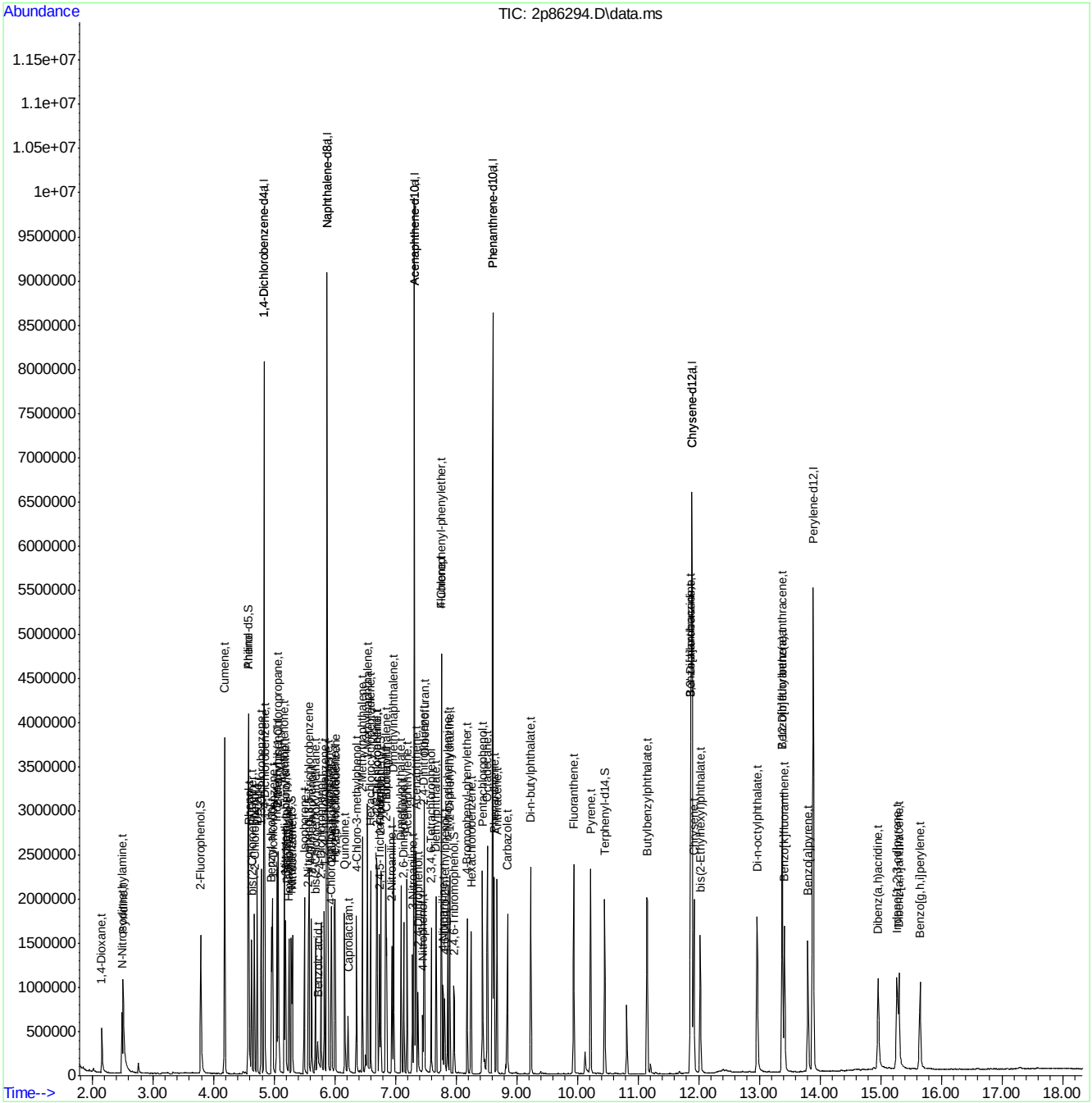
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.676	178	645839	10.06	ppm	99
79) Carbazole	8.847	167	671971	10.94	ppm	98
80) Di-n-butylphthalate	9.232	149	1083139	12.28	ppm	98
81) Fluoranthene	9.943	202	922590	10.50	ppm	98
82) Octadecane	8.515	43	234384	12.78	ppm	97
84) Pyrene	10.222	202	950892	11.44	ppm	99
86) Butylbenzylphthalate	11.152	149	520538	12.62	ppm	89
87) Benzo[a]anthracene	11.869	228	854957	10.13	ppm	99
88) 3,3'-Dichlorobenzidine	11.869	252	291107	9.87	ppm	96
89) Chrysene	11.922	228	639387	9.66	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.029	149	573298	13.29	ppm	96
92) Di-n-octylphthalate	12.965	149	1212825	13.11	ppm	97
93) Benzo[b]fluoranthene	13.377	252	816222	9.97	ppm	95
94) Benzo[k]fluoranthene	13.415	252	707819	10.81	ppm	95
95) Benzo[a]pyrene	13.800	252	674147	10.76	ppm	96
96) Indeno[1,2,3-cd]pyrene	15.265	276	762993	11.07	ppm	79
97) Dibenz(a,h)acridine	14.960	279	576057	10.21	ppm	98
98) Dibenz[a,h]anthracene	15.303	278	597186	9.20	ppm	93
99) 7,12-Dimethylbenz(a)an...	13.377	256	318861	9.56	ppm	92
100) Benzo[g,h,i]perylene	15.650	276	604437	9.24	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86294.D
Acq On : 5 Apr 2019 8:26 am
Operator : chriss2
Sample : ic3816-10
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 13:59:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86295.D
Acq On : 5 Apr 2019 8:50 am
Operator : chriss2
Sample : ic3816-5
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 14:00:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.836	152	1000760	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	3155520	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1633901	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	2729337	40.00	ppm		0.00
83) Chrysene-d12	11.891	240	2532945	40.00	ppm		0.00
91) Perylene-d12	13.886	264	2546198	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.836	152	1000760	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	3155520	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1633901	40.00	ppm		0.00
108) Chrysene-d12a	11.891	240	2532945	40.00	ppm		0.00
110) Phenanthrene-d10a	8.606	188	2729337	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.793	112	214911	4.53	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 9.06%#				
8) Phenol-d5	4.574	99	277196	5.12	ppm		0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 10.24%				
25) Nitrobenzene-d5	5.285	82	221093	6.30	ppm		0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 12.60%#				
51) 2-Fluorobiphenyl	6.756	172	286580	5.36	ppm		0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 10.72%#				
73) 2,4,6-Tribromophenol	7.965	330	34592	3.62	ppm		0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 7.24%#				
85) Terphenyl-d14	10.446	244	260166	4.42	ppm		0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 8.84%#				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.161	88	124570	5.28	ppm		94
3) Pyridine	2.520	79	276658	4.20	ppm		97
4) N-Nitrosodimethylamine	2.498	74	171118	4.35	ppm		94
6) Indene	5.044	116	268690	5.32	ppm		100
7) Cumene	4.183	105	618809	5.49	ppm		96
9) Phenol	4.584	94	300362	5.27	ppm		92
10) Aniline	4.574	93	335354	5.69	ppm		89
11) bis(2-Chloroethyl)ether	4.627	93	214184	5.06	ppm		95
12) 2-Chlorophenol	4.675	128	193547	5.29	ppm		93
13) Decane	4.718	57	189591	5.41	ppm		98
14) 1,3-Dichlorobenzene	4.788	146	208916	5.28	ppm		98
15) 1,4-Dichlorobenzene	4.846	146	171632	4.81	ppm		98
16) Benzyl alcohol	4.959	108	97108	3.49	ppm		94
17) 1,2-Dichlorobenzene	4.975	146	165143	4.88	ppm		98
18) Acetophenone	5.162	105	248691	5.31	ppm		91
19) 2-Methylphenol	5.066	108	150843	5.53	ppm		98
20) 2,2'-oxybis(1-Chloropr...	5.066	121	41744	4.88	ppm	#	27
21) 3&4-Methylphenol	5.189	108	148735	5.37	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86295.D
Acq On : 5 Apr 2019 8:50 am
Operator : chriss2
Sample : ic3816-5
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 14:00:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.167	70	140142	6.24	ppm		90
23) Hexachloroethane	5.248	201	59152	4.85	ppm		88
26) Nitrobenzene	5.301	77	224083	6.19	ppm		88
27) Quinoline	6.162	129	259504	4.79	ppm		97
28) Isophorone	5.494	82	365320	5.75	ppm		91
29) 2-Nitrophenol	5.563	139	81706	5.31	ppm		76
30) 2,4-Dimethylphenol	5.617	107	142256	5.51	ppm		91
31) Benzoic acid	5.718	105	67070	2.55	ppm		94
32) bis(2-Chloroethoxy)met...	5.681	93	208914	5.29	ppm		96
33) 2,4-Dichlorophenol	5.772	162	115524	5.31	ppm		96
34) 2,6-Dichlorophenol	5.948	162	101487	5.30	ppm		91
35) 1,3,5-Trichlorobenzene	5.574	180	139558	4.92	ppm		98
36) 1,2,4-Trichlorobenzene	5.831	180	129151	4.81	ppm		94
37) 1,2,3-Trichlorobenzene	6.007	180	110150	4.68	ppm		95
38) Naphthalene	5.889	128	367927	5.03	ppm		98
39) 4-Chloroaniline	5.938	127	150117	4.95	ppm		89
40) 2,3-Dichloroaniline	6.692	161	138544	5.19	ppm		93
41) Caprolactam	6.210	113	43612	4.76	ppm		94
42) Hexachlorobutadiene	5.996	225	68463	4.66	ppm		99
43) 4-Chloro-3-methylphenol	6.355	107	145572	5.77	ppm		90
44) 2-Methylnaphthalene	6.456	141	224621	5.18	ppm		96
45) 1-Methylnaphthalene	6.537	141	255582	5.37	ppm		94
46) Dimethylnaphthalene	6.970	156	233870	5.24	ppm		97
48) Hexachlorocyclopentadiene	6.590	237	98519	6.99	ppm		95
49) 2,4,6-Trichlorophenol	6.697	196	73255	4.74	ppm		99
50) 2,4,5-Trichlorophenol	6.734	196	75866	4.65	ppm		96
52) 2-Chloronaphthalene	6.852	162	238214	5.16	ppm		94
53) Biphenyl	6.836	154	323900	5.24	ppm		98
54) 2-Nitroaniline	6.943	65	104787	6.51	ppm		86
55) Dimethylphthalate	7.093	163	275200	5.12	ppm		98
56) Acenaphthylene	7.194	152	393216	5.15	ppm		99
57) 2,6-Dinitrotoluene	7.141	165	62002	5.44	ppm		79
58) 3-Nitroaniline	7.280	138	69008	4.97	ppm		83
59) Acenaphthene	7.339	153	219935	4.79	ppm		97
60) 2,4-Dinitrophenol	7.371	184	32123	12.05	ppm	#	40
61) 4-Nitrophenol	7.451	109	44070	5.25	ppm	#	84
62) Dibenzofuran	7.478	168	307163	5.08	ppm		93
63) 2,4-Dinitrotoluene	7.473	165	76992	5.33	ppm		90
64) 2,3,4,6-Tetrachlorophenol	7.590	232	54932	3.65	ppm		84
65) Diethylphthalate	7.670	149	291956	5.33	ppm		95
66) Fluorene	7.761	166	265898	5.22	ppm		97
67) 4-Chlorophenyl-phenyle...	7.761	204	116662	4.49	ppm		87
68) 4-Nitroaniline	7.783	138	66541	5.15	ppm		79
70) 4,6-Dinitro-2-methylph...	7.815	198	35924	5.80	ppm	#	54
71) n-Nitrosodiphenylamine	7.863	169	185183	5.64	ppm		99
72) 1,2-Diphenylhydrazine	7.895	77	410293	6.79	ppm		94
74) 4-Bromophenyl-phenylether	8.184	248	70883	4.41	ppm		85
75) Hexachlorobenzene	8.248	284	79221	4.22	ppm		86
76) Pentachlorophenol	8.435	266	82032	9.81	ppm		98
77) Phenanthrene	8.628	178	320859	4.84	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86295.D
Acq On : 5 Apr 2019 8:50 am
Operator : chriss2
Sample : ic3816-5
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 14:00:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.676	178	337868	5.09	ppm	97
79) Carbazole	8.842	167	344429	5.42	ppm	97
80) Di-n-butylphthalate	9.232	149	496623	5.44	ppm	97
81) Fluoranthene	9.938	202	414972	4.56	ppm	95
82) Octadecane	8.516	43	129055	6.80	ppm	98
84) Pyrene	10.216	202	444919	5.24	ppm	99
86) Butylbenzylphthalate	11.147	149	249364	5.93	ppm	81
87) Benzo[a]anthracene	11.869	228	431015	5.01	ppm	97
88) 3,3'-Dichlorobenzidine	11.869	252	134915	5.93	ppm	94
89) Chrysene	11.917	228	313296	4.64	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.024	149	281237	6.39	ppm	93
92) Di-n-octylphthalate	12.960	149	545246	7.25	ppm	97
93) Benzo[b]fluoranthene	13.377	252	372750	5.20	ppm	95
94) Benzo[k]fluoranthene	13.410	252	367153	5.55	ppm	94
95) Benzo[a]pyrene	13.800	252	328914	5.20	ppm	95
96) Indeno[1,2,3-cd]pyrene	15.266	276	359436	6.22	ppm	83
97) Dibenz(a,h)acridine	14.955	279	251445	6.48	ppm	97
98) Dibenz[a,h]anthracene	15.298	278	290472	5.15	ppm	93
99) 7,12-Dimethylbenz(a)an...	13.372	256	133286	3.95	ppm	90
100) Benzo[g,h,i]perylene	15.645	276	286393	5.12	ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

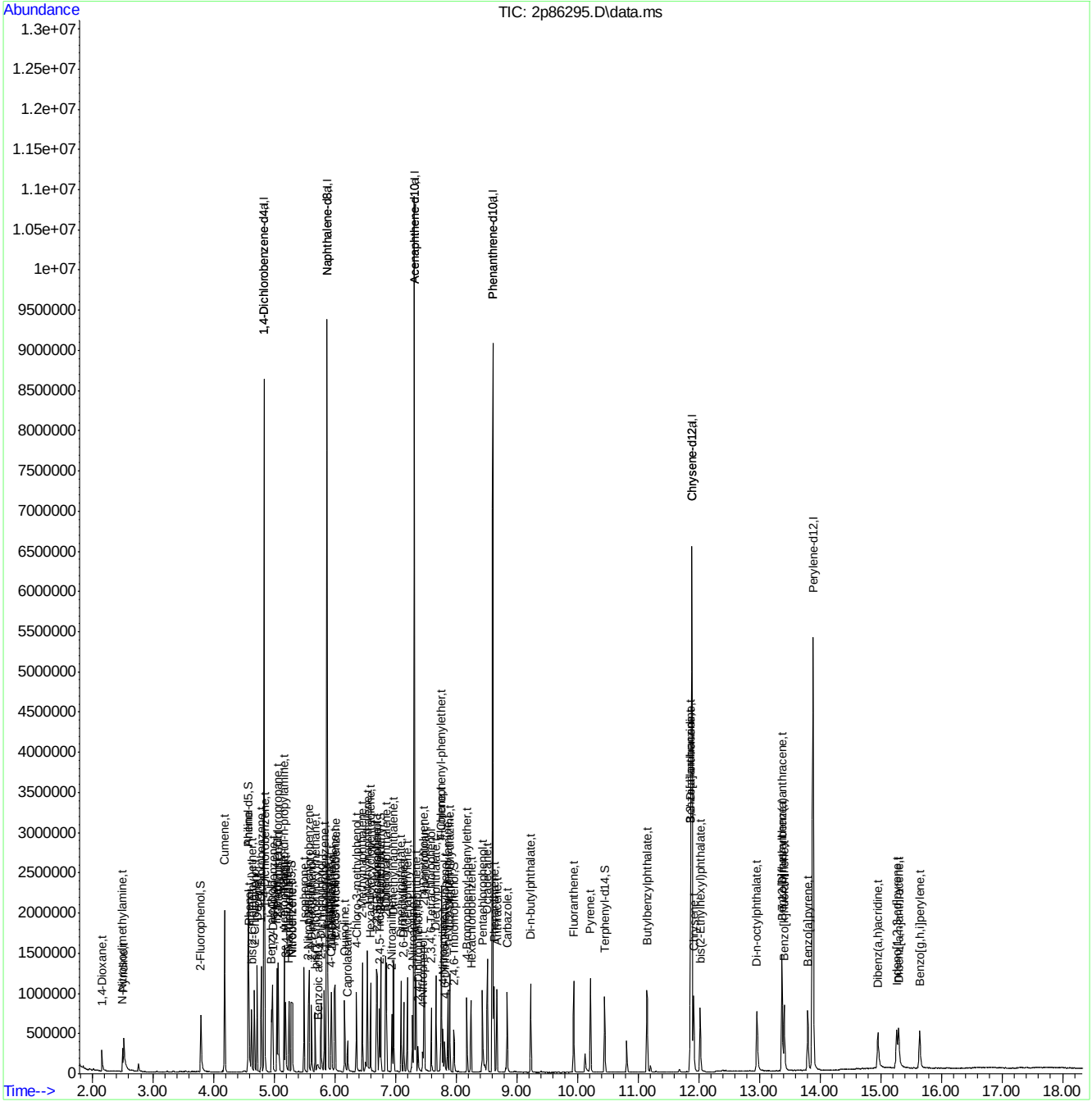
9.6.16

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86295.D
Acq On : 5 Apr 2019 8:50 am
Operator : chriss2
Sample : ic3816-5
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 14:00:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration



2P86296.D

Manual Integrations APPROVED (compounds with "m" flag)

Nina Pandya
04/09/19 16:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:02:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.835	152	1006194	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	3242453	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1734207	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	2855483	40.00	ppm		0.00
83) Chrysene-d12	11.885	240	2504406	40.00	ppm		-0.01
91) Perylene-d12	13.891	264	2543584	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.835	152	1006194	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	3242453	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1734207	40.00	ppm		0.00
108) Chrysene-d12a	11.885	240	2504406	40.00	ppm		-0.01
110) Phenanthrene-d10a	8.606	188	2855483	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.793	112	75252	1.58	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	3.16%#			
8) Phenol-d5	4.573	99	102656	1.89	ppm		0.00
Spiked Amount 50.000	Range 10 - 59		Recovery =	3.78%#			
25) Nitrobenzene-d5	5.285	82	92073	2.55	ppm		0.00
Spiked Amount 50.000	Range 19 - 61		Recovery =	5.10%#			
51) 2-Fluorobiphenyl	6.756	172	126378	2.23	ppm		0.00
Spiked Amount 50.000	Range 21 - 58		Recovery =	4.46%#			
73) 2,4,6-Tribromophenol	7.970	330	13801	1.38	ppm		0.00
Spiked Amount 50.000	Range 12 - 68		Recovery =	2.76%#			
85) Terphenyl-d14	10.446	244	111830	1.92	ppm		0.00
Spiked Amount 50.000	Range 16 - 65		Recovery =	3.84%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
Target Compounds							Qvalue
2) 1,4-Dioxane	2.167	88	48229	2.61	ppm		94
3) Pyridine	2.536	79	100108	1.51	ppm		95
4) N-Nitrosodimethylamine	2.503	74	65556	1.66	ppm		95
6) Indene	5.044	116	101905	2.01	ppm		98
7) Cumene	4.183	105	232713	2.05	ppm		94
9) Phenol	4.584	94	112035	1.95	ppm		80
10) Aniline	4.573	93	130565	2.20	ppm		94
11) bis(2-Chloroethyl)ether	4.627	93	85019	2.00	ppm		87
12) 2-Chlorophenol	4.675	128	71490	1.94	ppm		89
13) Decane	4.718	57	76760	2.18	ppm		97
14) 1,3-Dichlorobenzene	4.787	146	81473	2.05	ppm		96
15) 1,4-Dichlorobenzene	4.846	146	67831	1.89	ppm		98
16) Benzyl alcohol	4.958	108	33403	1.19	ppm		91
17) 1,2-Dichlorobenzene	4.975	146	65169	1.91	ppm		98
18) Acetophenone	5.167	105	101375	2.15	ppm		96
19) 2-Methylphenol	5.065	108	57686	2.10	ppm		98
20) 2,2'-oxybis(1-Chloropr...	5.065	121	17399	2.02	ppm	#	32
21) 3&4-Methylphenol	5.194	108	58113	2.09	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:02:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.167	70	58355	2.58	ppm		90
23) Hexachloroethane	5.247	201	23918	1.95	ppm		82
26) Nitrobenzene	5.301	77	91684	2.46	ppm		87
27) Quinoline	6.162	129	108539	1.95	ppm		94
28) Isophorone	5.493	82	147783	2.26	ppm		90
29) 2-Nitrophenol	5.563	139	31422	1.99	ppm		73
30) 2,4-Dimethylphenol	5.616	107	52269	1.97	ppm		93
32) bis(2-Chloroethoxy)met...	5.675	93	86502	2.13	ppm		97
33) 2,4-Dichlorophenol	5.777	162	43639	1.95	ppm		95
34) 2,6-Dichlorophenol	5.948	162	38526	1.96	ppm		90
35) 1,3,5-Trichlorobenzene	5.574	180	55137	1.89	ppm		95
36) 1,2,4-Trichlorobenzene	5.830	180	51694	1.88	ppm		96
37) 1,2,3-Trichlorobenzene	6.007	180	48199	1.99	ppm		93
38) Naphthalene	5.889	128	147998	1.97	ppm		99
39) 4-Chloroaniline	5.943	127	58957	1.89	ppm		93
40) 2,3-Dichloroaniline	6.691	161	59484	2.17	ppm		90
41) Caprolactam	6.205	113	17551	1.86	ppm		96
42) Hexachlorobutadiene	5.996	225	28089	1.86	ppm		97
43) 4-Chloro-3-methylphenol	6.354	107	58469	2.25	ppm		91
44) 2-Methylnaphthalene	6.456	141	95887	2.15	ppm		96
45) 1-Methylnaphthalene	6.536	141	109894	2.25	ppm		94
46) Dimethylnaphthalene	6.970	156	101374	2.21	ppm		94
48) Hexachlorocyclopentadiene	6.590	237	31093	2.08	ppm		92
49) 2,4,6-Trichlorophenol	6.697	196	29048	1.77	ppm		98
50) 2,4,5-Trichlorophenol	6.740	196	29774	1.72	ppm		95
52) 2-Chloronaphthalene	6.852	162	105819	2.16	ppm		94
53) Biphenyl	6.836	154	141110	2.15	ppm		97
54) 2-Nitroaniline	6.943	65	43180	2.53	ppm		83
55) Dimethylphthalate	7.093	163	120262	2.11	ppm		97
56) Acenaphthylene	7.194	152	172546	2.13	ppm		99
57) 2,6-Dinitrotoluene	7.141	165	25317	2.09	ppm		82
58) 3-Nitroaniline	7.280	138	26553	1.80	ppm		80
59) Acenaphthene	7.333	153	91851	1.88	ppm		98
60) 2,4-Dinitrophenol	7.376	184	7023	8.12	ppm	#	78
61) 4-Nitrophenol	7.467	109	14372	1.61	ppm	#	72
62) Dibenzofuran	7.478	168	127870	1.99	ppm		93
63) 2,4-Dinitrotoluene	7.472	165	29401	1.92	ppm		77
64) 2,3,4,6-Tetrachlorophenol	7.590	232	21131	1.32	ppm		77
65) Diethylphthalate	7.670	149	121218	2.09	ppm		95
66) Fluorene	7.761	166	110839	2.05	ppm		98
67) 4-Chlorophenyl-phenyle...	7.761	204	48038	1.74	ppm		80
68) 4-Nitroaniline	7.783	138	22911	1.67	ppm		83
70) 4,6-Dinitro-2-methylph...	7.815	198	10880	1.68	ppm		77
71) n-Nitrosodiphenylamine	7.863	169	75449	2.20	ppm		99
72) 1,2-Diphenylhydrazine	7.895	77	179041	2.83	ppm		93
74) 4-Bromophenyl-phenylether	8.184	248	29224	1.74	ppm		84
75) Hexachlorobenzene	8.248	284	32401	1.65	ppm		84
76) Pentachlorophenol	8.435	266	27499	6.28	ppm		95
77) Phenanthrene	8.622	178	131034	1.89	ppm		99
78) Anthracene	8.676	178	136316	1.96	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:02:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

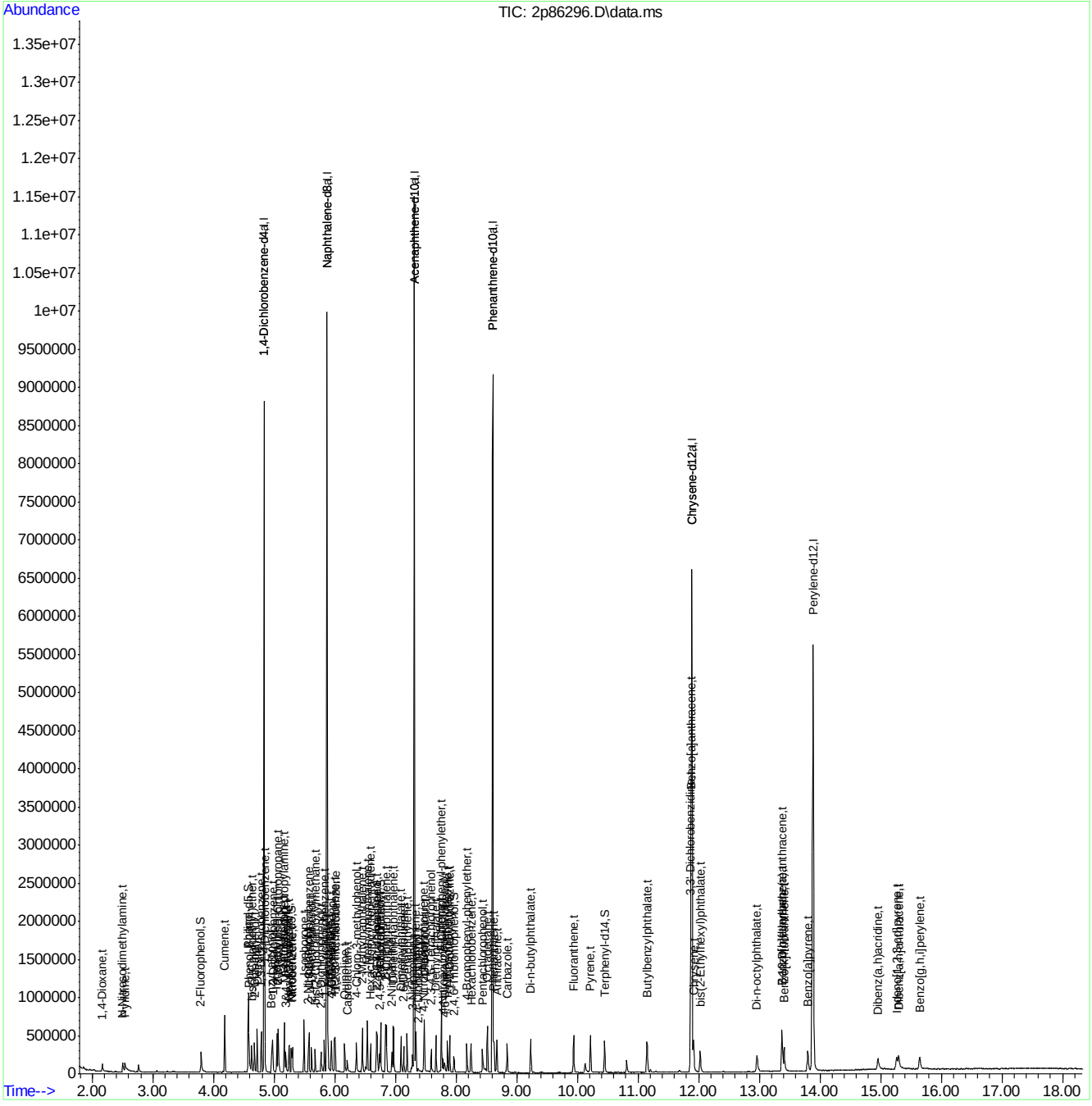
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) Carbazole	8.842	167	134675	2.02	ppm	96
80) Di-n-butylphthalate	9.232	149	203346	2.13	ppm	98
81) Fluoranthene	9.938	202	172304	1.81	ppm	92
82) Octadecane	8.515	43	54262	2.73	ppm	95
84) Pyrene	10.216	202	181259	2.16	ppm	98
86) Butylbenzylphthalate	11.147	149	102458	2.46	ppm	87
87) Benzo[a]anthracene	11.874	228	171208	2.01	ppm	100
88) 3,3'-Dichlorobenzidine	11.869	252	45367	3.79	ppm	90
89) Chrysene	11.917	228	122678	1.84	ppm	96
90) bis(2-Ethylhexyl)phtha...	12.024	149	101363	2.33	ppm	96
92) Di-n-octylphthalate	12.960	149	173507	4.10	ppm	95
93) Benzo[b]fluoranthene	13.372	252	137721m	2.74	ppm	
94) Benzo[k]fluoranthene	13.409	252	143988	2.18	ppm	95
95) Benzo[a]pyrene	13.800	252	119494	1.89	ppm	91
96) Indeno[1,2,3-cd]pyrene	15.265	276	125276	3.48	ppm	79
97) Dibenz(a,h)acridine	14.960	279	83899	4.60	ppm	91
98) Dibenz[a,h]anthracene	15.297	278	102329	2.74	ppm	89
99) 7,12-Dimethylbenz(a)an...	13.372	256	48201	1.43	ppm	97
100) Benzo[g,h,i]perylene	15.645	276	105492	2.84	ppm	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:02:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration



Manual Integration Approval Summary

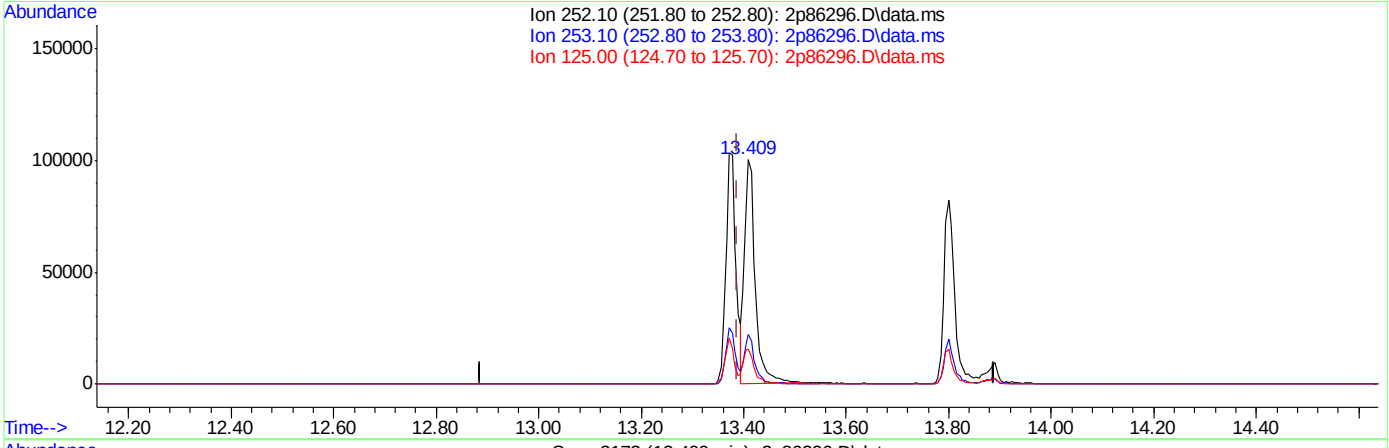
Sample Number:	E2P3816-IC3816	**Method:**	SW846 8270D
Lab FileID:	2P86296.D	**Analyst approved:**	04/08/19 13:30 Kristi Schollenberger
Injection Time:	04/05/19 09:13	**Supervisor approved:**	04/09/19 16:32 Nina Pandya

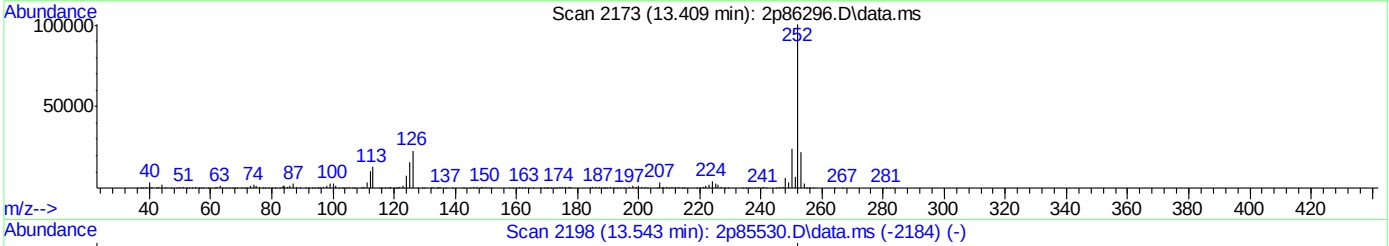
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		13.37	Overlapping peak

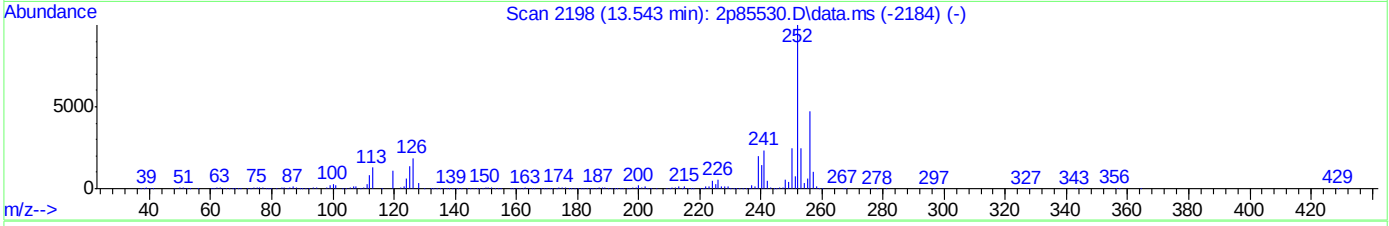
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:00:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration







TIC: 2p86296.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.409min (+0.021) 2.80ppm

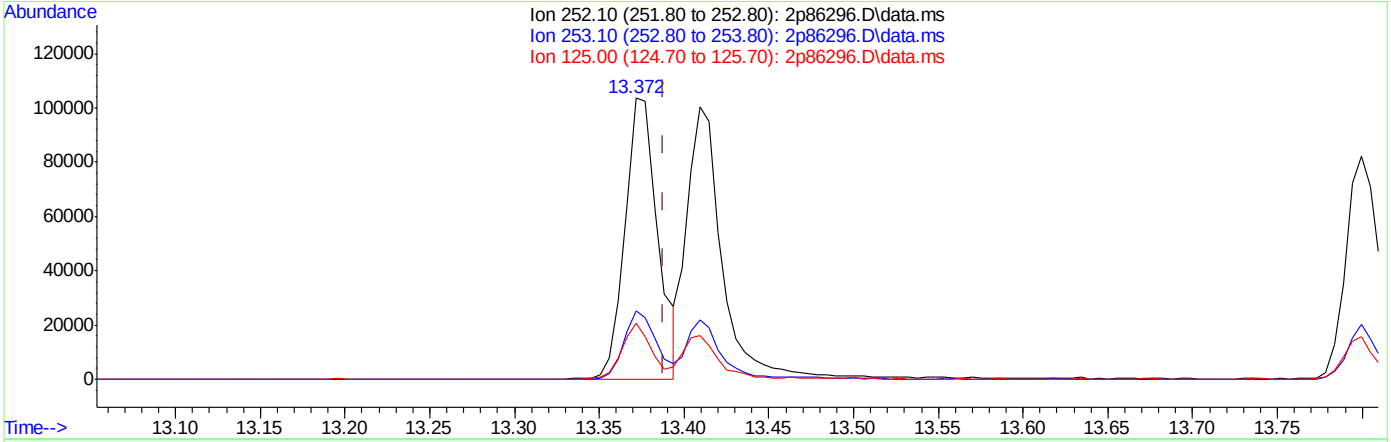
response 142958

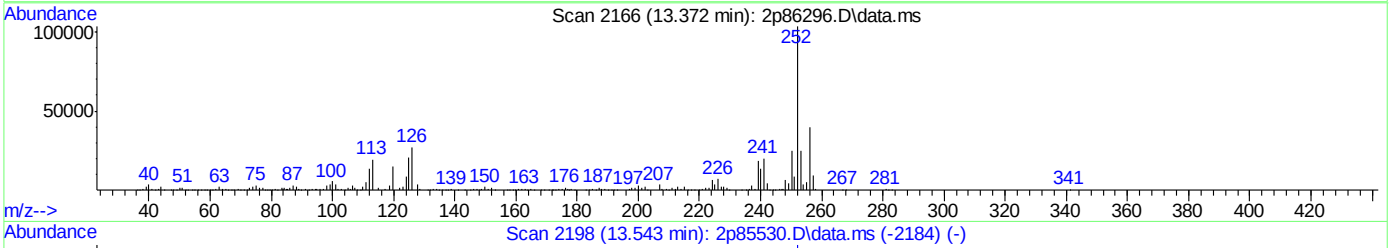
Ion	Exp%	Act%
252.10	100	100
253.10	25.10	21.97
125.00	11.40	15.58
0.00	0.00	0.00

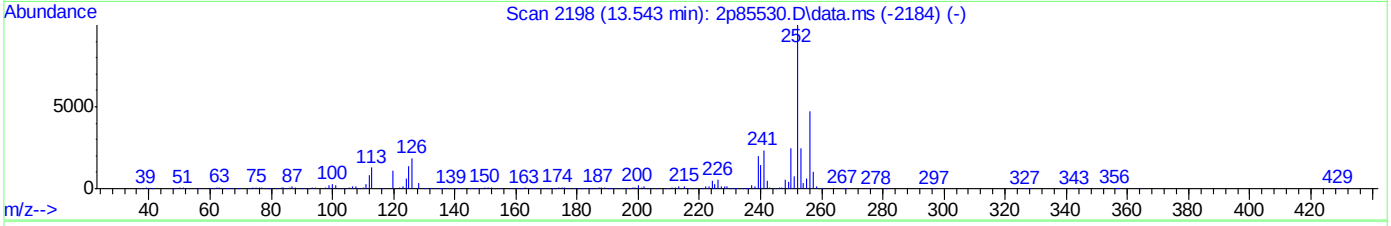
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86296.D
Acq On : 5 Apr 2019 9:13 am
Operator : chriss2
Sample : ic3816-2
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 14:00:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration







TIC: 2p86296.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.372min (-0.016) 2.74ppm m

response 137721

Ion	Exp%	Act%
252.10	100	100
253.10	25.10	24.29
125.00	11.40	20.14
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/09/19 16:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:04:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.835	152	1085527	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	3465605	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1774818	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	2914349	40.00	ppm		0.00
83) Chrysene-d12	11.885	240	2354919	40.00	ppm		-0.01
91) Perylene-d12	13.885	264	2589352	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.835	152	1085527	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	3465605	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1774818	40.00	ppm		0.00
108) Chrysene-d12a	11.885	240	2354919	40.00	ppm		-0.01
110) Phenanthrene-d10a	8.606	188	2914349	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.798	112	35148	0.68	ppm		0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 1.36%#				
8) Phenol-d5	4.579	99	51658	0.88	ppm		0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 1.76%#				
25) Nitrobenzene-d5	5.285	82	51184	1.33	ppm		0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 2.66%#				
51) 2-Fluorobiphenyl	6.756	172	65474	1.13	ppm		0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 2.26%#				
73) 2,4,6-Tribromophenol	7.970	330	6478	0.64	ppm		0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 1.28%#				
85) Terphenyl-d14	10.446	244	53910	0.98	ppm		0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 1.96%#				
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
112) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.167	88	23805	1.69	ppm		99
3) Pyridine	2.552	79	48617	0.68	ppm		91
4) N-Nitrosodimethylamine	2.509	74	30287	0.71	ppm		81
6) Indene	5.044	116	58078	1.06	ppm		98
7) Cumene	4.183	105	128156	1.05	ppm		92
9) Phenol	4.589	94	60344	0.98	ppm		92
10) Aniline	4.573	93	70979	1.11	ppm		96
11) bis(2-Chloroethyl)ether	4.627	93	49540	1.08	ppm		97
12) 2-Chlorophenol	4.675	128	37727	0.95	ppm		85
13) Decane	4.718	57	43189	1.14	ppm		95
14) 1,3-Dichlorobenzene	4.787	146	45124	1.05	ppm		99
15) 1,4-Dichlorobenzene	4.846	146	39954	1.03	ppm		96
16) Benzyl alcohol	4.964	108	18946	0.63	ppm		92
17) 1,2-Dichlorobenzene	4.975	146	37460	1.02	ppm		97
18) Acetophenone	5.167	105	55130	1.08	ppm		95
19) 2-Methylphenol	5.065	108	31911	1.08	ppm		98
20) 2,2'-oxybis(1-Chloropr...	5.065	121	9818	1.06	ppm	#	41
21) 3&4-Methylphenol	5.194	108	29915	1.00	ppm		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:04:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.167	70	31018	1.27	ppm		89
23) Hexachloroethane	5.247	201	12635	0.96	ppm		88
26) Nitrobenzene	5.301	77	52536	1.32	ppm		82
27) Quinoline	6.162	129	54401	0.91	ppm		98
28) Isophorone	5.499	82	82610	1.18	ppm		96
29) 2-Nitrophenol	5.563	139	15218	0.90	ppm		60
30) 2,4-Dimethylphenol	5.616	107	27510	0.97	ppm		94
32) bis(2-Chloroethoxy)met...	5.681	93	47521	1.10	ppm		100
33) 2,4-Dichlorophenol	5.777	162	21305	0.89	ppm		80
34) 2,6-Dichlorophenol	5.948	162	20345	0.97	ppm		91
35) 1,3,5-Trichlorobenzene	5.574	180	30270	0.97	ppm		94
36) 1,2,4-Trichlorobenzene	5.830	180	29065	0.99	ppm		92
37) 1,2,3-Trichlorobenzene	6.007	180	24097	0.93	ppm		93
38) Naphthalene	5.889	128	82223	1.02	ppm		99
39) 4-Chloroaniline	5.943	127	30853	0.93	ppm		92
40) 2,3-Dichloroaniline	6.691	161	29144	0.99	ppm		91
41) Caprolactam	6.205	113	8280	0.82	ppm		89
42) Hexachlorobutadiene	5.996	225	14862	0.92	ppm		97
43) 4-Chloro-3-methylphenol	6.360	107	29075	1.05	ppm		89
44) 2-Methylnaphthalene	6.456	141	49252	1.03	ppm		92
45) 1-Methylnaphthalene	6.536	141	55826	1.07	ppm		95
46) Dimethylnaphthalene	6.970	156	52968	1.08	ppm		93
48) Hexachlorocyclopentadiene	6.590	237	10918	0.71	ppm		95
49) 2,4,6-Trichlorophenol	6.697	196	14163	0.84	ppm		99
50) 2,4,5-Trichlorophenol	6.740	196	15095	0.85	ppm		95
52) 2-Chloronaphthalene	6.852	162	55688	1.11	ppm		92
53) Biphenyl	6.836	154	72037	1.07	ppm		98
54) 2-Nitroaniline	6.943	65	21974	1.26	ppm	#	79
55) Dimethylphthalate	7.093	163	63710	1.09	ppm		97
56) Acenaphthylene	7.194	152	89682	1.08	ppm		98
57) 2,6-Dinitrotoluene	7.141	165	12199	0.99	ppm		77
58) 3-Nitroaniline	7.285	138	13278	0.88	ppm		79
59) Acenaphthene	7.339	153	48285	0.97	ppm		94
60) 2,4-Dinitrophenol	7.381	184	1691	7.34	ppm		90
61) 4-Nitrophenol	7.472	109	6944	0.76	ppm	#	1
62) Dibenzofuran	7.478	168	66187	1.01	ppm		92
63) 2,4-Dinitrotoluene	7.472	165	14230	0.91	ppm		78
64) 2,3,4,6-Tetrachlorophenol	7.590	232	9869	0.60	ppm	#	73
65) Diethylphthalate	7.670	149	62755	1.06	ppm		92
66) Fluorene	7.761	166	54750	0.99	ppm		95
67) 4-Chlorophenyl-phenyle...	7.761	204	24315	0.86	ppm		86
68) 4-Nitroaniline	7.788	138	11004	0.78	ppm		74
70) 4,6-Dinitro-2-methylph...	7.815	198	4199	0.64	ppm		72
71) n-Nitrosodiphenylamine	7.863	169	39113	1.12	ppm		99
72) 1,2-Diphenylhydrazine	7.895	77	92471	1.43	ppm		93
74) 4-Bromophenyl-phenylether	8.184	248	14351	0.84	ppm	#	78
75) Hexachlorobenzene	8.248	284	16451	0.82	ppm		79
76) Pentachlorophenol	8.440	266	11959	5.33	ppm		95
77) Phenanthrene	8.622	178	67989	0.96	ppm		100
78) Anthracene	8.676	178	67910	0.96	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:04:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration

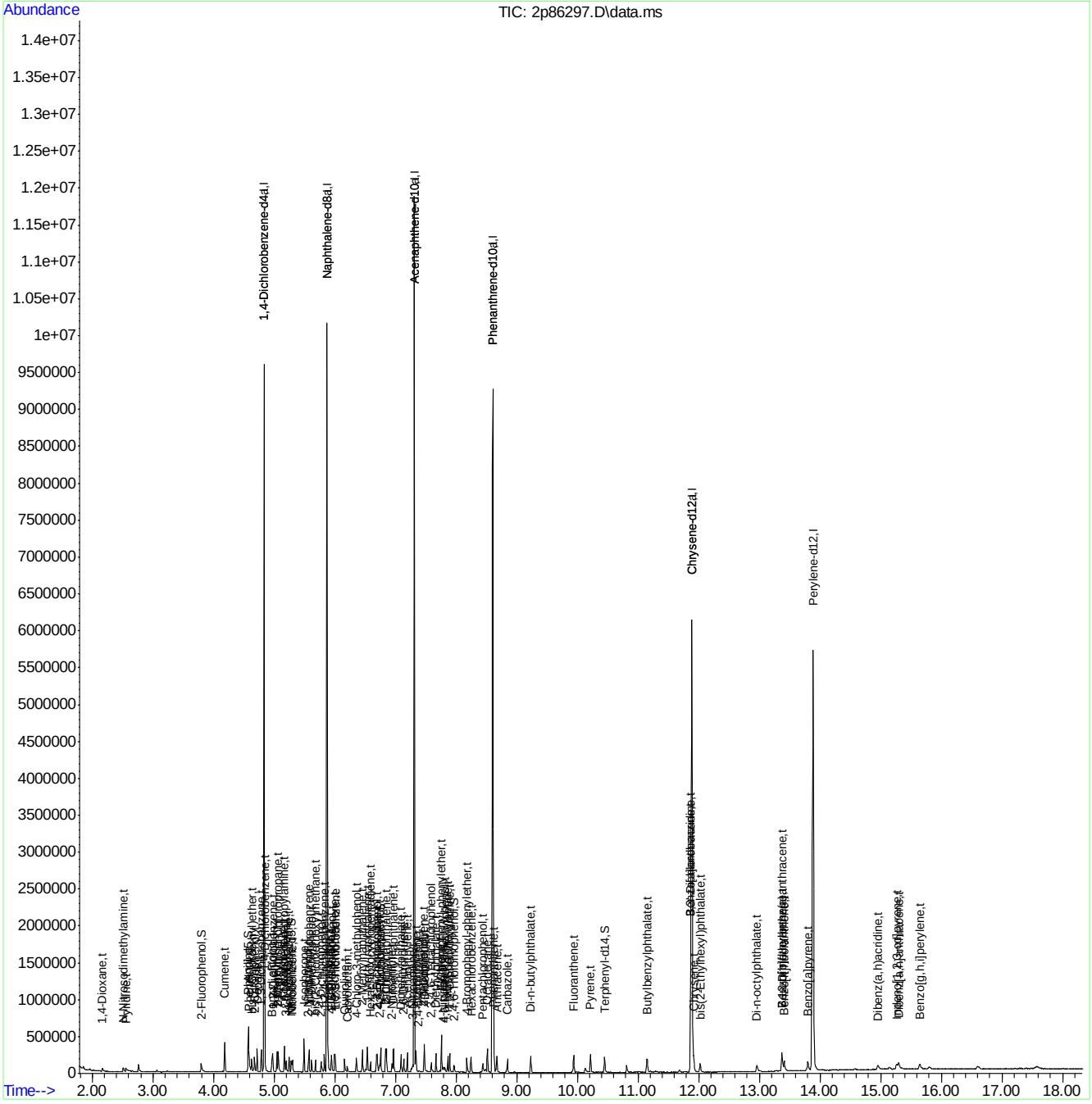
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) Carbazole	8.847	167	67017	0.99	ppm	96
80) Di-n-butylphthalate	9.232	149	98994	1.02	ppm	98
81) Fluoranthene	9.938	202	86080	0.89	ppm	94
82) Octadecane	8.515	43	28623	1.41	ppm	95
84) Pyrene	10.216	202	90754	1.15	ppm	98
86) Butylbenzylphthalate	11.147	149	46679	1.19	ppm	74
87) Benzo[a]anthracene	11.869	228	83000	1.04	ppm	95
88) 3,3'-Dichlorobenzidine	11.869	252	17407	3.15	ppm	88
89) Chrysene	11.917	228	59830	0.95	ppm	96
90) bis(2-Ethylhexyl)phtha...	12.029	149	42764	1.04	ppm	92
92) Di-n-octylphthalate	12.960	149	70978	3.22	ppm	98
93) Benzo[b]fluoranthene	13.372	252	68587m	2.01	ppm	
94) Benzo[k]fluoranthene	13.409	252	67813	1.01	ppm	93
95) Benzo[a]pyrene	13.800	252	57898	0.90	ppm	87
96) Indeno[1,2,3-cd]pyrene	15.265	276	59464	2.70	ppm	69
97) Dibenz(a,h)acridine	14.955	279	36284	4.07	ppm	92
98) Dibenz[a,h]anthracene	15.297	278	44251	1.99	ppm	88
99) 7,12-Dimethylbenz(a)an...	13.372	256	21775	0.64	ppm	92
100) Benzo[g,h,i]perylene	15.645	276	48864	2.12	ppm	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:04:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration



Manual Integration Approval Summary

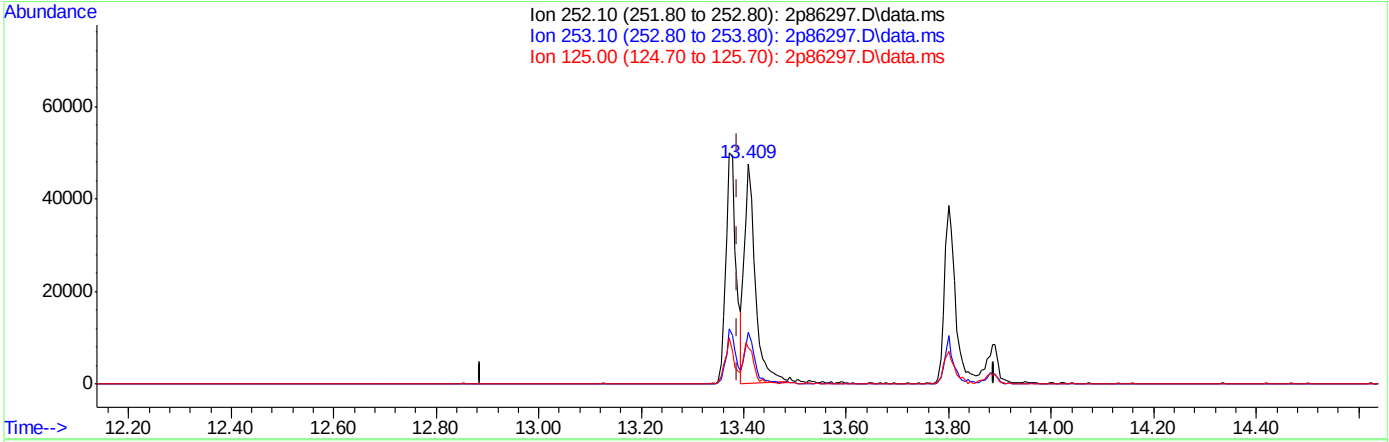
Sample Number:	E2P3816-IC3816	**Method:**	SW846 8270D
Lab FileID:	2P86297.D	**Analyst approved:**	04/08/19 13:30 Kristi Schollenberger
Injection Time:	04/05/19 09:36	**Supervisor approved:**	04/09/19 16:32 Nina Pandya

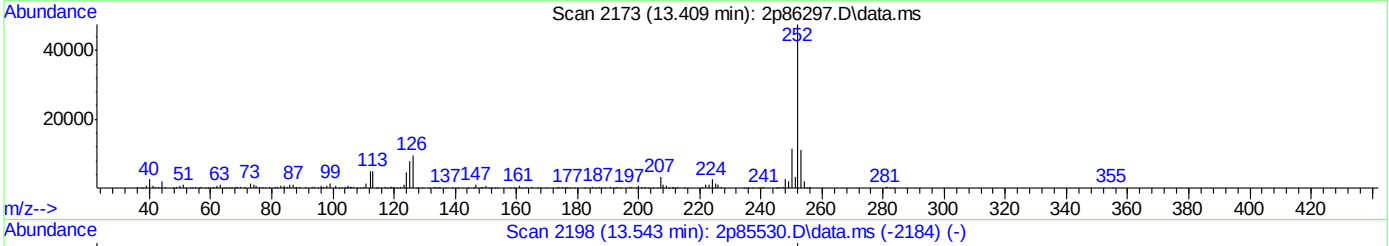
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		13.37	Overlapping peak

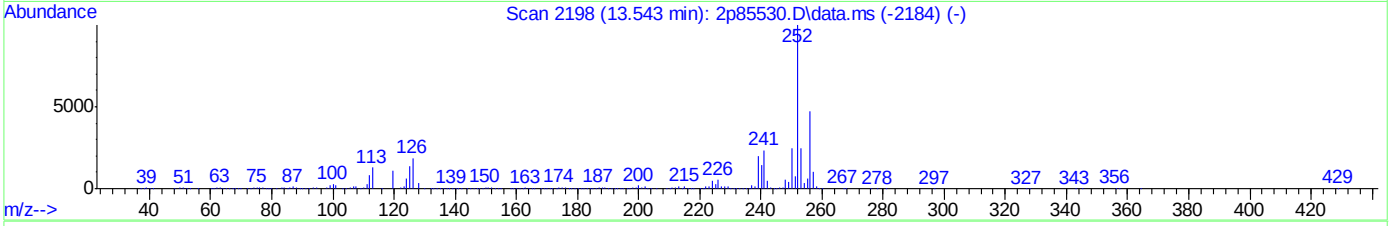
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:02:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration







TIC: 2p86297.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.409min (+0.021) 2.01ppm

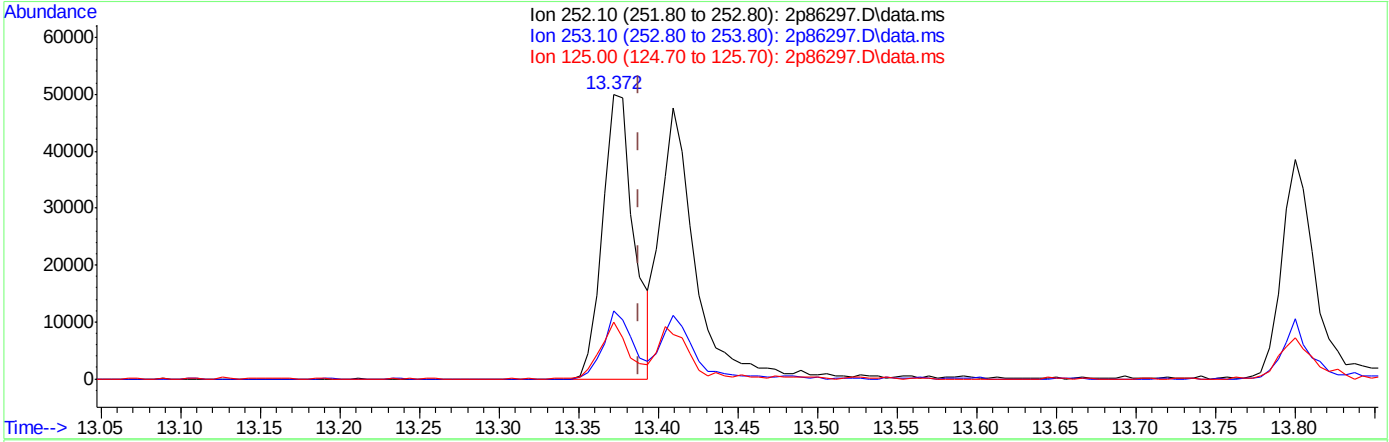
response 69278

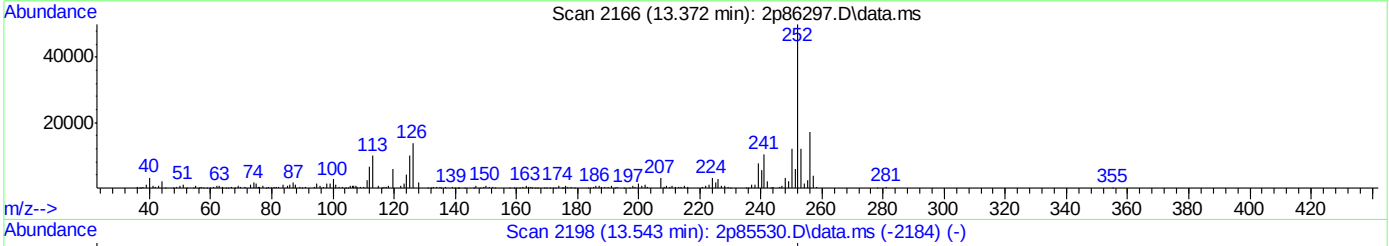
Ion	Exp%	Act%
252.10	100	100
253.10	25.10	23.80
125.00	11.40	16.28
0.00	0.00	0.00

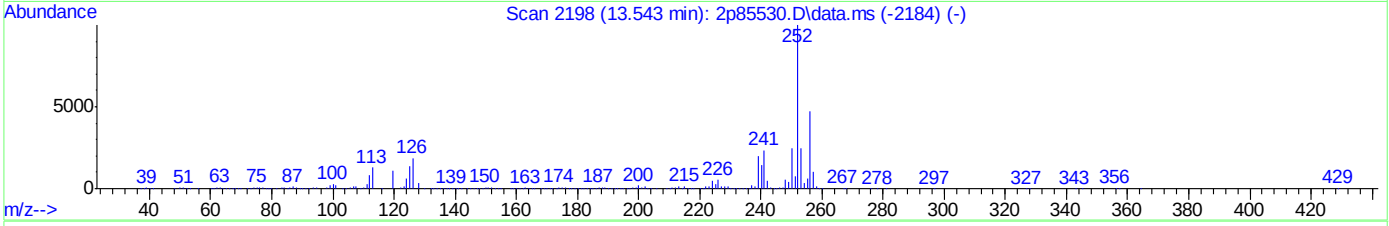
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86297.D
Acq On : 5 Apr 2019 9:36 am
Operator : chriss2
Sample : ic3816-1
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 14:02:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 13:55:55 2019
Response via : Initial Calibration







TIC: 2p86297.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.372min (-0.016) 2.01ppm m

response 68587

Ion	Exp%	Act%
252.10	100	100
253.10	25.10	23.86
125.00	11.40	20.11
0.00	0.00	0.00

9.6.18.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86298.D
Acq On : 5 Apr 2019 9:59 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 14:23:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.836	152	637726	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	1970449	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1027591	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	1925269	40.00	ppm		0.00
83) Chrysene-d12	11.896	240	1421174	40.00	ppm		0.00
91) Perylene-d12	13.891	264	1436386	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.836	152	637726	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	1970449	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1027591	40.00	ppm		0.00
108) Chrysene-d12a	11.896	240	1421174	40.00	ppm		0.00
110) Phenanthrene-d10a	8.606	188	1925269	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm		
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm		
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm		
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm		
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
Target Compounds							Qvalue
4) N-Nitrosodimethylamine	2.536	74	869158	31.66	ppm		99
11) bis(2-Chloroethyl)ether	4.627	93	1562450	59.57	ppm		98
14) 1,3-Dichlorobenzene	4.793	146	1431372	55.04	ppm		99
15) 1,4-Dichlorobenzene	4.852	146	1188777	51.14	ppm		99
17) 1,2-Dichlorobenzene	4.975	146	1074658	48.09	ppm		99
20) 2,2'-oxybis(1-Chloropr...	5.066	121	313707	57.93	ppm	#	69
22) n-Nitroso-di-n-propyla...	5.173	70	893686	52.69	ppm		98
23) Hexachloroethane	5.248	201	401973	51.12	ppm		100
26) Nitrobenzene	5.306	77	1272367	49.05	ppm		97
28) Isophorone	5.499	82	2238612	49.13	ppm		100
32) bis(2-Chloroethoxy)met...	5.681	93	1370498	54.03	ppm		100
36) 1,2,4-Trichlorobenzene	5.831	180	893394	54.16	ppm		98
38) Naphthalene	5.889	128	2480864	52.63	ppm		99
42) Hexachlorobutadiene	5.996	225	521039	55.08	ppm		99
48) Hexachlorocyclopentadiene	6.595	237	498316	51.81	ppm		100
52) 2-Chloronaphthalene	6.857	162	1774728	60.23	ppm		96
55) Dimethylphthalate	7.098	163	2004157	54.96	ppm		99
56) Acenaphthylene	7.194	152	2480752	49.35	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86298.D
Acq On : 5 Apr 2019 9:59 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 14:23:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

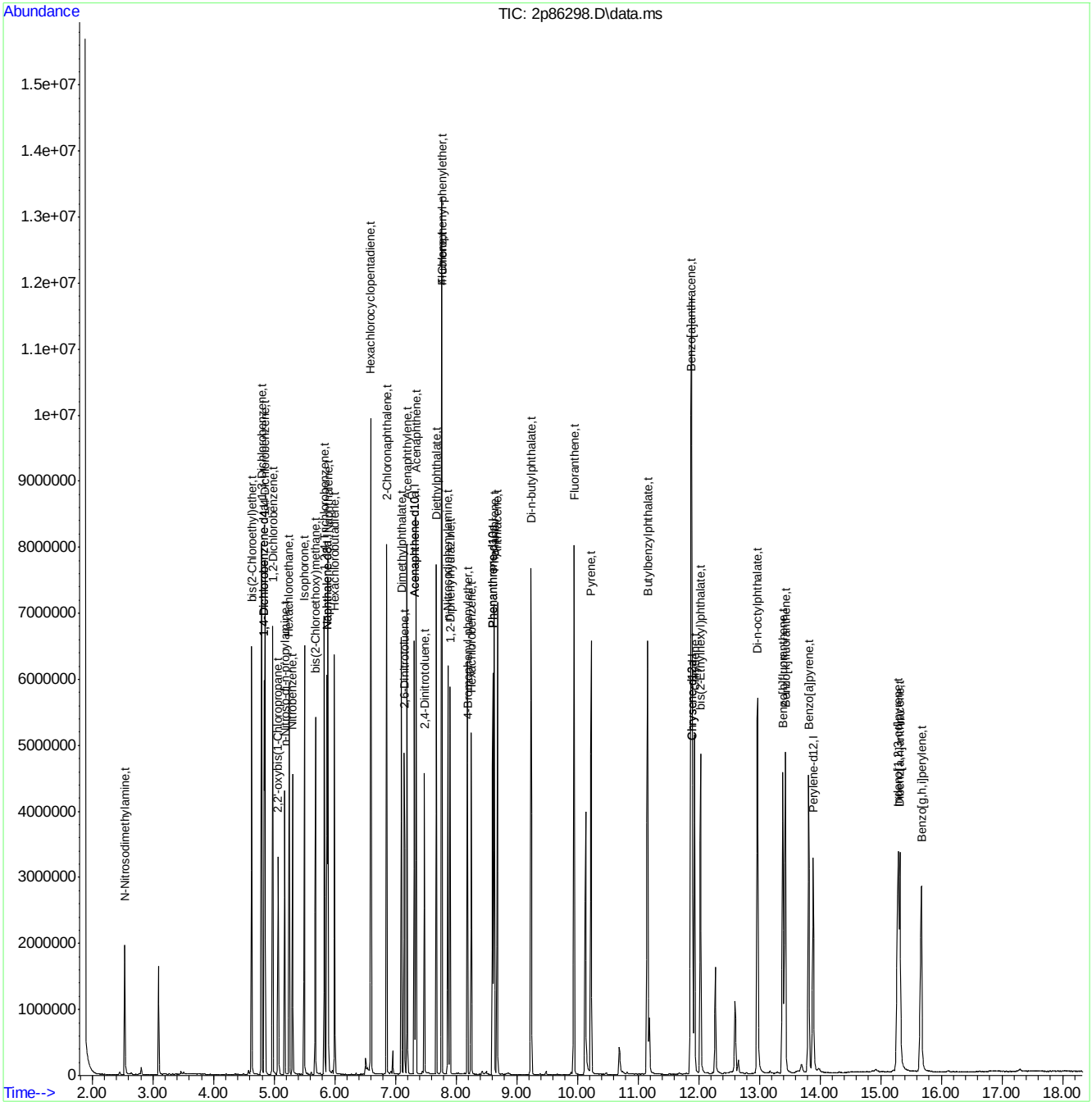
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57)	2,6-Dinitrotoluene	7.146	165	410696	51.36	ppm	83
59)	Acenaphthene	7.339	153	1508691	51.14	ppm	97
63)	2,4-Dinitrotoluene	7.478	165	511242	49.71	ppm	93
65)	Diethylphthalate	7.676	149	2038843	53.80	ppm	99
66)	Fluorene	7.767	166	1887549	54.09	ppm	99
67)	4-Chlorophenyl-phenyle...	7.767	204	944739	56.35	ppm	98
71)	n-Nitrosodiphenylamine	7.868	169	1149492	44.22	ppm	100
72)	1,2-Diphenylhydrazine	7.900	77	2142551	42.28	ppm	96
74)	4-Bromophenyl-phenylether	8.189	248	549326	47.73	ppm	98
75)	Hexachlorobenzene	8.253	284	575519	45.16	ppm	99
77)	Phenanthrene	8.633	178	2423117	50.52	ppm	99
78)	Anthracene	8.681	178	2285364	46.86	ppm	100
80)	Di-n-butylphthalate	9.238	149	3775704	49.35	ppm	100
81)	Fluoranthene	9.949	202	3278421	48.10	ppm	98
84)	Pyrene	10.227	202	2806896	50.76	ppm	98
86)	Butylbenzylphthalate	11.158	149	1845168	59.50	ppm	99
87)	Benzo[a]anthracene	11.874	228	2929520	54.88	ppm	100
89)	Chrysene	11.933	228	2000600	52.83	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.030	149	1810283	56.72	ppm	98
92)	Di-n-octylphthalate	12.971	149	3933194	57.29	ppm	99
93)	Benzo[b]fluoranthene	13.388	252	2530576	53.77	ppm	96
94)	Benzo[k]fluoranthene	13.431	252	2179674	56.64	ppm	99
95)	Benzo[a]pyrene	13.816	252	2236082	56.53	ppm	99
96)	Indeno[1,2,3-cd]pyrene	15.287	276	2803450	62.18	ppm	99
98)	Dibenz[a,h]anthracene	15.319	278	2030905	57.83	ppm	98
100)	Benzo[g,h,i]perylene	15.677	276	2110742	59.15	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86298.D
Acq On : 5 Apr 2019 9:59 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 14:23:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86299.D
Acq On : 5 Apr 2019 10:22 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 14:26:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

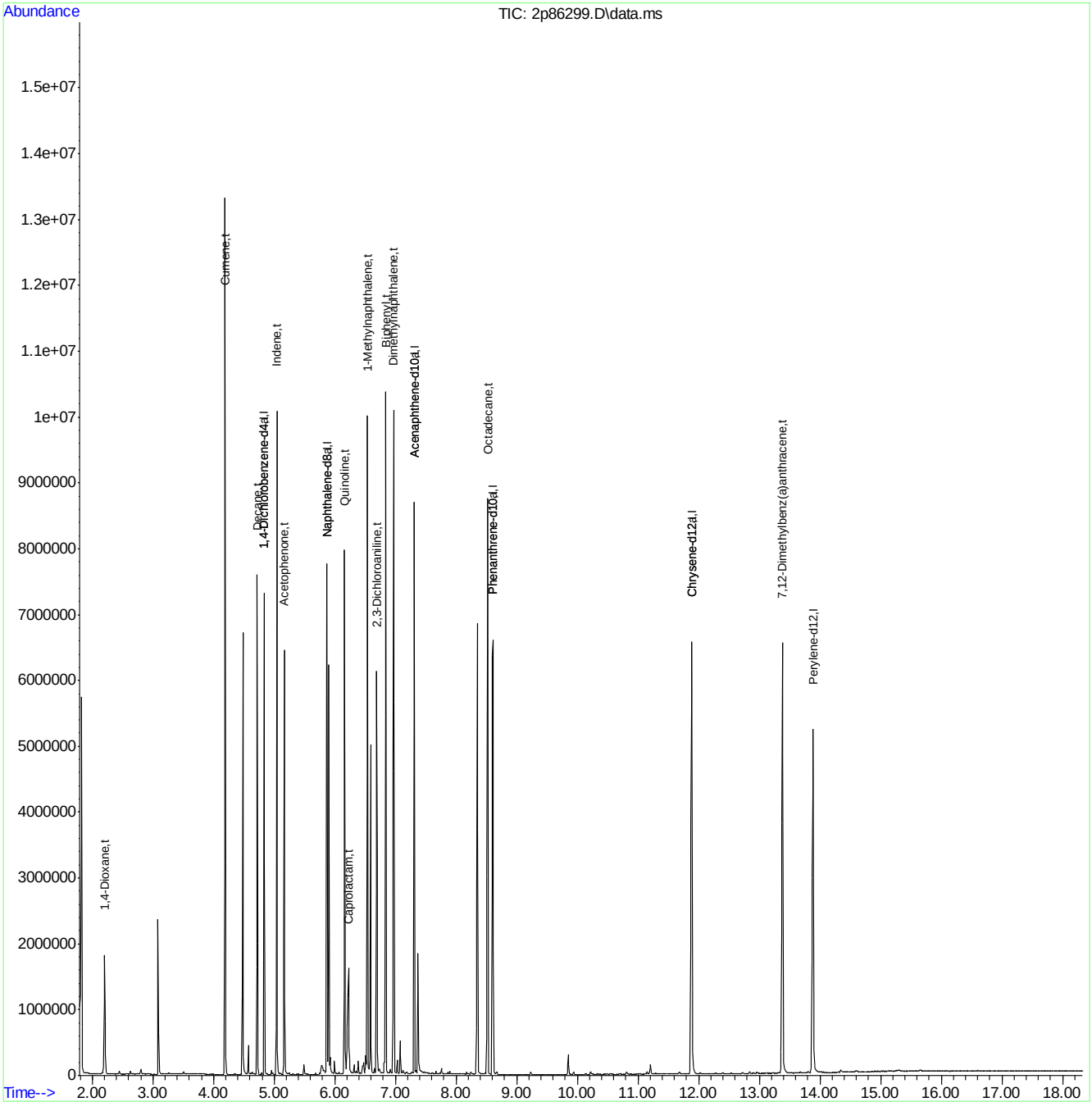
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.836	152	725673	40.00	ppm	0.00
24) Naphthalene-d8	5.873	136	2808973	40.00	ppm	0.00
47) Acenaphthene-d10	7.312	164	1310602	40.00	ppm	0.00
69) Phenanthrene-d10	8.606	188	2124461	40.00	ppm	0.00
83) Chrysene-d12	11.885	240	2481164	40.00	ppm	-0.01
91) Perylene-d12	13.886	264	2188246	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.836	152	725673	40.00	ppm	0.00
103) Naphthalene-d8a	5.873	136	2808973	40.00	ppm	0.00
105) Acenaphthene-d10a	7.312	164	1310602	40.00	ppm	0.00
108) Chrysene-d12a	11.885	240	2481164	40.00	ppm	-0.01
110) Phenanthrene-d10a	8.606	188	2124461	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.204	88	869136	38.01	ppm	97
6) Indene	5.044	116	2134068	54.70	ppm	100
7) Cumene	4.194	105	4159350	45.12	ppm	99
13) Decane	4.723	57	1158378	45.60	ppm	95
18) Acetophenone	5.167	105	1696648	46.38	ppm	97
27) Quinoline	6.162	129	2095680	42.19	ppm	98
40) 2,3-Dichloroaniline	6.692	161	857350	32.30	ppm	98
41) Caprolactam	6.226	113	307540	35.50	ppm	95
45) 1-Methylnaphthalene	6.537	141	1787805	38.19	ppm	98
46) Dimethylnaphthalene	6.970	156	1646850	38.13	ppm	97
53) Biphenyl	6.841	154	2267671	43.18	ppm	99
82) Octadecane	8.521	43	852787	48.74	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.383	256	1592580	48.82	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86299.D
Acq On : 5 Apr 2019 10:22 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 14:26:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86301.D
Acq On : 5 Apr 2019 11:09 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 05 14:30:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.836	152	731019	40.00	ppm		0.00
24) Naphthalene-d8	5.873	136	2113848	40.00	ppm		0.00
47) Acenaphthene-d10	7.312	164	1416805	40.00	ppm		0.00
69) Phenanthrene-d10	8.606	188	2167373	40.00	ppm		0.00
83) Chrysene-d12	11.885	240	2172779	40.00	ppm		-0.01
91) Perylene-d12	13.886	264	2195184	40.00	ppm		-0.01
101) 1,4-Dichlorobenzene-d4a	4.836	152	731019	40.00	ppm		0.00
103) Naphthalene-d8a	5.873	136	2113848	40.00	ppm		0.00
105) Acenaphthene-d10a	7.312	164	1416805	40.00	ppm		0.00
108) Chrysene-d12a	11.885	240	2172779	40.00	ppm		-0.01
110) Phenanthrene-d10a	8.606	188	2167373	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm		
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm		
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm		
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm		
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#			
Target Compounds							Qvalue
9) Phenol	4.590	94	2340553	55.63	ppm		94
12) 2-Chlorophenol	4.675	128	1462494	54.13	ppm		97
19) 2-Methylphenol	5.066	108	1261500	58.78	ppm		98
21) 3&4-Methylphenol	5.194	108	1225110	56.32	ppm		99
29) 2-Nitrophenol	5.563	139	664577	58.49	ppm		84
30) 2,4-Dimethylphenol	5.617	107	1309261	66.41	ppm		97
31) Benzoic acid	5.761	105	843829	47.61	ppm		95
33) 2,4-Dichlorophenol	5.772	162	816264	51.38	ppm		99
34) 2,6-Dichlorophenol	5.948	162	797315	55.94	ppm		98
43) 4-Chloro-3-methylphenol	6.355	107	1140383	55.44	ppm		74
49) 2,4,6-Trichlorophenol	6.697	196	674075	50.82	ppm		96
50) 2,4,5-Trichlorophenol	6.729	196	620538	44.95	ppm		98
60) 2,4-Dinitrophenol	7.371	184	232789	43.31	ppm	#	46
61) 4-Nitrophenol	7.451	109	427298	46.63	ppm		96
64) 2,3,4,6-Tetrachlorophenol	7.590	232	526646	41.05	ppm		93
70) 4,6-Dinitro-2-methylph...	7.815	198	382337	59.08	ppm		85
76) Pentachlorophenol	8.435	266	522213	51.93	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86301.D
Acq On : 5 Apr 2019 11:09 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 05 14:30:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

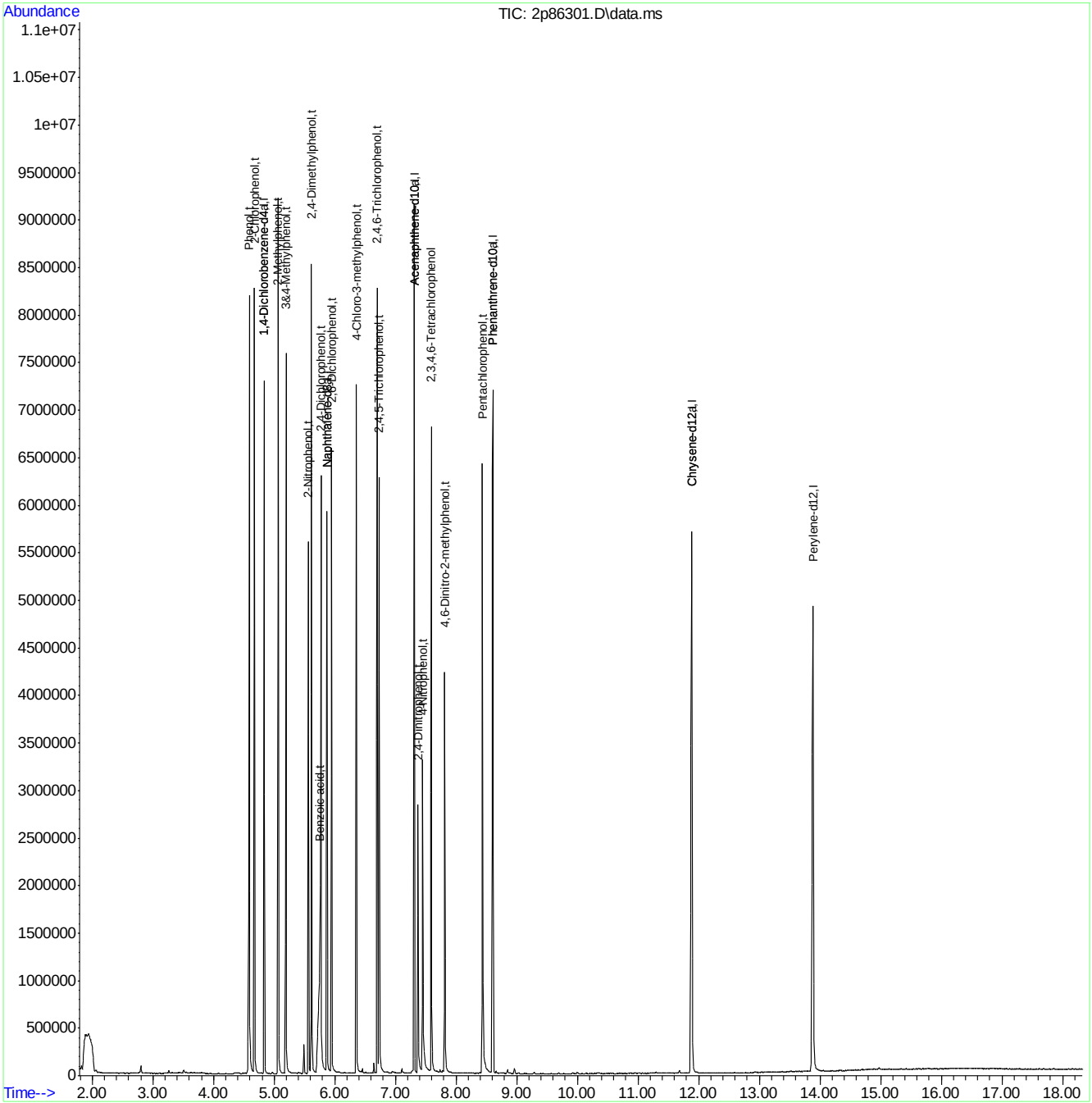
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86301.D
Acq On : 5 Apr 2019 11:09 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 05 14:30:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86302.D
Acq On : 5 Apr 2019 11:32 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 14:33:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

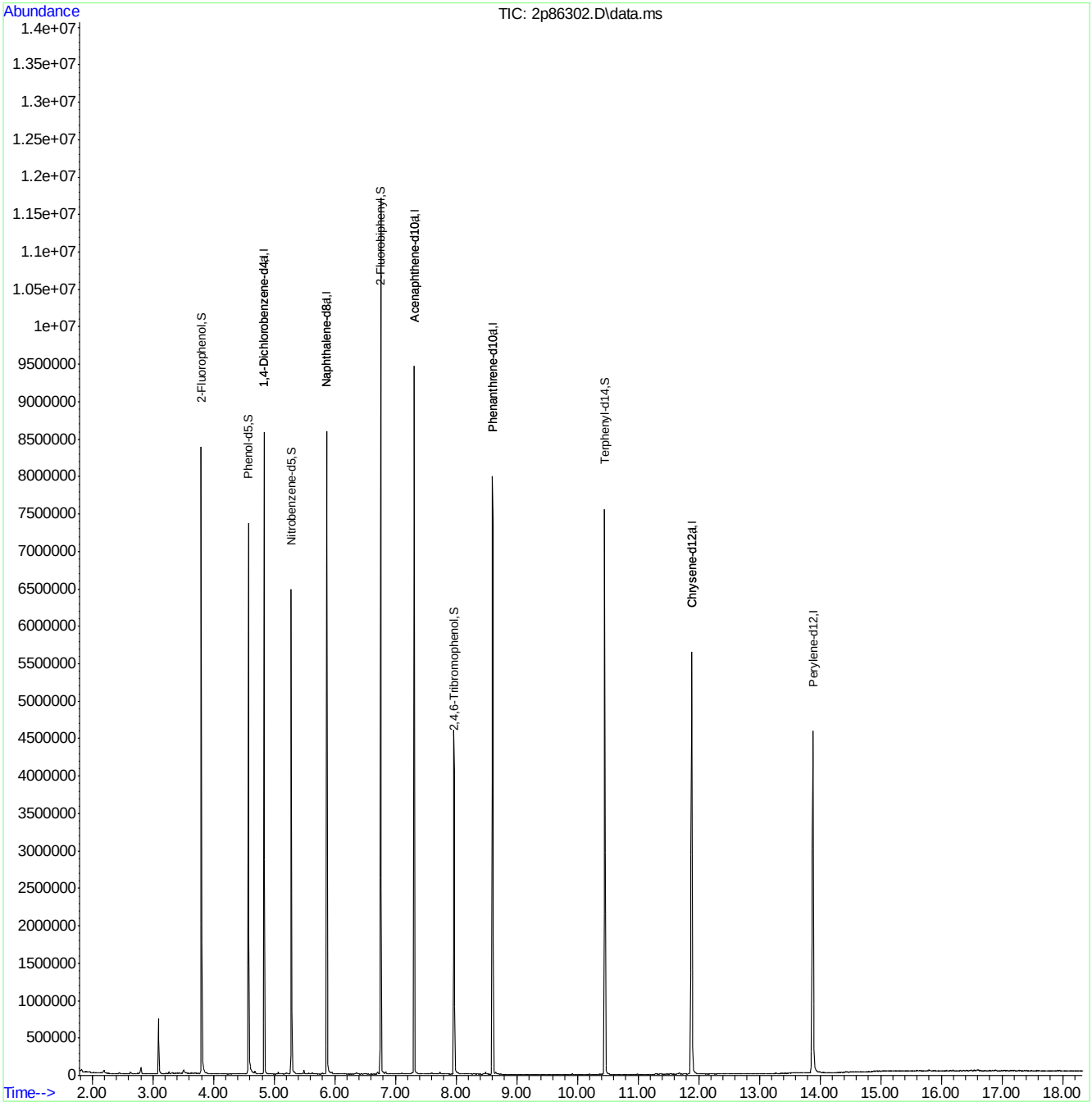
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.836	152	880241	40.00	ppm	0.00
24) Naphthalene-d8	5.868	136	3088721	40.00	ppm	0.00
47) Acenaphthene-d10	7.312	164	1538493	40.00	ppm	0.00
69) Phenanthrene-d10	8.601	188	2534217	40.00	ppm	0.00
83) Chrysene-d12	11.885	240	2054658	40.00	ppm	-0.01
91) Perylene-d12	13.886	264	1977762	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.836	152	880241	40.00	ppm	0.00
103) Naphthalene-d8a	5.868	136	3088721	40.00	ppm	# 0.00
105) Acenaphthene-d10a	7.312	164	1538493	40.00	ppm	0.00
108) Chrysene-d12a	11.885	240	2054658	40.00	ppm	-0.01
110) Phenanthrene-d10a	8.601	188	2534217	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.798	112	1704717	38.49	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 76.98%#			
8) Phenol-d5	4.579	99	2153550	44.36	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 88.72%#			
25) Nitrobenzene-d5	5.285	82	1943758	46.82	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 93.64%#			
51) 2-Fluorobiphenyl	6.761	172	2708111	50.85	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 101.70%#			
73) 2,4,6-Tribromophenol	7.970	330	364516	41.01	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 82.02%#			
85) Terphenyl-d14	10.452	244	2594718	50.74	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 101.48%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86302.D
Acq On : 5 Apr 2019 11:32 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 14:33:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86303.D
Acq On : 5 Apr 2019 11:55 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 14:34:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

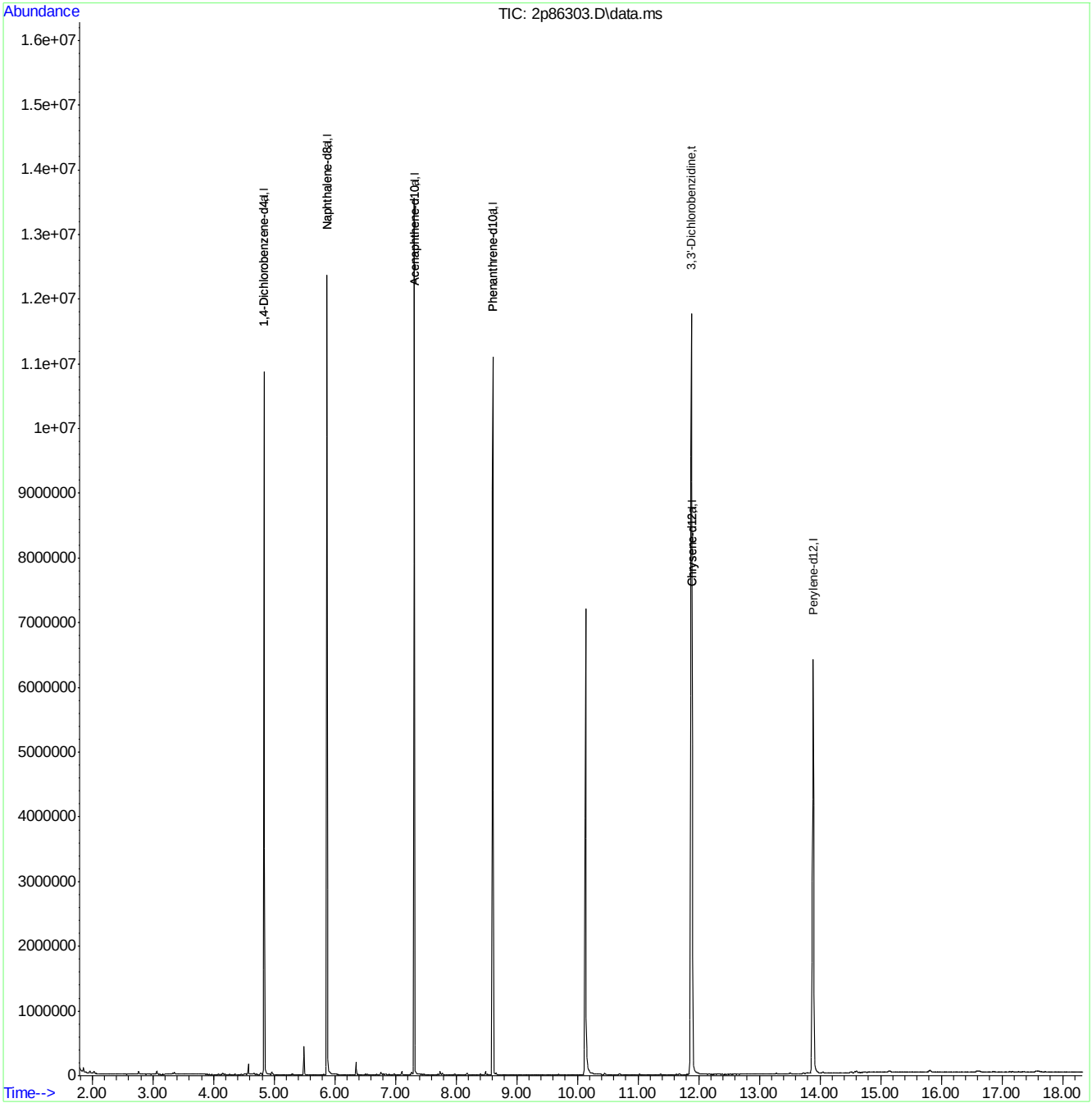
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.836	152	1218658	40.00	ppm	0.00
24) Naphthalene-d8	5.873	136	4110915	40.00	ppm	0.00
47) Acenaphthene-d10	7.312	164	2047205	40.00	ppm	0.00
69) Phenanthrene-d10	8.606	188	3461314	40.00	ppm	0.00
83) Chrysene-d12	11.890	240	2776110	40.00	ppm	0.00
91) Perylene-d12	13.891	264	2966609	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.836	152	1218658	40.00	ppm	0.00
103) Naphthalene-d8a	5.873	136	4110915	40.00	ppm	0.00
105) Acenaphthene-d10a	7.312	164	2047205	40.00	ppm	0.00
108) Chrysene-d12a	11.890	240	2776110	40.00	ppm	0.00
110) Phenanthrene-d10a	8.606	188	3461314	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	11.880	252	1765566	41.17	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3816\
Data File : 2p86303.D
Acq On : 5 Apr 2019 11:55 am
Operator : chriss2
Sample : icv3816-50
Misc : op13652,e2p3816,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 14:34:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3817\
Data File : 2p86307.D
Acq On : 5 Apr 2019 4:36 pm
Operator : christc2
Sample : icv3816-50
Misc : op13652,e2p3817,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 13:13:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

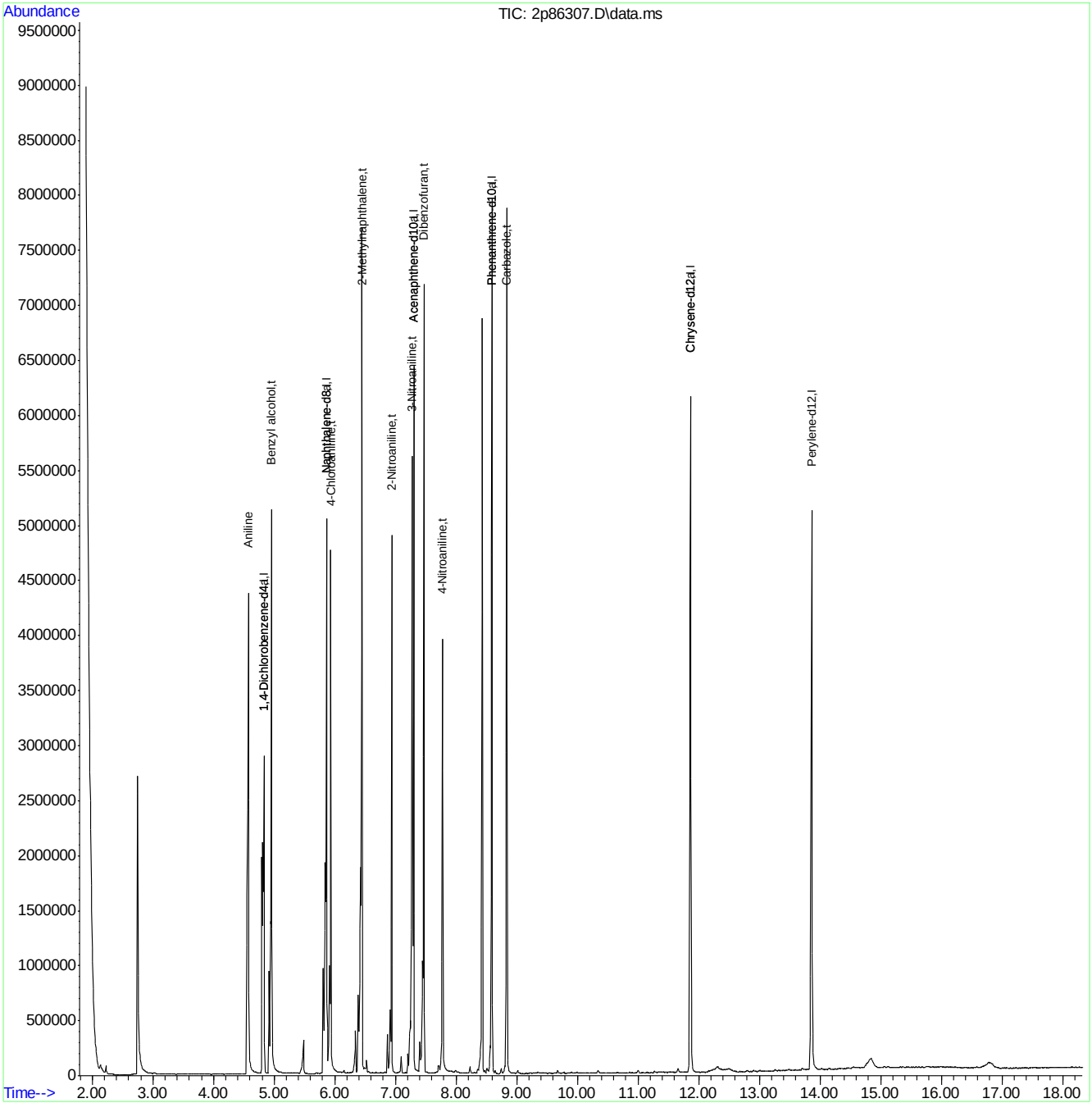
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.830	152	796068	40.00	ppm	0.00
24) Naphthalene-d8	5.863	136	2690544	40.00	ppm	-0.01
47) Acenaphthene-d10	7.301	164	1337964	40.00	ppm	-0.01
69) Phenanthrene-d10	8.590	188	2415060	40.00	ppm	-0.02
83) Chrysene-d12	11.864	240	2331393	40.00	ppm	-0.03
91) Perylene-d12	13.864	264	2195805	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.830	152	796068	40.00	ppm	0.00
103) Naphthalene-d8a	5.863	136	2690781	40.00	ppm	-0.01
105) Acenaphthene-d10a	7.301	164	1337964	40.00	ppm	-0.01
108) Chrysene-d12a	11.864	240	2331393	40.00	ppm	-0.03
110) Phenanthrene-d10a	8.590	188	2415060	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery =	0.00%#		
Target Compounds						Qvalue
10) Aniline	4.574	93	2493638	48.99	ppm	98
16) Benzyl alcohol	4.959	108	772500	48.02	ppm	98
39) 4-Chloroaniline	5.932	127	1228408	46.51	ppm	96
44) 2-Methylnaphthalene	6.446	141	1781493	43.52	ppm	98
54) 2-Nitroaniline	6.938	65	802413	48.71	ppm	99
58) 3-Nitroaniline	7.275	138	565259	48.11	ppm	96
62) Dibenzofuran	7.467	168	2577901	48.66	ppm	95
68) 4-Nitroaniline	7.777	138	541746	53.49	ppm	97
79) Carbazole	8.836	167	2950413	46.64	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3817\
Data File : 2p86307.D
Acq On : 5 Apr 2019 4:36 pm
Operator : christc2
Sample : icv3816-50
Misc : op13652,e2p3817,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 13:13:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86728.D
Acq On : 18 Apr 2019 10:23 pm
Operator : carolb
Sample : cc3816-25
Misc : op19810,e2p3831,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 19 10:25:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	486940	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	1597346	40.00	ppm	-0.17
47) Acenaphthene-d10	7.136	164	861284	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	1489012	40.00	ppm	-0.21
83) Chrysene-d12	11.618	240	1487218	40.00	ppm	-0.28
91) Perylene-d12	13.602	264	1412185	40.00	ppm	-0.29
101) 1,4-Dichlorobenzene-d4a	4.670	152	486940	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	1597346	40.00	ppm	#-0.17
105) Acenaphthene-d10a	7.136	164	861284	40.00	ppm	-0.18
108) Chrysene-d12a	11.618	240	1487218	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	1489012	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.632	112	633897	25.87	ppm	-0.15
Spiked Amount 50.000	Range 11 - 58		Recovery = 51.74%			
8) Phenol-d5	4.424	99	720414	26.83	ppm	-0.16
Spiked Amount 50.000	Range 10 - 59		Recovery = 53.66%			
25) Nitrobenzene-d5	5.124	82	574552	26.76	ppm	-0.17
Spiked Amount 50.000	Range 19 - 61		Recovery = 53.52%			
51) 2-Fluorobiphenyl	6.590	172	733664	24.61	ppm	-0.18
Spiked Amount 50.000	Range 21 - 58		Recovery = 49.22%			
73) 2,4,6-Tribromophenol	7.788	330	108636	20.80	ppm	-0.19
Spiked Amount 50.000	Range 12 - 68		Recovery = 41.60%			
85) Terphenyl-d14	10.200	244	869297	23.49	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery = 46.98%			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.953	88	429306	29.98	ppm	97
3) Pyridine	2.311	79	950264	28.39	ppm	96
4) N-Nitrosodimethylamine	2.306	74	561784	26.80	ppm	99
6) Indene	4.878	116	702714	26.84	ppm	99
7) Cumene	4.017	105	1655356	26.76	ppm	98
9) Phenol	4.434	94	828599	29.57	ppm	99
10) Aniline	4.413	93	924526	29.70	ppm	95
11) bis(2-Chloroethyl)ether	4.467	93	534485	26.69	ppm	95
12) 2-Chlorophenol	4.515	128	479626	26.65	ppm	99
13) Decane	4.558	57	486129	28.52	ppm	98
14) 1,3-Dichlorobenzene	4.622	146	502403	25.30	ppm	98
15) 1,4-Dichlorobenzene	4.681	146	468367	26.39	ppm	98
16) Benzyl alcohol	4.804	108	276213	28.07	ppm	96
17) 1,2-Dichlorobenzene	4.804	146	455454	26.69	ppm	98
18) Acetophenone	5.007	105	653253	26.61	ppm	95
19) 2-Methylphenol	4.911	108	409483	28.64	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.905	121	107082	25.90	ppm #	72
21) 3&4-Methylphenol	5.039	108	413550	28.54	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86728.D
Acq On : 18 Apr 2019 10:23 pm
Operator : carolb
Sample : cc3816-25
Misc : op19810,e2p3831,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 19 10:25:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.012	70	368411	28.45	ppm		93
23) Hexachloroethane	5.076	201	139273	23.19	ppm		86
26) Nitrobenzene	5.141	77	574047	27.30	ppm		98
27) Quinoline	6.002	129	728601	25.79	ppm		99
28) Isophorone	5.338	82	971267	26.29	ppm		97
29) 2-Nitrophenol	5.403	139	219297	25.54	ppm	#	73
30) 2,4-Dimethylphenol	5.461	107	457441	30.07	ppm		98
31) Benzoic acid	5.595	105	351079	26.21	ppm		92
32) bis(2-Chloroethoxy)met...	5.520	93	547706	26.64	ppm		99
33) 2,4-Dichlorophenol	5.611	162	301376	25.10	ppm		96
34) 2,6-Dichlorophenol	5.782	162	281959	26.18	ppm		94
35) 1,3,5-Trichlorobenzene	5.408	180	356845	24.53	ppm		97
36) 1,2,4-Trichlorobenzene	5.659	180	322612	24.13	ppm		96
37) 1,2,3-Trichlorobenzene	5.841	180	295976	25.15	ppm		99
38) Naphthalene	5.718	128	1014996	26.56	ppm		99
39) 4-Chloroaniline	5.777	127	432257	27.57	ppm		91
40) 2,3-Dichloroaniline	6.520	161	377051	24.98	ppm		95
41) Caprolactam	6.082	113	128165	26.01	ppm		86
42) Hexachlorobutadiene	5.830	225	180010	23.47	ppm		98
43) 4-Chloro-3-methylphenol	6.205	107	425477	27.37	ppm		81
44) 2-Methylnaphthalene	6.285	141	618661	25.46	ppm		98
45) 1-Methylnaphthalene	6.365	141	682611	25.64	ppm		97
46) Dimethylnaphthalene	6.799	156	592043	24.10	ppm		94
48) Hexachlorocyclopentadiene	6.419	237	349100	44.00	ppm		97
49) 2,4,6-Trichlorophenol	6.531	196	201142	24.95	ppm		96
50) 2,4,5-Trichlorophenol	6.574	196	211818	25.24	ppm		97
52) 2-Chloronaphthalene	6.681	162	618968	25.06	ppm		98
53) Biphenyl	6.670	154	872136	25.27	ppm		99
54) 2-Nitroaniline	6.777	65	288000	27.16	ppm		80
55) Dimethylphthalate	6.927	163	737438	24.13	ppm		99
56) Acenaphthylene	7.018	152	1047567	24.87	ppm		99
57) 2,6-Dinitrotoluene	6.980	165	167052	24.92	ppm		98
58) 3-Nitroaniline	7.120	138	202389	26.76	ppm		95
59) Acenaphthene	7.162	153	656813	26.56	ppm		99
60) 2,4-Dinitrophenol	7.210	184	141006	43.18	ppm	#	61
61) 4-Nitrophenol	7.296	109	141417	25.38	ppm	#	53
62) Dibenzofuran	7.307	168	935799	27.44	ppm		95
63) 2,4-Dinitrotoluene	7.312	165	229567	26.63	ppm		96
64) 2,3,4,6-Tetrachlorophenol	7.419	232	181178	23.23	ppm		90
65) Diethylphthalate	7.510	149	846807	26.66	ppm		98
66) Fluorene	7.585	166	807546	27.61	ppm		97
67) 4-Chlorophenyl-phenyle...	7.590	204	363784	25.89	ppm		90
68) 4-Nitroaniline	7.622	138	177633	27.24	ppm		96
70) 4,6-Dinitro-2-methylph...	7.649	198	112185	25.23	ppm		80
71) n-Nitrosodiphenylamine	7.692	169	521885	25.96	ppm		99
72) 1,2-Diphenylhydrazine	7.719	77	1033423	26.37	ppm		96
74) 4-Bromophenyl-phenylether	7.997	248	220045	24.72	ppm		94
75) Hexachlorobenzene	8.056	284	244773	24.83	ppm		95
76) Pentachlorophenol	8.243	266	311673	45.84	ppm		97
77) Phenanthrene	8.419	178	1005043	27.10	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86728.D
Acq On : 18 Apr 2019 10:23 pm
Operator : carolb
Sample : cc3816-25
Misc : op19810,e2p3831,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 19 10:25:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

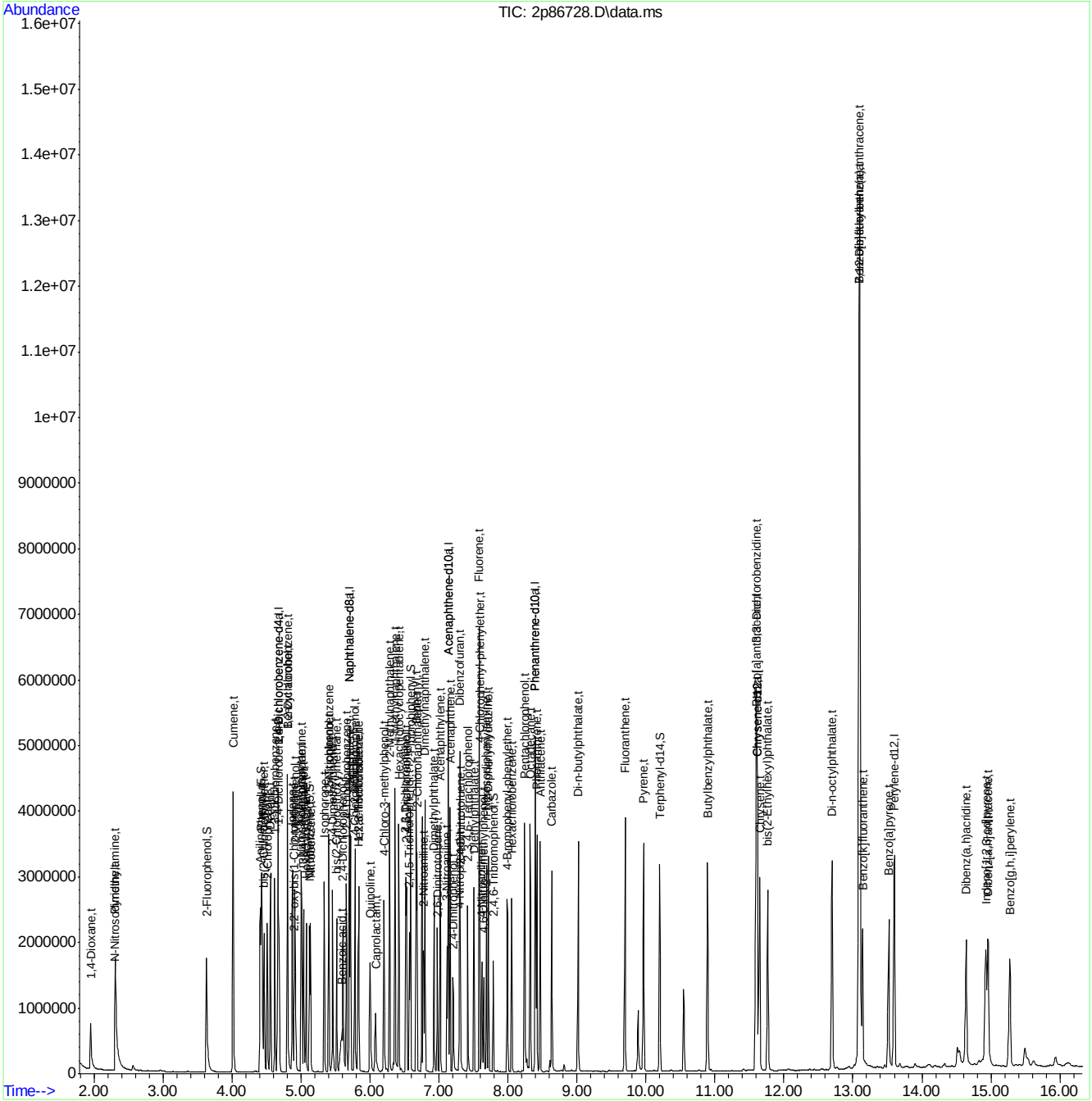
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.467	178	1027351	27.24	ppm	99
79) Carbazole	8.639	167	1025794	26.30	ppm	98
80) Di-n-butylphthalate	9.018	149	1636634	27.66	ppm	99
81) Fluoranthene	9.698	202	1401754	26.59	ppm	96
82) Octadecane	8.323	43	356923	29.10	ppm	93
84) Pyrene	9.970	202	1396468	24.13	ppm	99
86) Butylbenzylphthalate	10.896	149	832562	25.66	ppm	90
87) Benzo[a]anthracene	11.596	228	1377144	24.65	ppm	99
88) 3,3'-Dichlorobenzidine	11.602	252	479992	21.80	ppm	95
89) Chrysene	11.650	228	1025869	25.89	ppm	98
90) bis(2-Ethylhexyl)phtha...	11.767	149	946951	28.35	ppm	99
92) Di-n-octylphthalate	12.698	149	2002438	29.67	ppm	98
93) Benzo[b]fluoranthene	13.099	252	1349321	29.16	ppm	99
94) Benzo[k]fluoranthene	13.142	252	839780	22.19	ppm	99
95) Benzo[a]pyrene	13.522	252	1021304	26.26	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.929	276	1229914	27.75	ppm	95
97) Dibenz(a,h)acridine	14.645	279	958647	24.96	ppm	99
98) Dibenz[a,h]anthracene	14.961	278	986288	28.57	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.099	256	658820	31.29	ppm	97
100) Benzo[g,h,i]perylene	15.276	276	980109	27.94	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86728.D
Acq On : 18 Apr 2019 10:23 pm
Operator : carolb
Sample : cc3816-25
Misc : op19810,e2p3831,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 19 10:25:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86730.D
Acq On : 18 Apr 2019 11:21 pm
Operator : carolb
Sample : cc3783-26
Misc : op13652,e2p3831,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 19 10:17:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration

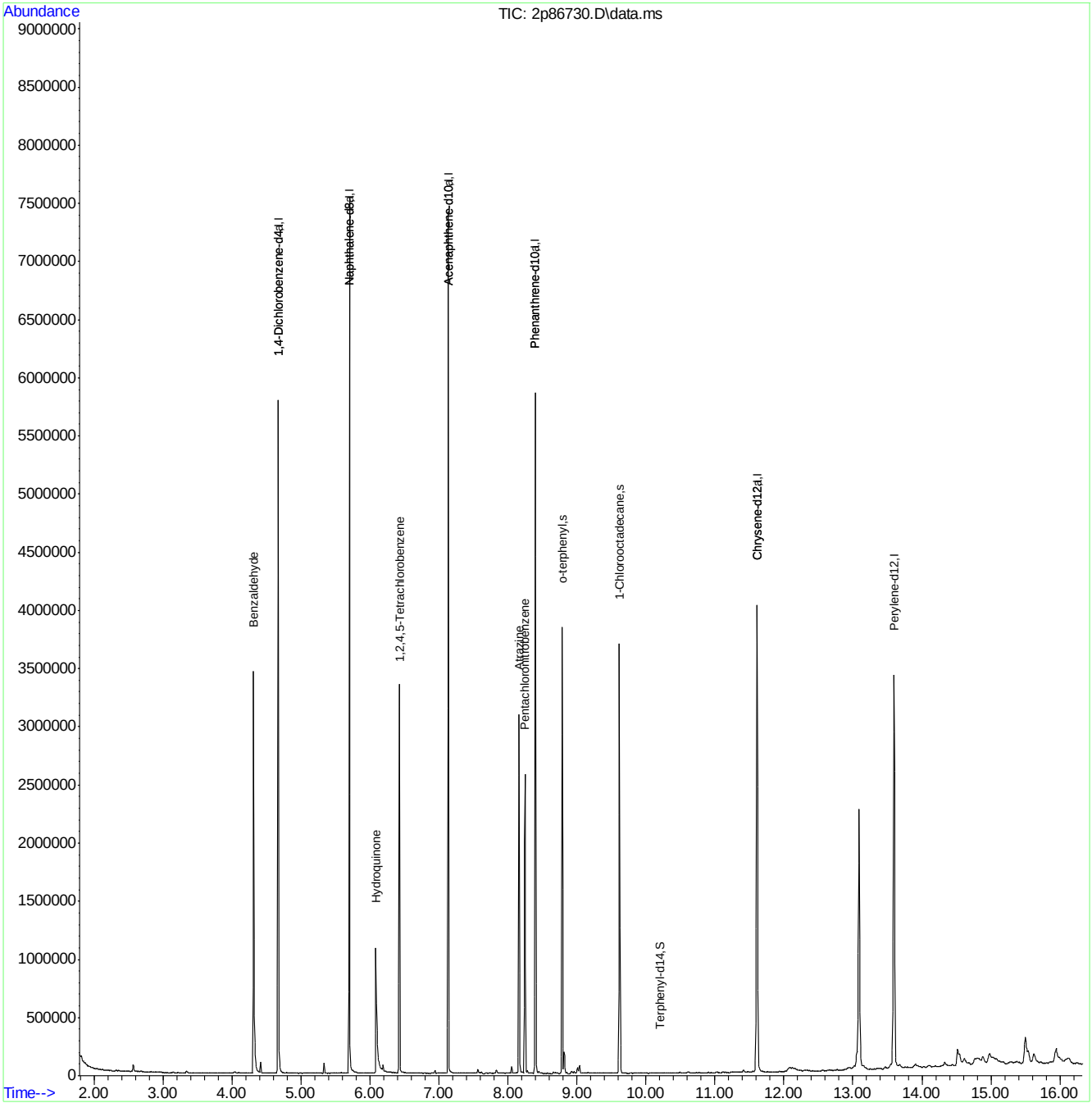
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	683045	40.00	ppm	-0.17
24) Naphthalene-d8	5.702	136	2271348	40.00	ppm	-0.17
47) Acenaphthene-d10	7.136	164	1078013	40.00	ppm	-0.18
69) Phenanthrene-d10	8.398	188	1592449	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	1423856	40.00	ppm	-0.28
91) Perylene-d12	13.597	264	1391809	40.00	ppm	-0.30
101) 1,4-Dichlorobenzene-d4a	4.670	152	683045	40.00	ppm	-0.17
103) Naphthalene-d8a	5.702	136	2271348	40.00	ppm	-0.17
105) Acenaphthene-d10a	7.136	164	1078013	40.00	ppm	-0.18
108) Chrysene-d12a	11.612	240	1423856	40.00	ppm	0.00
110) Phenanthrene-d10a	8.398	188	1592449	40.00	ppm	#-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	10.200	244	1098	0.03	ppm	-0.26
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.06%#		
111) 1-Chlorooctadecane	9.617	57	460573	38.47	ppm	-0.08
Spiked Amount 50.000	Range 20 - 70		Recovery =	76.94%#		
112) o-terphenyl	8.788	230	550757	25.73	ppm	0.00
Spiked Amount 50.000	Range 20 - 70		Recovery =	51.46%		
Target Compounds						Qvalue
102) Benzaldehyde	4.311	105	633901	25.67	ppm	90
104) Hydroquinone	6.087	110	529803	30.92	ppm #	89
106) Atrazine	8.163	215	114407	25.07	ppm	89
107) 1,2,4,5-Tetrachloroben...	6.430	216	380027	23.55	ppm	98
113) Pentachloronitrobenzene	8.248	295	42101	24.53	ppm	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P3831\
Data File : 2p86730.D
Acq On : 18 Apr 2019 11:21 pm
Operator : carolb
Sample : cc3783-26
Misc : op13652,e2p3831,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 19 10:17:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 05 14:12:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86756.d
Acq On : 22 Apr 2019 1:22 pm
Operator : yujiac
Sample : cc3816-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:13:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	403777	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	1477084	40.00	ppm	0.00
47) Acenaphthene-d10	7.130	164	850510	40.00	ppm	0.00
69) Phenanthrene-d10	8.392	188	1517598	40.00	ppm	0.00
83) Chrysene-d12	11.612	240	1474798	40.00	ppm	0.00
91) Perylene-d12	13.591	264	1556723	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	403777	40.00	ppm	0.00
103) Naphthalene-d8a	5.697	136	1477084	40.00	ppm	0.00
105) Acenaphthene-d10a	7.130	164	850510	40.00	ppm	0.00
108) Chrysene-d12a	11.612	240	1474798	40.00	ppm	0.00
110) Phenanthrene-d10a	8.392	188	1517598	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.616	112	1182854	58.22	ppm	-0.04
Spiked Amount 50.000	Range 11 - 58		Recovery = 116.44%#			
8) Phenol-d5	4.413	99	1257064	56.45	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 112.90%#			
25) Nitrobenzene-d5	5.119	82	1050562	52.92	ppm	-0.01
Spiked Amount 50.000	Range 19 - 61		Recovery = 105.84%#			
51) 2-Fluorobiphenyl	6.584	172	1404672	47.71	ppm	-0.01
Spiked Amount 50.000	Range 21 - 58		Recovery = 95.42%#			
73) 2,4,6-Tribromophenol	7.783	330	218453	41.04	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 82.08%#			
85) Terphenyl-d14	10.195	244	1903772	51.87	ppm	-0.01
Spiked Amount 50.000	Range 16 - 65		Recovery = 103.74%#			
111) 1-Chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.926	88	837414	56.55	ppm	93
3) Pyridine	2.289	79	1792491	64.58	ppm	100
4) N-Nitrosodimethylamine	2.284	74	1059410	60.95	ppm	95
6) Indene	4.873	116	1219787	56.19	ppm	99
7) Cumene	4.006	105	2882668	56.20	ppm	96
9) Phenol	4.424	94	1380632	59.41	ppm	94
10) Aniline	4.402	93	1534221	59.43	ppm	97
11) bis(2-Chloroethyl)ether	4.461	93	877202	52.82	ppm	96
12) 2-Chlorophenol	4.504	128	775808	51.99	ppm	95
13) Decane	4.552	57	806505	57.05	ppm	98
14) 1,3-Dichlorobenzene	4.616	146	829710	50.39	ppm	98
15) 1,4-Dichlorobenzene	4.675	146	801959	54.49	ppm	96
16) Benzyl alcohol	4.798	108	486266	59.60	ppm	95
17) 1,2-Dichlorobenzene	4.798	146	799620	56.51	ppm	97
18) Acetophenone	5.001	105	1179061	57.92	ppm	92
19) 2-Methylphenol	4.905	108	680731	57.42	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.900	121	187424	54.67	ppm #	73
21) 3&4-Methylphenol	5.033	108	710392	59.13	ppm	99
22) n-Nitroso-di-n-propyla...	5.012	70	635215	59.16	ppm	91
23) Hexachloroethane	5.065	201	250824	50.38	ppm #	80
26) Nitrobenzene	5.135	77	1009175	51.89	ppm	96
27) Quinoline	6.007	129	1483969	56.81	ppm	96
28) Isophorone	5.338	82	1862236	54.52	ppm	97
29) 2-Nitrophenol	5.397	139	408227	51.42	ppm	83
30) 2,4-Dimethylphenol	5.451	107	853281	60.65	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86756.d
Acq On : 22 Apr 2019 1:22 pm
Operator : yujiac
Sample : cc3816-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:13:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31)	Benzoic acid	5.622	105	720715	58.19	ppm		95
32)	bis(2-Chloroethoxy)met...	5.515	93	975557	51.31	ppm		98
33)	2,4-Dichlorophenol	5.600	162	582265	52.45	ppm		93
34)	2,6-Dichlorophenol	5.777	162	541222	54.34	ppm		97
35)	1,3,5-Trichlorobenzene	5.402	180	671313	49.91	ppm		98
36)	1,2,4-Trichlorobenzene	5.654	180	589050	47.64	ppm		98
37)	1,2,3-Trichlorobenzene	5.836	180	558940	51.37	ppm		98
38)	Naphthalene	5.713	128	1868337	52.88	ppm		99
39)	4-Chloroaniline	5.771	127	796935	54.96	ppm		90
40)	2,3-Dichloroaniline	6.515	161	733997	52.59	ppm		98
41)	Caprolactam	6.098	113	256637	56.33	ppm		84
42)	Hexachlorobutadiene	5.825	225	360027	50.77	ppm		100
43)	4-Chloro-3-methylphenol	6.199	107	873230	60.75	ppm		82
44)	2-Methylnaphthalene	6.280	141	1172943	52.20	ppm		98
45)	1-Methylnaphthalene	6.360	141	1264895	51.38	ppm		97
46)	Dimethylnaphthalene	6.793	156	1137796	50.09	ppm		95
48)	Hexachlorocyclopentadiene	6.413	237	685373	82.81	ppm		97
49)	2,4,6-Trichlorophenol	6.531	196	398239	50.02	ppm		97
50)	2,4,5-Trichlorophenol	6.568	196	413823	49.94	ppm		99
52)	2-Chloronaphthalene	6.675	162	1191462	48.86	ppm		97
53)	Biphenyl	6.665	154	1667524	48.92	ppm		99
54)	2-Nitroaniline	6.777	65	545533	52.10	ppm		86
55)	Dimethylphthalate	6.927	163	1548219	51.29	ppm		99
56)	Acenaphthylene	7.012	152	2078024	49.95	ppm		100
57)	2,6-Dinitrotoluene	6.975	165	337082	50.93	ppm		71
58)	3-Nitroaniline	7.119	138	409750	54.86	ppm		92
59)	Acenaphthene	7.157	153	1312722	53.76	ppm		97
60)	2,4-Dinitrophenol	7.210	184	322644	89.36	ppm	#	43
61)	4-Nitrophenol	7.290	109	323660	58.83	ppm	#	72
62)	Dibenzofuran	7.301	168	1826568	54.24	ppm		94
63)	2,4-Dinitrotoluene	7.312	165	432573	50.82	ppm		87
64)	2,3,4,6-Tetrachlorophenol	7.413	232	368349	47.83	ppm		88
65)	Diethylphthalate	7.504	149	1739024	55.45	ppm		98
66)	Fluorene	7.579	166	1574363	54.51	ppm		100
67)	4-Chlorophenyl-phenyle...	7.585	204	786133	56.66	ppm		98
68)	4-Nitroaniline	7.627	138	329063	51.11	ppm		92
70)	4,6-Dinitro-2-methylph...	7.654	198	234004	51.64	ppm		77
71)	n-Nitrosodiphenylamine	7.686	169	1026835	50.11	ppm		98
72)	1,2-Diphenylhydrazine	7.713	77	2056173	51.47	ppm		96
74)	4-Bromophenyl-phenylether	7.991	248	462692	51.00	ppm		91
75)	Hexachlorobenzene	8.050	284	501732	49.95	ppm		85
76)	Pentachlorophenol	8.237	266	678139	89.76	ppm		98
77)	Phenanthrene	8.414	178	2087183	55.21	ppm		99
78)	Anthracene	8.467	178	2142218	55.73	ppm		99
79)	Carbazole	8.633	167	2133934	53.69	ppm		99
80)	Di-n-butylphthalate	9.007	149	3599901	59.69	ppm		100
81)	Fluoranthene	9.692	202	3036587	56.52	ppm		98
82)	Octadecane	8.317	43	683558	54.69	ppm		95
84)	Pyrene	9.965	202	2930595	51.07	ppm		98
86)	Butylbenzylphthalate	10.885	149	1796928	55.84	ppm		94
87)	Benzo[a]anthracene	11.591	228	2965218	53.53	ppm		99
88)	3,3'-Dichlorobenzidine	11.596	252	1041078	45.54	ppm		96
89)	Chrysene	11.650	228	2129473	54.19	ppm		99
90)	bis(2-Ethylhexyl)phtha...	11.751	149	2025023	61.14	ppm		97
92)	Di-n-octylphthalate	12.687	149	4517644	60.72	ppm		99
93)	Benzo[b]fluoranthene	13.110	252	2725702	53.44	ppm		96
94)	Benzo[k]fluoranthene	13.142	252	2202131	52.80	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86756.d
Acq On : 22 Apr 2019 1:22 pm
Operator : yujiac
Sample : cc3816-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:13:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration

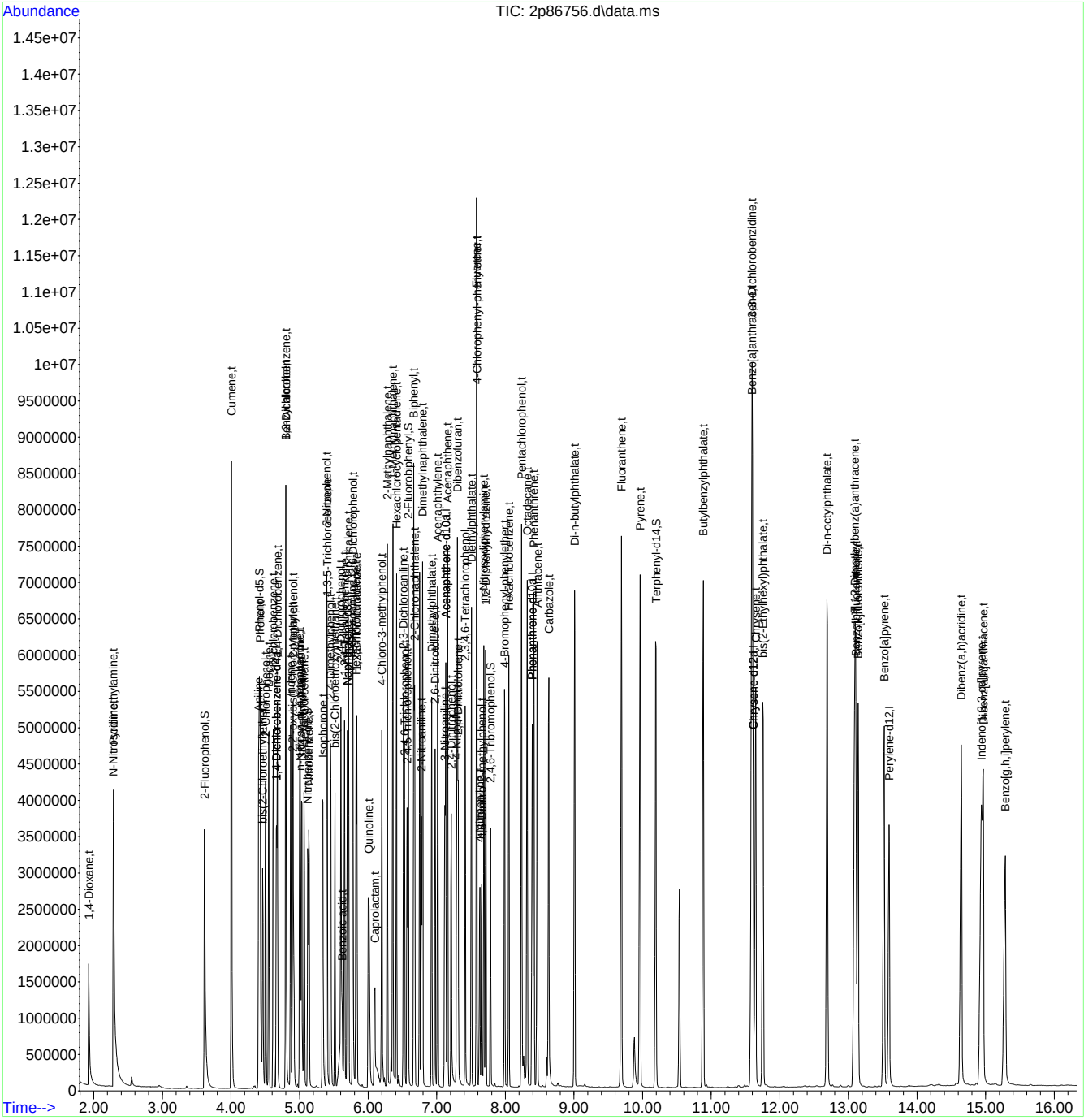
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	13.522	252	2445557	57.05	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.939	276	2935479	60.08	ppm	97
97) Dibenz(a,h)acridine	14.645	279	2434768	57.50	ppm	100
98) Dibenz[a,h]anthracene	14.966	278	2351513	61.79	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.094	256	1338717	57.68	ppm	98
100) Benzo[g,h,i]perylene	15.287	276	2197893	56.83	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86756.d
Acq On : 22 Apr 2019 1:22 pm
Operator : yujiac
Sample : cc3816-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:13:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86757.d
Acq On : 22 Apr 2019 1:44 pm
Operator : yujiac
Sample : cc3783-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:18:00 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration

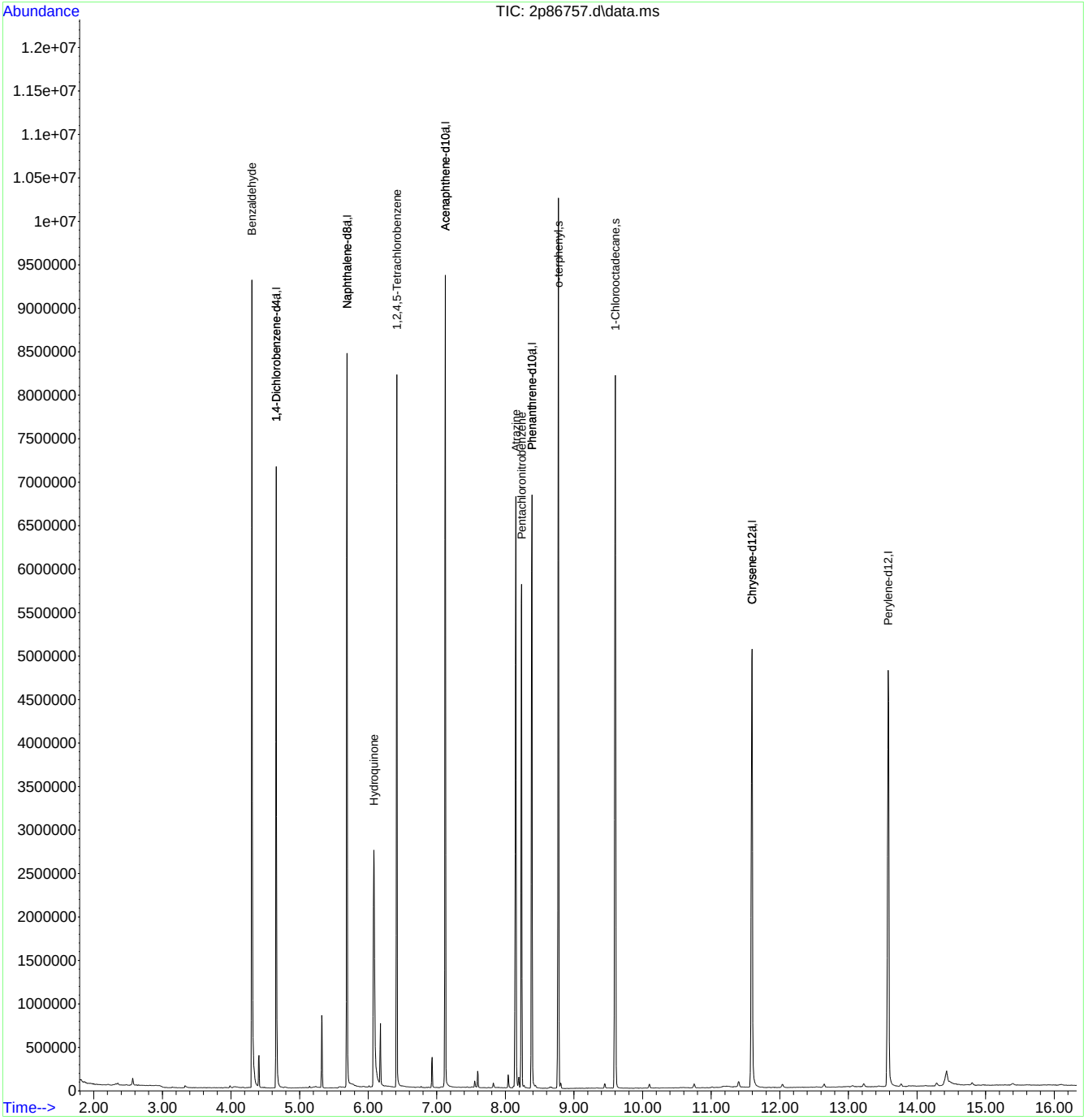
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.659	152	744993	40.00	ppm	0.00
24) Naphthalene-d8	5.691	136	2661975	40.00	ppm	0.00
47) Acenaphthene-d10	7.125	164	1376106	40.00	ppm	0.00
69) Phenanthrene-d10	8.387	188	1965398	40.00	ppm	0.00
83) Chrysene-d12	11.596	240	1913595	40.00	ppm	-0.02
91) Perylene-d12	13.581	264	2123461	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.659	152	744993	40.00	ppm	0.00
103) Naphthalene-d8a	5.691	136	2661975	40.00	ppm	0.00
105) Acenaphthene-d10a	7.125	164	1376106	40.00	ppm	0.00
108) Chrysene-d12a	11.596	240	1913595	40.00	ppm	-0.02
110) Phenanthrene-d10a	8.387	188	1965398	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	9.601	57	1053954	71.33	ppm	-0.10
Spiked Amount 50.000	Range 20 - 70		Recovery =	142.66%#		
112) o-terphenyl	8.772	230	1573973	59.58	ppm	-0.10
Spiked Amount 50.000	Range 20 - 70		Recovery =	119.16%#		
Target Compounds						Qvalue
102) Benzaldehyde	4.306	105	1443534	53.59	ppm	94
104) Hydroquinone	6.082	110	1409062	70.16	ppm	# 88
106) Atrazine	8.152	215	310492	52.53	ppm	92
107) 1,2,4,5-Tetrachloroben...	6.419	216	963302	46.76	ppm	99
113) Pentachloronitrobenzene	8.237	295	114566	51.22	ppm	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3832\
Data File : 2p86757.d
Acq On : 22 Apr 2019 1:44 pm
Operator : yujiac
Sample : cc3783-50 Inst : MS2P
Misc : op13652,e2p3832,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 23 04:18:00 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Apr 23 04:12:21 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86897.d
Acq On : 27 Apr 2019 12:29 am
Operator : chriss2
Sample : cc3816-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:16:28 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.561	152	507419	40.00	ppm	0.00
24) Naphthalene-d8	5.598	136	1626191	40.00	ppm	0.00
47) Acenaphthene-d10	7.032	164	881776	40.00	ppm	0.00
69) Phenanthrene-d10	8.278	188	1583506	40.00	ppm	0.00
83) Chrysene-d12	11.455	240	1555534	40.00	ppm	0.00
91) Perylene-d12	13.434	264	1501774	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.561	152	507419	40.00	ppm	0.00
103) Naphthalene-d8a	5.598	136	1626191	40.00	ppm	0.00
105) Acenaphthene-d10a	7.032	164	881776	40.00	ppm	0.00
108) Chrysene-d12a	11.455	240	1555534	40.00	ppm	0.00
110) Phenanthrene-d10a	8.278	188	1583506	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.518	112	591237	23.15	ppm	-0.06
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.30%			
8) Phenol-d5	4.325	99	676298	24.17	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 48.34%			
25) Nitrobenzene-d5	5.021	82	485431	22.21	ppm	-0.02
Spiked Amount 50.000	Range 19 - 61		Recovery = 44.42%			
51) 2-Fluorobiphenyl	6.486	172	758357	24.85	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 49.70%			
73) 2,4,6-Tribromophenol	7.684	330	117280	21.12	ppm	0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 42.24%			
85) Terphenyl-d14	10.048	244	939865	24.28	ppm	-0.01
Spiked Amount 50.000	Range 16 - 65		Recovery = 48.56%			
111) 1-Chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
112) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000	Range 20 - 70		Recovery = 0.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.785	88	379675	26.26	ppm	98
3) Pyridine	2.148	79	816984	23.42	ppm	95
4) N-Nitrosodimethylamine	2.138	74	488717	22.37	ppm	95
6) Indene	4.769	116	672630	24.65	ppm	98
7) Cumene	3.903	105	1597025	24.78	ppm	98
9) Phenol	4.336	94	700740	23.99	ppm	93
10) Aniline	4.304	93	805750	24.84	ppm	93
11) bis(2-Chloroethyl)ether	4.363	93	470776	22.56	ppm	99
12) 2-Chlorophenol	4.406	128	476771	25.42	ppm	99
13) Decane	4.454	57	427484	24.06	ppm	98
14) 1,3-Dichlorobenzene	4.513	146	511369	24.71	ppm	98
15) 1,4-Dichlorobenzene	4.577	146	475258	25.70	ppm	98
16) Benzyl alcohol	4.700	108	250545	24.44	ppm	93
17) 1,2-Dichlorobenzene	4.700	146	473408	26.63	ppm	98
18) Acetophenone	4.903	105	608978	23.81	ppm	97
19) 2-Methylphenol	4.812	108	380020	25.51	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.801	121	100340	23.29	ppm #	66
21) 3&4-Methylphenol	4.940	108	378179	25.05	ppm	96
22) n-Nitroso-di-n-propyla...	4.914	70	311691	23.10	ppm	98
23) Hexachloroethane	4.967	201	153487	24.53	ppm	97
26) Nitrobenzene	5.037	77	482123	22.52	ppm	95
27) Quinoline	5.898	129	712830	24.79	ppm	100
28) Isophorone	5.235	82	834549	22.19	ppm	99
29) 2-Nitrophenol	5.299	139	228255	26.11	ppm	78
30) 2,4-Dimethylphenol	5.363	107	408273	26.36	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86897.d
Acq On : 27 Apr 2019 12:29 am
Operator : chriss2
Sample : cc3816-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:16:28 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.507	105	325838	23.90	ppm		98
32) bis(2-Chloroethoxy)met...	5.416	93	461786	22.06	ppm		98
33) 2,4-Dichlorophenol	5.507	162	313152	25.62	ppm		98
34) 2,6-Dichlorophenol	5.684	162	286793	26.16	ppm		99
35) 1,3,5-Trichlorobenzene	5.304	180	387282	26.15	ppm		99
36) 1,2,4-Trichlorobenzene	5.556	180	337768	24.81	ppm		98
37) 1,2,3-Trichlorobenzene	5.737	180	307244	25.65	ppm		97
38) Naphthalene	5.614	128	1010279	25.97	ppm		99
39) 4-Chloroaniline	5.679	127	422445	26.46	ppm		99
40) 2,3-Dichloroaniline	6.417	161	387945	25.25	ppm		99
41) Caprolactam	5.978	113	115570	23.04	ppm		92
42) Hexachlorobutadiene	5.727	225	190182	24.36	ppm		99
43) 4-Chloro-3-methylphenol	6.106	107	405386	25.62	ppm		76
44) 2-Methylnaphthalene	6.181	141	608612	24.60	ppm		96
45) 1-Methylnaphthalene	6.262	141	672624	24.82	ppm		98
46) Dimethylnaphthalene	6.695	156	582417	23.29	ppm		96
48) Hexachlorocyclopentadiene	6.315	237	319802	39.80	ppm		99
49) 2,4,6-Trichlorophenol	6.433	196	217269	26.32	ppm		100
50) 2,4,5-Trichlorophenol	6.470	196	230538	26.84	ppm		97
52) 2-Chloronaphthalene	6.577	162	619378	24.50	ppm		100
53) Biphenyl	6.566	154	860337	24.35	ppm		99
54) 2-Nitroaniline	6.679	65	236772	21.81	ppm		94
55) Dimethylphthalate	6.828	163	768143	24.55	ppm		99
56) Acenaphthylene	6.914	152	1062372	24.63	ppm		99
57) 2,6-Dinitrotoluene	6.877	165	171448	24.98	ppm		99
58) 3-Nitroaniline	7.016	138	204409	26.40	ppm		89
59) Acenaphthene	7.053	153	645264	25.49	ppm		98
60) 2,4-Dinitrophenol	7.112	184	173465	50.52	ppm	#	56
61) 4-Nitrophenol	7.203	109	133154	23.35	ppm	#	1
62) Dibenzofuran	7.198	168	910355	26.08	ppm		90
63) 2,4-Dinitrotoluene	7.214	165	226298	25.64	ppm		98
64) 2,3,4,6-Tetrachlorophenol	7.315	232	180818	22.65	ppm		89
65) Diethylphthalate	7.406	149	823069	25.31	ppm		99
66) Fluorene	7.476	166	782457	26.13	ppm		97
67) 4-Chlorophenyl-phenyle...	7.481	204	371558	25.83	ppm		91
68) 4-Nitroaniline	7.524	138	184645	27.66	ppm		92
70) 4,6-Dinitro-2-methylph...	7.556	198	134114	28.36	ppm		85
71) n-Nitrosodiphenylamine	7.588	169	525377	24.57	ppm		99
72) 1,2-Diphenylhydrazine	7.615	77	855120	20.51	ppm		96
74) 4-Bromophenyl-phenylether	7.882	248	226486	23.93	ppm		86
75) Hexachlorobenzene	7.946	284	263437	25.13	ppm		100
76) Pentachlorophenol	8.128	266	323984	44.93	ppm		97
77) Phenanthrene	8.299	178	1001912	25.40	ppm		99
78) Anthracene	8.348	178	1020962	25.45	ppm		99
79) Carbazole	8.513	167	1062900	25.63	ppm		99
80) Di-n-butylphthalate	8.888	149	1629461	25.89	ppm		99
81) Fluoranthene	9.551	202	1474551	26.30	ppm		97
82) Octadecane	8.208	43	306693	23.51	ppm		94
84) Pyrene	9.818	202	1441169	23.81	ppm		99
86) Butylbenzylphthalate	10.738	149	813508	23.97	ppm		98
87) Benzo[a]anthracene	11.434	228	1421000	24.32	ppm		99
88) 3,3'-Dichlorobenzidine	11.444	252	551659	23.76	ppm		96
89) Chrysene	11.487	228	1021780	24.65	ppm		98
90) bis(2-Ethylhexyl)phtha...	11.610	149	928499	26.58	ppm		100
92) Di-n-octylphthalate	12.541	149	1881219	26.21	ppm		99
93) Benzo[b]fluoranthene	12.937	252	1274334	25.90	ppm		96
94) Benzo[k]fluoranthene	12.974	252	1088456	27.05	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86897.d
Acq On : 27 Apr 2019 12:29 am
Operator : chriss2
Sample : cc3816-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:16:28 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	Benzo[a]pyrene	13.354	252	1071386	25.91	ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.744	276	1116813	23.69	ppm	96
97)	Dibenz(a,h)acridine	14.472	279	879715	21.54	ppm	99
98)	Dibenz[a,h]anthracene	14.771	278	918230	25.01	ppm	98
99)	7,12-Dimethylbenz(a)an...	12.931	256	601094	26.85	ppm	97
100)	Benzo[g,h,i]perylene	15.076	276	854870	22.91	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

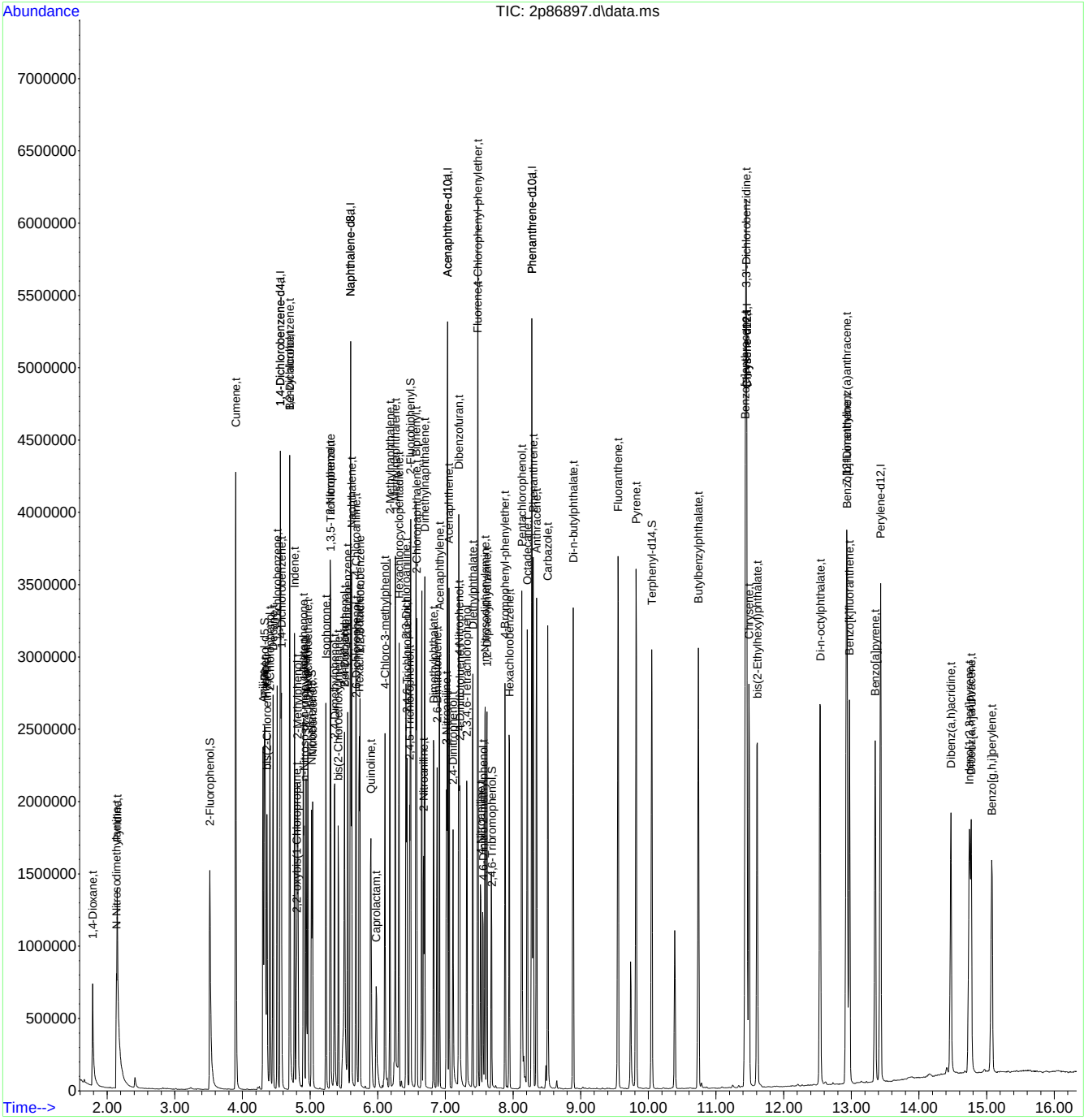
9.6.29

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86897.d
Acq On : 27 Apr 2019 12:29 am
Operator : chriss2
Sample : cc3816-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:16:28 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86898.d
Acq On : 27 Apr 2019 12:50 am
Operator : chriss2
Sample : cc3783-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:20:42 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration

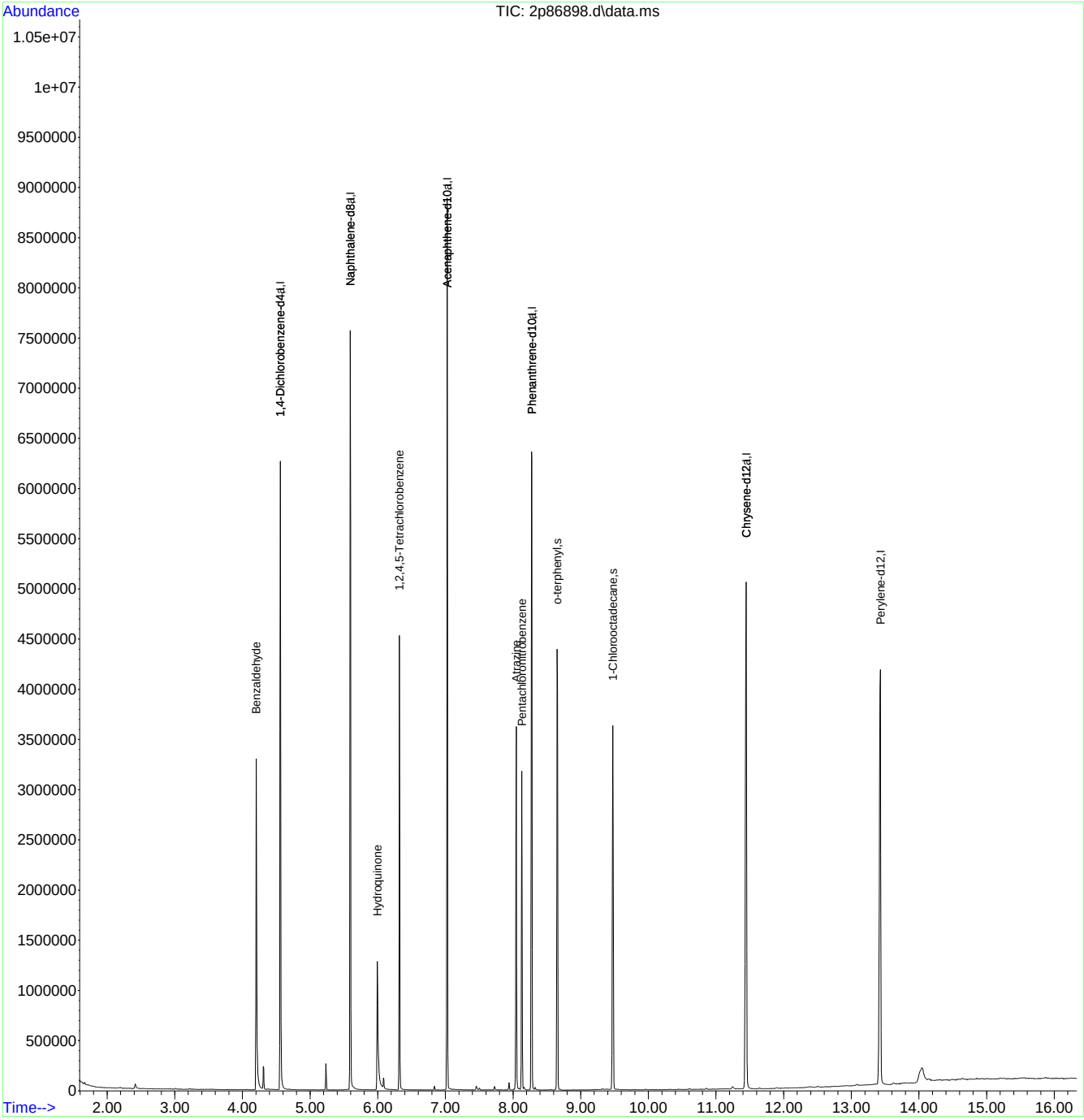
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.561	152	737972	40.00	ppm	0.00
24) Naphthalene-d8	5.593	136	2575840	40.00	ppm	0.00
47) Acenaphthene-d10	7.027	164	1353304	40.00	ppm	0.00
69) Phenanthrene-d10	8.278	188	2073518	40.00	ppm	0.00
83) Chrysene-d12	11.445	240	1941156	40.00	ppm	0.00
91) Perylene-d12	13.429	264	1872276	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.561	152	737972	40.00	ppm	0.00
103) Naphthalene-d8a	5.593	136	2575840	40.00	ppm	0.00
105) Acenaphthene-d10a	7.027	164	1353304	40.00	ppm	0.00
108) Chrysene-d12a	11.445	240	1941156	40.00	ppm	0.00
110) Phenanthrene-d10a	8.278	188	2073518	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery =	0.00%#		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery =	0.00%#		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery =	0.00%#		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery =	0.00%#		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery =	0.00%#		
111) 1-Chlorooctadecane	9.476	57	428897	27.51	ppm	0.15
Spiked Amount 50.000	Range 20 - 70		Recovery =	55.02%		
112) o-terphenyl	8.653	230	744759	26.72	ppm	-0.10
Spiked Amount 50.000	Range 20 - 70		Recovery =	53.44%		
Target Compounds						Qvalue
102) Benzaldehyde	4.202	105	595351	22.31	ppm	94
104) Hydroquinone	5.994	110	580657	29.88	ppm	96
106) Atrazine	8.048	215	157065	27.31	ppm	87
107) 1,2,4,5-Tetrachloroben...	6.321	216	507942	25.07	ppm	98
113) Pentachloronitrobenzene	8.128	295	66419	29.17	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\2p3839\
Data File : 2p86898.d
Acq On : 27 Apr 2019 12:50 am
Operator : chriss2
Sample : cc3783-25 Inst : MS2P
Misc : op13652,e2p3839,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2P3816.M
Quant Results File: M2P3816.RES
Quant Time: Apr 29 03:20:42 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 04:11:22 2019
Response via : Initial Calibration



Manual Integrations APPROVED
(compounds with "m" flag)
Nina Pandya
04/16/19 10:44

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	209799	40.00	ppm	0.00
24) Naphthalene-d8	5.699	136	772072	40.00	ppm	0.00
47) Acenaphthene-d10	7.996	164	456258	40.00	ppm	0.00
69) Phenanthrene-d10	10.581	188	962273	40.00	ppm	0.00
83) Chrysene-d12	15.713	240	751600	40.00	ppm	0.00
91) Perylene-d12	18.309	264	938114	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	209799	40.00	ppm	0.00
103) Acenaphthene-d10a	7.996	164	456258	40.00	ppm	0.00
106) Chrysene-d12a	15.713	240	751600	40.00	ppm	0.00
108) Chrysene-d12b	15.713	240	751600	40.00	ppm	0.00
110) Phenanthrene-d10a	10.581	188	962273	40.00	ppm	0.00
113) Naphthalene-d8a	5.699	136	772072	40.00	ppm	0.00
115) Chrysene-d12c	15.713	240	751600	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.605	112	861150	96.77	ppm	0.00
Spiked Amount 50.000			Recovery =	193.54%		
8) Phenol-d5	4.332	99	1016962	94.70	ppm	0.00
Spiked Amount 50.000			Recovery =	189.40%		
25) Nitrobenzene-d5	5.031	82	793175	96.11	ppm	0.00
Spiked Amount 50.000			Recovery =	192.22%		
51) 2-Fluorobiphenyl	7.008	172	1465098	93.29	ppm	0.00
Spiked Amount 50.000			Recovery =	186.58%		
73) 2,4,6-Tribromophenol	9.331	330	322547	90.84	ppm	0.00
Spiked Amount 50.000			Recovery =	181.68%		
85) Terphenyl-d14	13.743	244	2066039	99.57	ppm	0.00
Spiked Amount 50.000			Recovery =	199.14%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.120	88	460644	105.26	ppm	98
3) Pyridine	2.441	79	1091159	104.74	ppm	99
4) N-Nitrosodimethylamine	2.409	42	392524	103.03	ppm	99
6) Indene	4.791	116	983600	91.81	ppm	99
7) Cumene	3.995	105	1784695	91.79	ppm	99
9) Phenol	4.342	94	947265	89.09	ppm	81
10) Aniline	4.348	93	813831	88.85	ppm	93
11) bis(2-Chloroethyl)ether	4.396	93	683763	95.37	ppm	99
12) 2-Chlorophenol	4.438	128	692304	93.29	ppm	98
13) Decane	4.481	43	465485	89.48	ppm	97
14) 1,3-Dichlorobenzene	4.545	146	746108	89.90	ppm	97
15) 1,4-Dichlorobenzene	4.604	146	706031	92.10	ppm	98
16) Benzyl alcohol	4.700	108	449881	96.66	ppm	99
17) 1,2-Dichlorobenzene	4.722	146	676103	88.77	ppm	99
18) Acetophenone	4.909	105	848333	92.65	ppm	97
19) 2-Methylphenol	4.796	108	550039	91.48	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.807	121	175370	93.95	ppm		95
21) 3&4-Methylphenol	4.914	108	551887	90.48	ppm	#	84
22) n-Nitroso-di-n-propyla...	4.919	70	406599	90.62	ppm		100
23) Hexachloroethane	4.994	201	301890	91.63	ppm		89
26) Nitrobenzene	5.053	77	727144	92.49	ppm		95
27) Quinoline	6.094	129	1401789	93.50	ppm		98
28) Isophorone	5.261	82	1372049	91.69	ppm		97
29) 2-Nitrophenol	5.330	139	370281	88.87	ppm		96
30) 2,4-Dimethylphenol	5.373	107	660434	98.24	ppm		97
31) Benzoic acid	5.523	105	494490	86.46	ppm		98
32) bis(2-Chloroethoxy)met...	5.459	93	834296	94.81	ppm		99
33) 2,4-Dichlorophenol	5.560	162	585406	89.44	ppm		99
34) 2,6-Dichlorophenol	5.790	162	534178	91.20	ppm		98
35) 1,3,5-Trichlorobenzene	5.346	180	657712	87.30	ppm		99
36) 1,2,4-Trichlorobenzene	5.646	180	671871	89.26	ppm		98
37) 1,2,3-Trichlorobenzene	5.875	180	608659	89.96	ppm		99
38) Naphthalene	5.720	128	1682052	91.21	ppm		99
39) 4-Chloroaniline	5.779	127	739698	88.40	ppm		98
40) 2,3-Dichloroaniline	6.879	161	732442	90.75	ppm		98
41) Caprolactam	6.196	55	314353m	98.30	ppm		
42) Hexachlorobutadiene	5.865	225	410798	91.11	ppm		99
43) 4-Chloro-3-methylphenol	6.345	107	664854	92.63	ppm		99
44) 2-Methylnaphthalene	6.511	141	1060287	89.46	ppm		99
45) 1-Methylnaphthalene	6.634	142	1332258	89.87	ppm		98
46) Dimethylnaphthalene	7.371	156	1163933	89.71	ppm		100
48) Hexachlorocyclopentadiene	6.730	237	875753	185.52	ppm		99
49) 2,4,6-Trichlorophenol	6.890	196	445550	91.61	ppm		98
50) 2,4,5-Trichlorophenol	6.938	196	494836	93.18	ppm		96
52) 2-Chloronaphthalene	7.162	162	1170343	92.62	ppm		98
53) Biphenyl	7.146	154	1603724	92.63	ppm		99
54) 2-Nitroaniline	7.317	65	427892	100.22	ppm		97
55) Dimethylphthalate	7.622	163	1578760	94.05	ppm		99
56) Acenaphthylene	7.766	152	1956395	92.74	ppm		99
57) 2,6-Dinitrotoluene	7.697	165	349646	92.84	ppm		95
58) 3-Nitroaniline	7.953	138	420081	97.90	ppm		97
59) Acenaphthene	8.049	153	1233364	94.71	ppm		97
60) 2,4-Dinitrophenol	8.124	184	369947	193.40	ppm		94
61) 4-Nitrophenol	8.279	109	241544	101.27	ppm		95
62) Dibenzofuran	8.332	168	1739892	93.20	ppm		94
63) 2,4-Dinitrotoluene	8.343	165	433917	95.59	ppm		93
64) 2,3,4,6-Tetrachlorophenol	8.556	232	490611	93.25	ppm		99
65) Diethylphthalate	8.807	149	1574142	94.34	ppm		99
66) Fluorene	8.909	166	1486101	93.26	ppm		99
67) 4-Chlorophenyl-phenyle...	8.946	204	737051	92.38	ppm		100
68) 4-Nitroaniline	8.989	138	380339	99.61	ppm		99
70) 4,6-Dinitro-2-methylph...	9.042	198	285701	93.98	ppm		98
71) n-Nitrosodiphenylamine	9.160	169	1117447	91.37	ppm		99
72) 1,2-Diphenylhydrazine	9.219	77	1579035	94.81	ppm		98
74) 4-Bromophenyl-phenylether	9.812	248	583579	90.05	ppm		95
75) Hexachlorobenzene	9.892	284	610907	90.10	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

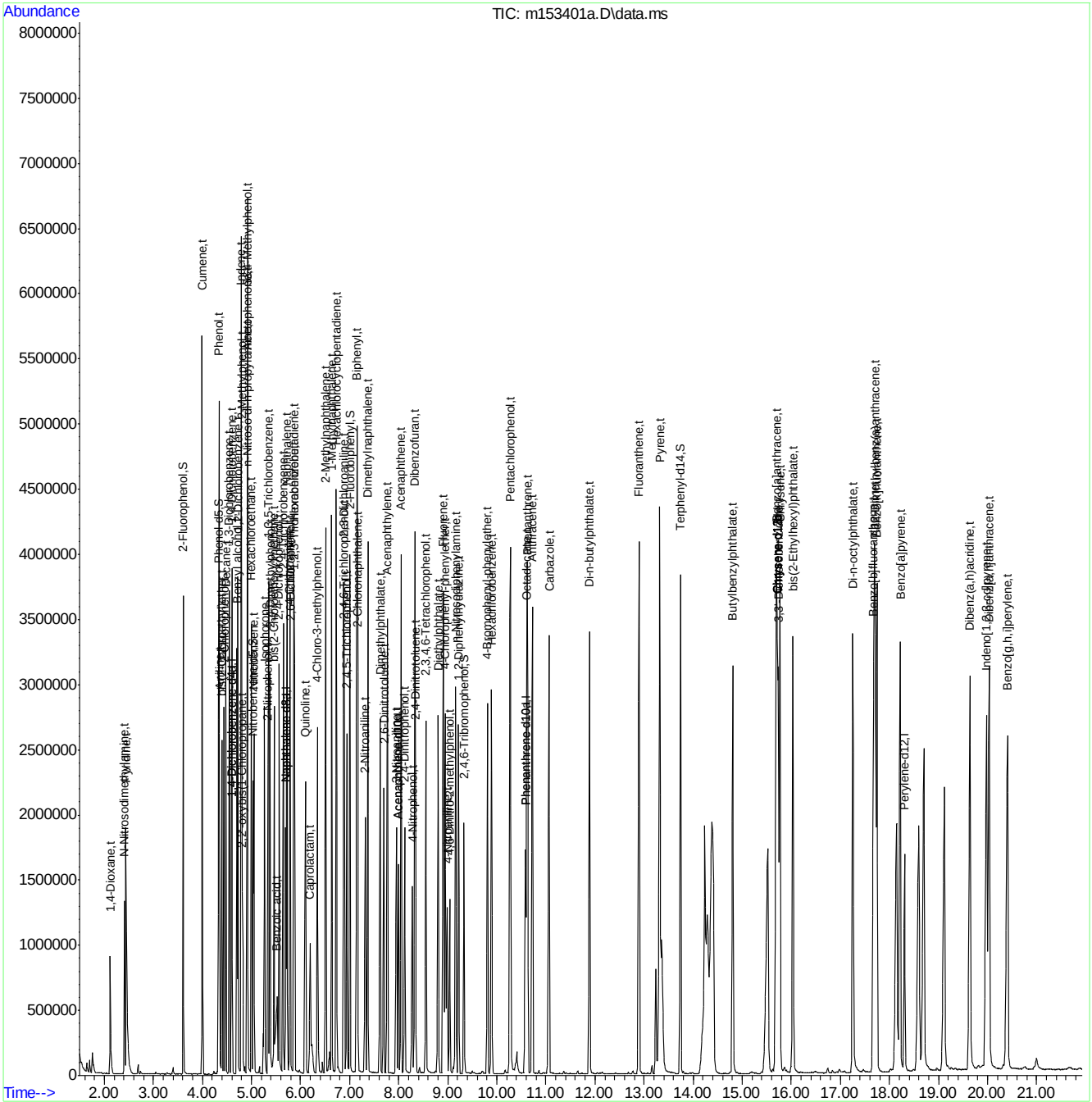
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.271	266	807802	180.41	ppm	100
77) Phenanthrene	10.629	178	2000630	91.13	ppm	99
78) Anthracene	10.725	178	2194380	90.91	ppm	99
79) Carbazole	11.067	167	2158130	90.94	ppm	99
80) Di-n-butylphthalate	11.889	149	2809220	91.66	ppm	99
81) Fluoranthene	12.899	202	2777400	89.99	ppm	99
82) Octadecane	10.607	57	706040	93.66	ppm	99
84) Pyrene	13.321	202	2672983	96.76	ppm	98
86) Butylbenzylphthalate	14.806	149	1260057	99.97	ppm	99
87) Benzo[a]anthracene	15.697	228	2555041	92.93	ppm	99
88) 3,3'-Dichlorobenzidine	15.735	252	987333	101.83	ppm	97
89) Chrysene	15.772	228	2324355	101.70	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.034	149	1663302	104.23	ppm	100
92) Di-n-octylphthalate	17.252	149	3068911	96.73	ppm	99
93) Benzo[b]fluoranthene	17.679	252	2938717	94.75	ppm	98
94) Benzo[k]fluoranthene	17.743	252	2487206	91.95	ppm	97
95) Benzo[a]pyrene	18.224	252	2429933	86.34	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.981	276	2517133	97.55	ppm	100
97) Dibenz(a,h)acridine	19.645	279	2440916	93.82	ppm	85
98) Dibenz[a,h]anthracene	20.034	278	2501423	96.26	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.706	256	1251747	98.43	ppm	98
100) Benzo[g,h,i]perylene	20.408	276	2507626	95.95	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



JC86406

9.6.31

Manual Integration Approval Summary

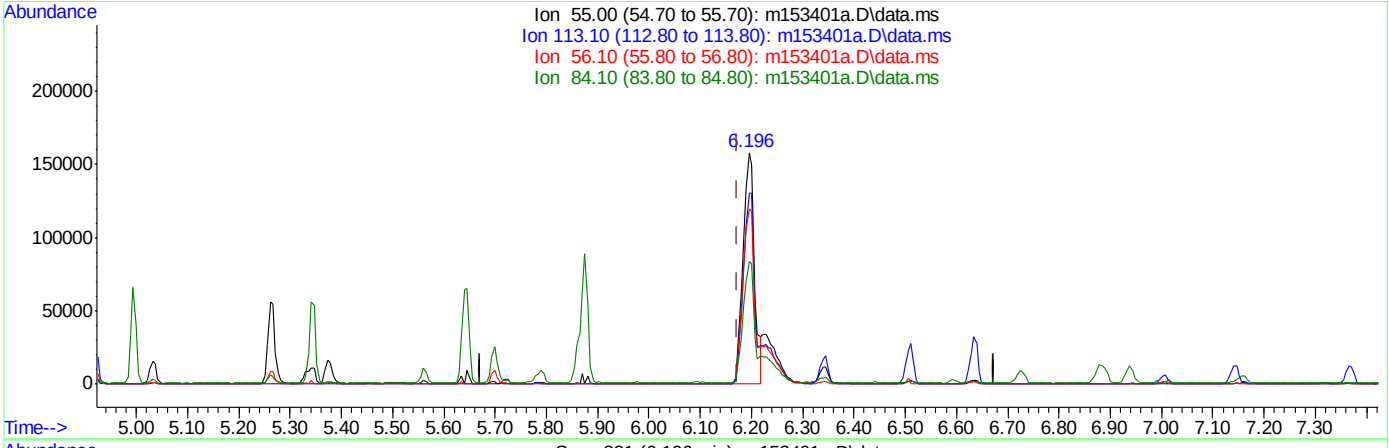
Sample Number:	EM6556-IC6556	**Method:**	SW846 8270D
Lab FileID:	M153401A.D	**Analyst approved:**	04/15/19 12:08 Ying Li
Injection Time:	04/12/19 17:56	**Supervisor approved:**	04/16/19 10:44 Nina Pandya

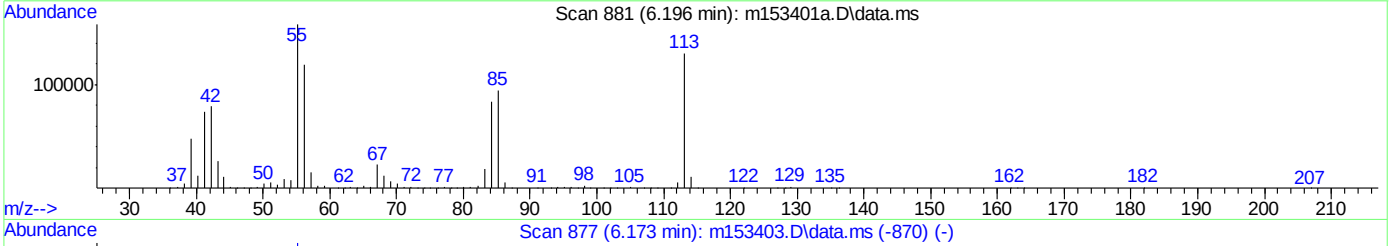
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		6.20	Split peak

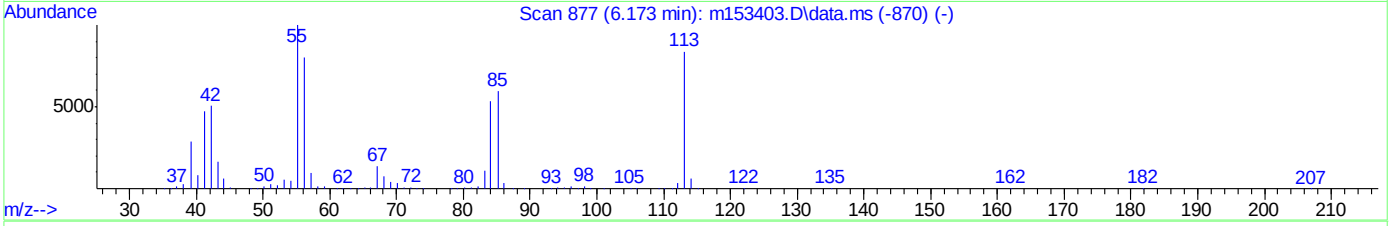
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:15:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration







TIC: m153401a.D\data.ms

(41) Caprolactam (t)

6.196min (+0.023) 76.33ppm

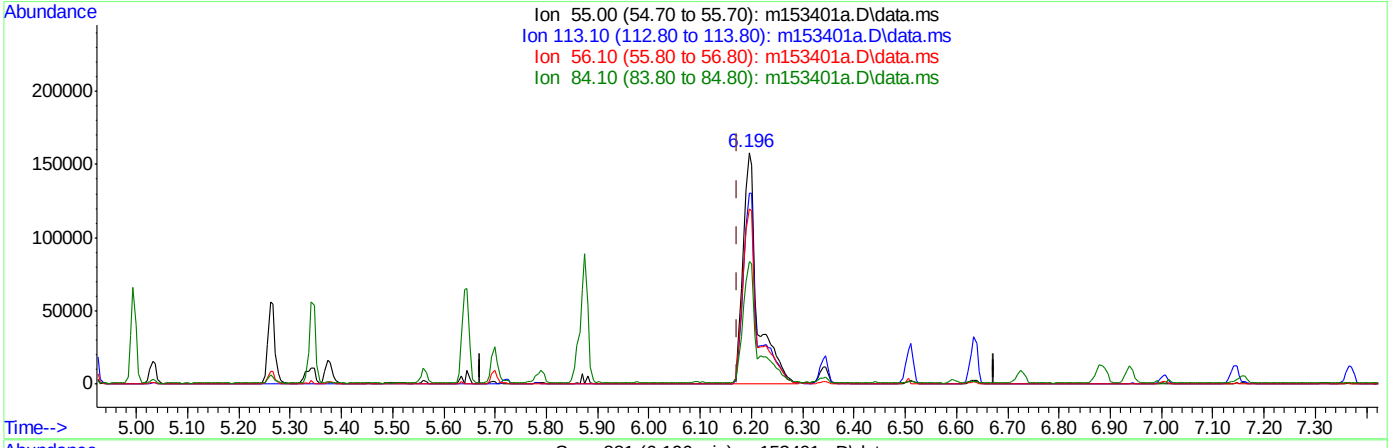
response 244082

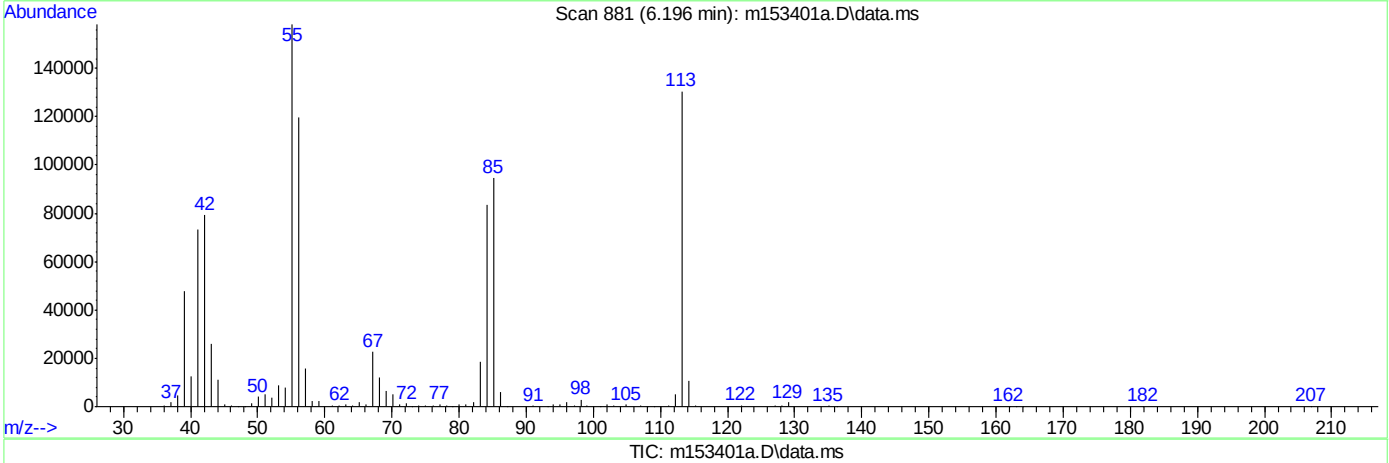
Ion	Exp%	Act%
55.00	100	100
113.10	83.80	82.69
56.10	80.40	75.39
84.10	53.50	51.72

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration





TIC: m153401a.D\data.ms

(41) Caprolactam (t)

6.196min (+0.023) 98.30ppm m

response 314353

Ion	Exp%	Act%
55.00	100	100
113.10	83.80	82.45
56.10	80.40	75.72
84.10	53.50	52.79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.592	152	225155	40.00	ppm		0.00
24) Naphthalene-d8	5.697	136	803489	40.00	ppm		0.00
47) Acenaphthene-d10	7.994	164	479679	40.00	ppm		0.00
69) Phenanthrene-d10	10.579	188	997619	40.00	ppm		0.00
83) Chrysene-d12	15.712	240	851028	40.00	ppm		0.00
91) Perylene-d12	18.307	264	999499	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.592	152	225155	40.00	ppm		0.00
103) Acenaphthene-d10a	7.994	164	479679	40.00	ppm		0.00
106) Chrysene-d12a	15.712	240	851028	40.00	ppm		0.00
108) Chrysene-d12b	15.712	240	851028	40.00	ppm		0.00
110) Phenanthrene-d10a	10.579	188	997619	40.00	ppm		0.00
113) Naphthalene-d8a	5.697	136	803489	40.00	ppm		0.00
115) Chrysene-d12c	15.712	240	851028	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.603	112	732085	76.66	ppm		0.00
Spiked Amount 50.000			Recovery = 153.32%				
8) Phenol-d5	4.330	99	867447	75.27	ppm		0.00
Spiked Amount 50.000			Recovery = 150.54%				
25) Nitrobenzene-d5	5.030	82	660145	76.87	ppm		0.00
Spiked Amount 50.000			Recovery = 153.74%				
51) 2-Fluorobiphenyl	7.006	172	1258043	76.20	ppm		0.00
Spiked Amount 50.000			Recovery = 152.40%				
73) 2,4,6-Tribromophenol	9.329	330	281508	76.48	ppm		0.00
Spiked Amount 50.000			Recovery = 152.96%				
85) Terphenyl-d14	13.741	244	1823182	77.60	ppm		0.00
Spiked Amount 50.000			Recovery = 155.20%				
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000			Recovery = 0.00%				
111) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000			Recovery = 0.00%				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.119	88	377230	80.32	ppm		99
3) Pyridine	2.444	79	908435	81.25	ppm		97
4) N-Nitrosodimethylamine	2.407	42	320590	78.41	ppm		98
6) Indene	4.789	116	846091	73.59	ppm		100
7) Cumene	3.993	105	1544937	74.04	ppm		98
9) Phenol	4.341	94	826435	72.42	ppm		82
10) Aniline	4.346	93	722357	73.49	ppm		97
11) bis(2-Chloroethyl)ether	4.394	93	581395	75.56	ppm		99
12) 2-Chlorophenol	4.437	128	595646	74.79	ppm		98
13) Decane	4.479	43	406911	72.88	ppm		99
14) 1,3-Dichlorobenzene	4.549	146	646405	72.57	ppm		98
15) 1,4-Dichlorobenzene	4.602	146	622280	75.64	ppm		99
16) Benzyl alcohol	4.698	108	376577	75.39	ppm		97
17) 1,2-Dichlorobenzene	4.720	146	596046	72.92	ppm		99
18) Acetophenone	4.907	105	732580	74.55	ppm	#	60
19) 2-Methylphenol	4.795	108	473535	73.38	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	151063	75.41	ppm		100
21) 3&4-Methylphenol	4.912	108	488132	74.57	ppm	#	81
22) n-Nitroso-di-n-propyla...	4.912	70	350213	72.73	ppm		95
23) Hexachloroethane	4.998	201	265594	75.12	ppm		100
26) Nitrobenzene	5.051	77	618972	75.65	ppm		95
27) Quinoline	6.092	129	1187613	76.12	ppm		99
28) Isophorone	5.259	82	1171099	75.20	ppm		97
29) 2-Nitrophenol	5.329	139	329749	76.05	ppm		98
30) 2,4-Dimethylphenol	5.371	107	558209	79.78	ppm		97
31) Benzoic acid	5.510	105	469499	78.88	ppm		96
32) bis(2-Chloroethoxy)met...	5.457	93	704348	76.92	ppm		100
33) 2,4-Dichlorophenol	5.564	162	511255	75.06	ppm		97
34) 2,6-Dichlorophenol	5.788	162	457218	75.01	ppm		98
35) 1,3,5-Trichlorobenzene	5.345	180	570920	72.82	ppm		98
36) 1,2,4-Trichlorobenzene	5.644	180	584453	74.61	ppm		99
37) 1,2,3-Trichlorobenzene	5.873	180	527854	74.97	ppm		100
38) Naphthalene	5.724	128	1445690	75.33	ppm		100
39) 4-Chloroaniline	5.777	127	641760	73.70	ppm		98
40) 2,3-Dichloroaniline	6.878	161	635130	75.61	ppm		98
41) Caprolactam	6.189	55	263983	79.32	ppm		99
42) Hexachlorobutadiene	5.863	225	353936	75.43	ppm		99
43) 4-Chloro-3-methylphenol	6.338	107	565483	75.70	ppm		97
44) 2-Methylnaphthalene	6.509	141	923318	74.86	ppm		99
45) 1-Methylnaphthalene	6.637	142	1146353	74.30	ppm		99
46) Dimethylnaphthalene	7.369	156	1002140	74.22	ppm		99
48) Hexachlorocyclopentadiene	6.728	237	762663	153.67	ppm		99
49) 2,4,6-Trichlorophenol	6.888	196	387941	75.87	ppm		98
50) 2,4,5-Trichlorophenol	6.936	196	439278	78.68	ppm		97
52) 2-Chloronaphthalene	7.161	162	1010850	76.09	ppm		99
53) Biphenyl	7.145	154	1372802	75.42	ppm		99
54) 2-Nitroaniline	7.316	65	355954	79.30	ppm		94
55) Dimethylphthalate	7.620	163	1350998	76.55	ppm		99
56) Acenaphthylene	7.770	152	1679865	75.75	ppm		100
57) 2,6-Dinitrotoluene	7.695	165	301047	76.03	ppm		100
58) 3-Nitroaniline	7.951	138	356271	78.97	ppm		98
59) Acenaphthene	8.047	153	1066647	77.91	ppm		99
60) 2,4-Dinitrophenol	8.117	184	325259	161.74	ppm		92
61) 4-Nitrophenol	8.272	109	197042	78.58	ppm		99
62) Dibenzofuran	8.330	168	1490794	75.96	ppm		99
63) 2,4-Dinitrotoluene	8.341	165	365850	76.66	ppm		85
64) 2,3,4,6-Tetrachlorophenol	8.555	232	423476	76.56	ppm		98
65) Diethylphthalate	8.806	149	1341665	76.48	ppm		100
66) Fluorene	8.907	166	1276678	76.21	ppm		100
67) 4-Chlorophenyl-phenyle...	8.945	204	639241	76.21	ppm		100
68) 4-Nitroaniline	8.982	138	314723	78.40	ppm		98
70) 4,6-Dinitro-2-methylph...	9.035	198	253467	80.42	ppm		99
71) n-Nitrosodiphenylamine	9.158	169	955792	75.38	ppm		99
72) 1,2-Diphenylhydrazine	9.217	77	1332214	77.16	ppm		99
74) 4-Bromophenyl-phenylether	9.810	248	506124	75.33	ppm		97
75) Hexachlorobenzene	9.890	284	527735	75.08	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

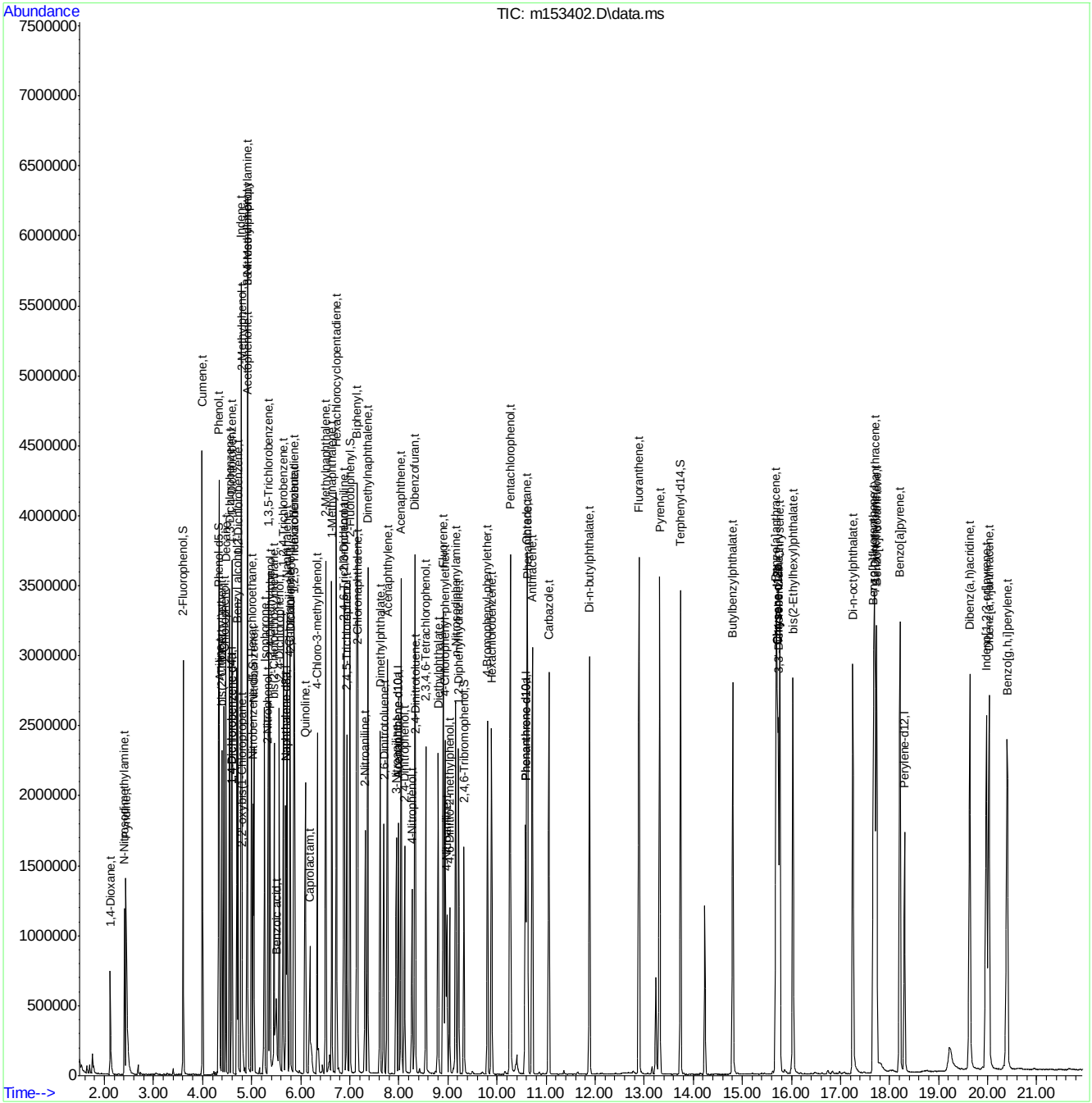
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.269	266	697346	150.22	ppm	100
77) Phenanthrene	10.627	178	1718325	75.50	ppm	100
78) Anthracene	10.723	178	1877702	75.03	ppm	99
79) Carbazole	11.065	167	1850995	75.24	ppm	100
80) Di-n-butylphthalate	11.887	149	2405373	75.70	ppm	99
81) Fluoranthene	12.897	202	2395875	74.88	ppm	99
82) Octadecane	10.611	57	606517	77.61	ppm	99
84) Pyrene	13.319	202	2365428	75.62	ppm	98
86) Butylbenzylphthalate	14.809	149	1116335	78.22	ppm	100
87) Benzo[a]anthracene	15.690	228	2395645	76.95	ppm	100
88) 3,3'-Dichlorobenzidine	15.733	252	866134	78.89	ppm	97
89) Chrysene	15.765	228	2002818	77.40	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.032	149	1398864	77.41	ppm	99
92) Di-n-octylphthalate	17.250	149	2615480	77.37	ppm	99
93) Benzo[b]fluoranthene	17.677	252	2563740	77.59	ppm	99
94) Benzo[k]fluoranthene	17.741	252	2126801	73.80	ppm	99
95) Benzo[a]pyrene	18.217	252	2293521	76.49	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.979	276	2136134	77.70	ppm	99
97) Dibenz(a,h)acridine	19.643	279	2110895	76.16	ppm	99
98) Dibenz[a,h]anthracene	20.027	278	2137844	77.22	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.704	256	1049442	77.46	ppm	99
100) Benzo[g,h,i]perylene	20.401	276	2143558	76.98	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.592	152	263272	40.00	ppm	0.00
24) Naphthalene-d8	5.698	136	947451	40.00	ppm	0.00
47) Acenaphthene-d10	7.994	164	577166	40.00	ppm	0.00
69) Phenanthrene-d10	10.579	188	1186859	40.00	ppm	0.00
83) Chrysene-d12	15.712	240	1034026	40.00	ppm	0.00
91) Perylene-d12	18.308	264	1197275	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.592	152	263272	40.00	ppm	0.00
103) Acenaphthene-d10a	7.994	164	577166	40.00	ppm	0.00
106) Chrysene-d12a	15.712	240	1034026	40.00	ppm	0.00
108) Chrysene-d12b	15.712	240	1034026	40.00	ppm	0.00
110) Phenanthrene-d10a	10.579	188	1186859	40.00	ppm	0.00
113) Naphthalene-d8a	5.698	136	947451	40.00	ppm	0.00
115) Chrysene-d12c	15.712	240	1034026	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.604	112	558336	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
8) Phenol-d5	4.325	99	673801	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
25) Nitrobenzene-d5	5.030	82	506356	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
51) 2-Fluorobiphenyl	7.006	172	993283	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
73) 2,4,6-Tribromophenol	9.324	330	218961	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
85) Terphenyl-d14	13.741	244	1427344	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.119	88	274573	50.00	ppm	100
3) Pyridine	2.445	79	653638	50.00	ppm	100
4) N-Nitrosodimethylamine	2.407	42	239053	50.00	ppm	100
6) Indene	4.790	116	672209	50.00	ppm	100
7) Cumene	3.999	105	1219950	50.00	ppm	100
9) Phenol	4.336	94	667164	50.00	ppm	100
10) Aniline	4.346	93	574687	50.00	ppm	100
11) bis(2-Chloroethyl)ether	4.394	93	449859	50.00	ppm	100
12) 2-Chlorophenol	4.437	128	465621	50.00	ppm	100
13) Decane	4.480	43	326411	50.00	ppm	100
14) 1,3-Dichlorobenzene	4.549	146	520746	50.00	ppm	100
15) 1,4-Dichlorobenzene	4.603	146	480987	50.00	ppm	100
16) Benzyl alcohol	4.699	108	292025	50.00	ppm	100
17) 1,2-Dichlorobenzene	4.720	146	477859	50.00	ppm	100
18) Acetophenone	4.907	105	574482	50.00	ppm	100
19) 2-Methylphenol	4.790	108	379257	50.26	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.806	121	117124	50.00	ppm	100
21) 3&4-Methylphenol	4.912	108	386192	50.46	ppm	100
22) n-Nitroso-di-n-propyla...	4.912	70	281513	50.00	ppm	100
23) Hexachloroethane	4.998	201	206713	50.00	ppm	100
26) Nitrobenzene	5.046	77	482380	50.00	ppm	100
27) Quinoline	6.087	129	919860	50.00	ppm	100
28) Isophorone	5.260	82	918158	50.00	ppm	100
29) 2-Nitrophenol	5.329	139	255650	50.00	ppm	100
30) 2,4-Dimethylphenol	5.372	107	412499	50.00	ppm	100
31) Benzoic acid	5.495	105	351227	50.05	ppm	100
32) bis(2-Chloroethoxy)met...	5.457	93	539901	50.00	ppm	100
33) 2,4-Dichlorophenol	5.559	162	401597	50.00	ppm	100
34) 2,6-Dichlorophenol	5.788	162	359394	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	5.345	180	462244	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	5.644	180	461860	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	5.874	180	415127	50.00	ppm	100
38) Naphthalene	5.719	128	1131562	50.00	ppm	100
39) 4-Chloroaniline	5.778	127	513415	50.00	ppm	100
40) 2,3-Dichloroaniline	6.878	161	495228	50.00	ppm	100
41) Caprolactam	6.173	55	196213	50.00	ppm	100
42) Hexachlorobutadiene	5.863	225	276656	50.00	ppm	100
43) 4-Chloro-3-methylphenol	6.338	107	440399	50.00	ppm	100
44) 2-Methylnaphthalene	6.509	141	727215	50.00	ppm	100
45) 1-Methylnaphthalene	6.632	142	909009	49.97	ppm	100
46) Dimethylnaphthalene	7.364	156	796076	50.00	ppm	100
48) Hexachlorocyclopentadiene	6.728	237	597151	100.00	ppm	100
49) 2,4,6-Trichlorophenol	6.889	196	307631	50.00	ppm	100
50) 2,4,5-Trichlorophenol	6.937	196	335791	49.99	ppm	100
52) 2-Chloronaphthalene	7.156	162	799205	50.00	ppm	100
53) Biphenyl	7.140	154	1095071	50.00	ppm	100
54) 2-Nitroaniline	7.316	65	270060	50.00	ppm	100
55) Dimethylphthalate	7.615	163	1061699	50.00	ppm	100
56) Acenaphthylene	7.765	152	1334232	50.00	ppm	100
57) 2,6-Dinitrotoluene	7.690	165	238205	50.00	ppm	100
58) 3-Nitroaniline	7.946	138	271410	50.00	ppm	100
59) Acenaphthene	8.048	153	823702	50.00	ppm	100
60) 2,4-Dinitrophenol	8.117	184	241976	100.00	ppm	100
61) 4-Nitrophenol	8.267	109	150862	50.00	ppm	100
62) Dibenzofuran	8.325	168	1180805	50.00	ppm	100
63) 2,4-Dinitrotoluene	8.336	165	287128	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	8.550	232	332782	50.00	ppm	100
65) Diethylphthalate	8.801	149	1055379	50.00	ppm	100
66) Fluorene	8.902	166	1007892	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	8.940	204	504648	50.00	ppm	100
68) 4-Nitroaniline	8.972	138	241517	50.00	ppm	100
70) 4,6-Dinitro-2-methylph...	9.030	198	187472	50.00	ppm	100
71) n-Nitrosodiphenylamine	9.153	169	754210	50.00	ppm	100
72) 1,2-Diphenylhydrazine	9.217	77	1027051	50.00	ppm	100
74) 4-Bromophenyl-phenylether	9.810	248	399649	50.00	ppm	100
75) Hexachlorobenzene	9.890	284	418128	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

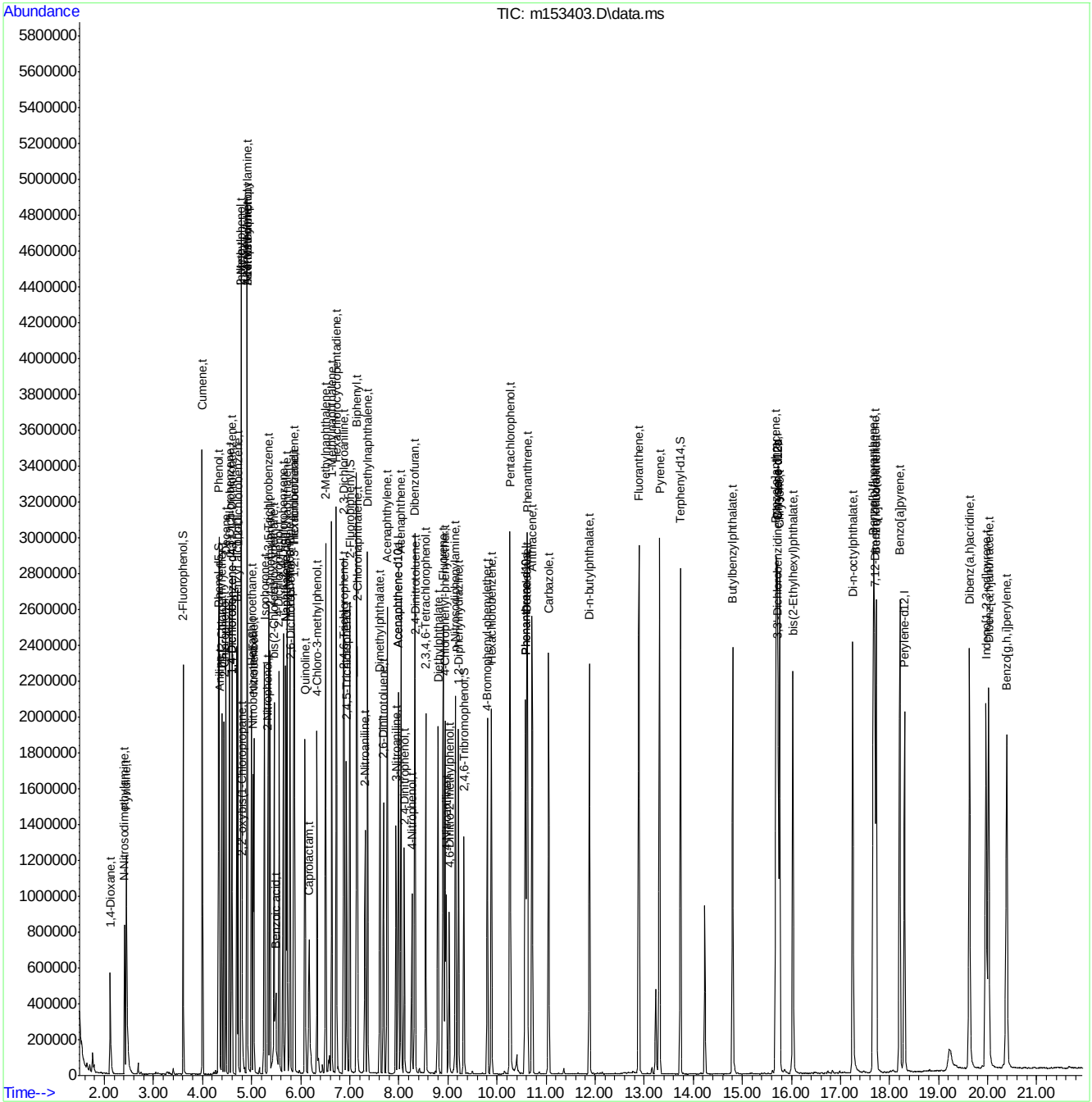
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.264	266	552267	100.00	ppm	100
77) Phenanthrene	10.622	178	1353903	50.00	ppm	100
78) Anthracene	10.718	178	1488565	50.00	ppm	100
79) Carbazole	11.060	167	1463436	50.00	ppm	100
80) Di-n-butylphthalate	11.883	149	1890098	50.00	ppm	100
81) Fluoranthene	12.892	202	1903264	50.00	ppm	100
82) Octadecane	10.606	57	464873	50.00	ppm	100
84) Pyrene	13.314	202	1900281	50.00	ppm	100
86) Butylbenzylphthalate	14.804	149	867014	50.00	ppm	100
87) Benzo[a]anthracene	15.691	228	1891375	50.00	ppm	100
88) 3,3'-Dichlorobenzidine	15.728	252	666968	50.00	ppm	100
89) Chrysene	15.760	228	1572083	50.00	ppm	100
90) bis(2-Ethylhexyl)phtha...	16.032	149	1097762	50.00	ppm	100
92) Di-n-octylphthalate	17.250	149	2024578	50.00	ppm	100
93) Benzo[b]fluoranthene	17.672	252	1979106	50.00	ppm	100
94) Benzo[k]fluoranthene	17.731	252	1726096	50.00	ppm	100
95) Benzo[a]pyrene	18.212	252	1795877	50.00	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.969	276	1646538	50.00	ppm	100
97) Dibenz(a,h)acridine	19.632	279	1660151	50.00	ppm	100
98) Dibenz[a,h]anthracene	20.022	278	1657997	49.99	ppm	100
99) 7,12-Dimethylbenz(a)an...	17.699	256	811481	50.00	ppm	100
100) Benzo[g,h,i]perylene	20.391	276	1673654	50.18	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	277562	40.00	ppm	0.00
24) Naphthalene-d8	5.699	136	964004	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	582129	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1169573	40.00	ppm	0.00
83) Chrysene-d12	15.708	240	1084540	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1211388	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	277562	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	582129	40.00	ppm	0.00
106) Chrysene-d12a	15.708	240	1084540	40.00	ppm	0.00
108) Chrysene-d12b	15.708	240	1084540	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1169573	40.00	ppm	0.00
113) Naphthalene-d8a	5.699	136	964004	40.00	ppm	0.00
115) Chrysene-d12c	15.708	240	1084540	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.606	112	286882	24.37	ppm	0.00
Spiked Amount 50.000			Recovery = 48.74%			
8) Phenol-d5	4.321	99	346438	24.38	ppm	0.00
Spiked Amount 50.000			Recovery = 48.76%			
25) Nitrobenzene-d5	5.026	82	262596	25.48	ppm	0.00
Spiked Amount 50.000			Recovery = 50.96%			
51) 2-Fluorobiphenyl	7.002	172	529165	26.41	ppm	0.00
Spiked Amount 50.000			Recovery = 52.82%			
73) 2,4,6-Tribromophenol	9.320	330	108513	25.15	ppm	0.00
Spiked Amount 50.000			Recovery = 50.30%			
85) Terphenyl-d14	13.738	244	744115	24.85	ppm	0.00
Spiked Amount 50.000			Recovery = 49.70%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.121	88	139830	24.15	ppm	98
3) Pyridine	2.447	79	349580	25.36	ppm	99
4) N-Nitrosodimethylamine	2.409	42	123459	24.49	ppm	99
6) Indene	4.791	116	360998	25.47	ppm	97
7) Cumene	3.995	105	668535	25.99	ppm	97
9) Phenol	4.332	94	366361	26.04	ppm	95
10) Aniline	4.343	93	332962	27.48	ppm	99
11) bis(2-Chloroethyl)ether	4.391	93	243495	25.67	ppm	98
12) 2-Chlorophenol	4.433	128	248181	25.28	ppm	96
13) Decane	4.476	43	184365	26.79	ppm	95
14) 1,3-Dichlorobenzene	4.546	146	282526	25.73	ppm	98
15) 1,4-Dichlorobenzene	4.599	146	258610	25.50	ppm	97
16) Benzyl alcohol	4.695	108	145414	23.62	ppm	97
17) 1,2-Dichlorobenzene	4.722	146	256741	25.48	ppm	99
18) Acetophenone	4.903	105	316389	26.12	ppm	98
19) 2-Methylphenol	4.786	108	208524	26.21	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.802	121	62030	25.12	ppm	99
21) 3&4-Methylphenol	4.909	108	209562	25.97	ppm	96
22) n-Nitroso-di-n-propyla...	4.909	70	158725	26.74	ppm	99
23) Hexachloroethane	4.994	201	110479	25.35	ppm	93
26) Nitrobenzene	5.042	77	253131	25.79	ppm	100
27) Quinoline	6.078	129	465379	24.86	ppm	99
28) Isophorone	5.256	82	482683	25.83	ppm	99
29) 2-Nitrophenol	5.325	139	130292	25.04	ppm	98
30) 2,4-Dimethylphenol	5.368	107	211484	25.19	ppm	96
31) Benzoic acid	5.470	105	158009	22.13	ppm	97
32) bis(2-Chloroethoxy)met...	5.454	93	278968	25.39	ppm	98
33) 2,4-Dichlorophenol	5.555	162	209733	25.66	ppm	97
34) 2,6-Dichlorophenol	5.785	162	187836	25.68	ppm	97
35) 1,3,5-Trichlorobenzene	5.341	180	253752	26.98	ppm	97
36) 1,2,4-Trichlorobenzene	5.640	180	246007	26.17	ppm	98
37) 1,2,3-Trichlorobenzene	5.870	180	225633	26.71	ppm	97
38) Naphthalene	5.721	128	595618	25.87	ppm	99
39) 4-Chloroaniline	5.774	127	265565	25.42	ppm	99
40) 2,3-Dichloroaniline	6.874	161	262704	26.07	ppm	98
41) Caprolactam	6.148	55	95863	24.01	ppm	97
42) Hexachlorobutadiene	5.859	225	147872	26.27	ppm	98
43) 4-Chloro-3-methylphenol	6.329	107	220877	24.65	ppm	99
44) 2-Methylnaphthalene	6.506	141	384085	25.95	ppm	98
45) 1-Methylnaphthalene	6.629	142	478793	25.87	ppm	100
46) Dimethylnaphthalene	7.360	156	420932	25.98	ppm	99
48) Hexachlorocyclopentadiene	6.725	237	302109	50.16	ppm	98
49) 2,4,6-Trichlorophenol	6.885	196	162550	26.19	ppm	97
50) 2,4,5-Trichlorophenol	6.928	196	170063	25.10	ppm	98
52) 2-Chloronaphthalene	7.152	162	434162	26.93	ppm	100
53) Biphenyl	7.136	154	583857	26.43	ppm	99
54) 2-Nitroaniline	7.307	65	129397	23.75	ppm	99
55) Dimethylphthalate	7.611	163	545123	25.45	ppm	100
56) Acenaphthylene	7.761	152	706715	26.26	ppm	99
57) 2,6-Dinitrotoluene	7.681	165	116586	24.26	ppm	98
58) 3-Nitroaniline	7.937	138	133122	24.32	ppm	98
59) Acenaphthene	8.044	153	428194	25.77	ppm	98
60) 2,4-Dinitrophenol	8.108	184	96805	39.66	ppm	99
61) 4-Nitrophenol	8.252	109	71256	23.41	ppm	96
62) Dibenzofuran	8.322	168	631593	26.52	ppm	100
63) 2,4-Dinitrotoluene	8.327	165	144447	24.94	ppm	90
64) 2,3,4,6-Tetrachlorophenol	8.546	232	167139	24.90	ppm	97
65) Diethylphthalate	8.792	149	541553	25.44	ppm	99
66) Fluorene	8.899	166	523316	25.74	ppm	100
67) 4-Chlorophenyl-phenyle...	8.936	204	273734	26.89	ppm	98
68) 4-Nitroaniline	8.957	138	121698	24.98	ppm	96
70) 4,6-Dinitro-2-methylph...	9.021	198	78819	21.33	ppm	99
71) n-Nitrosodiphenylamine	9.150	169	390300	26.26	ppm	99
72) 1,2-Diphenylhydrazine	9.214	77	537626	26.56	ppm	99
74) 4-Bromophenyl-phenylether	9.807	248	201222	25.55	ppm	99
75) Hexachlorobenzene	9.887	284	218898	26.56	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

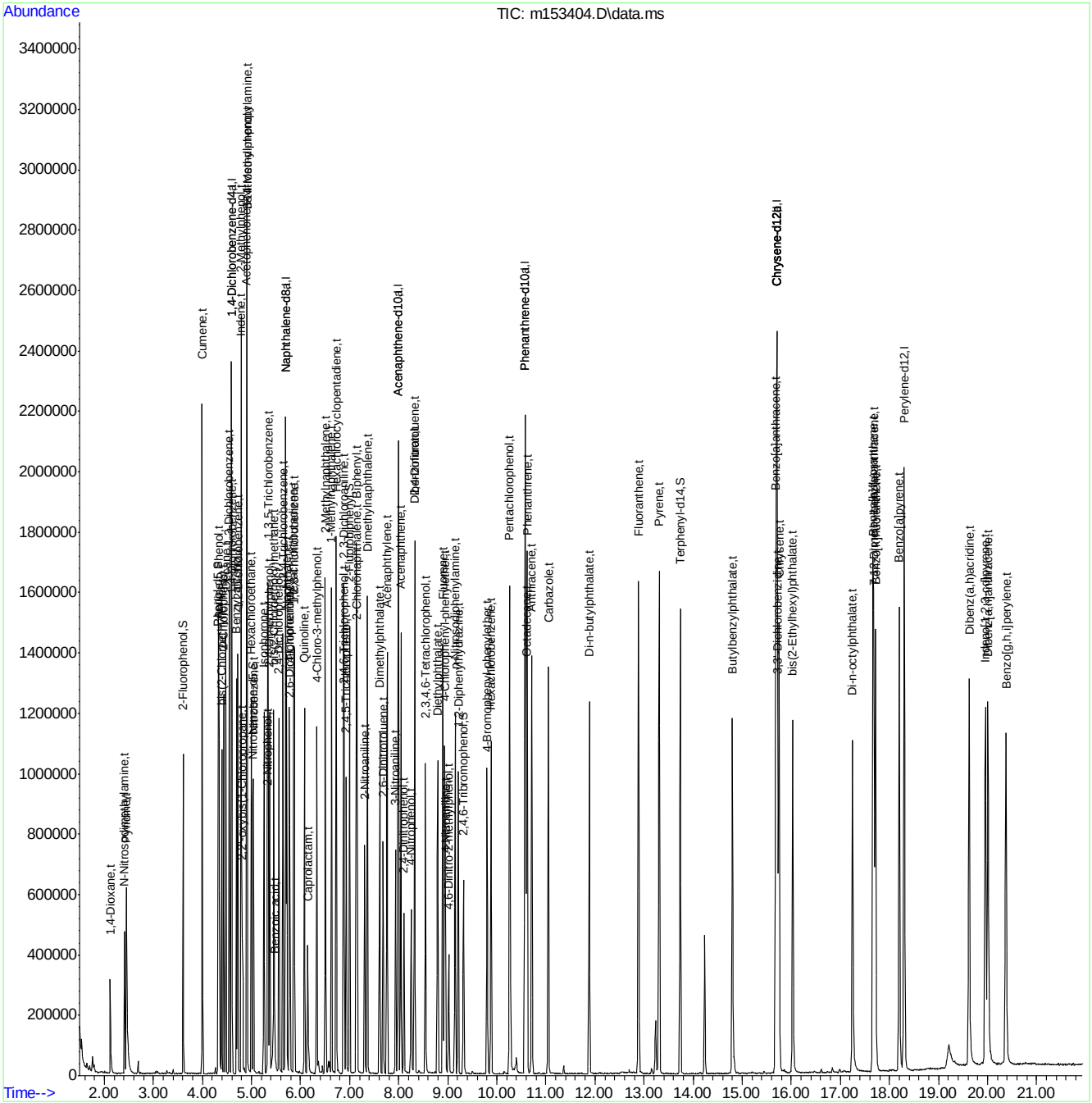
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.261	266	275158	50.56	ppm	99
77) Phenanthrene	10.618	178	712495	26.70	ppm	100
78) Anthracene	10.709	178	771837	26.31	ppm	99
79) Carbazole	11.051	167	758535	26.30	ppm	99
80) Di-n-butylphthalate	11.884	149	965711	25.92	ppm	99
81) Fluoranthene	12.888	202	995951	26.55	ppm	99
82) Octadecane	10.602	57	241476	26.36	ppm	99
84) Pyrene	13.310	202	999023	25.06	ppm	99
86) Butylbenzylphthalate	14.800	149	432256	23.77	ppm	97
87) Benzo[a]anthracene	15.687	228	962166	24.25	ppm	99
88) 3,3'-Dichlorobenzidine	15.724	252	330743	23.64	ppm	99
89) Chrysene	15.756	228	810822	24.59	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.029	149	539079	23.41	ppm	99
92) Di-n-octylphthalate	17.247	149	978451	23.88	ppm	99
93) Benzo[b]fluoranthene	17.663	252	1027165	25.65	ppm	100
94) Benzo[k]fluoranthene	17.717	252	914510	26.18	ppm	99
95) Benzo[a]pyrene	18.203	252	922796	25.39	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.960	276	847552	25.44	ppm	99
97) Dibenz(a,h)acridine	19.629	279	856264	25.49	ppm	97
98) Dibenz[a,h]anthracene	20.008	278	854704	25.47	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.685	256	413338	25.17	ppm	99
100) Benzo[g,h,i]perylene	20.376	276	873483	25.88	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	354996	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	1212660	40.00	ppm	0.00
47) Acenaphthene-d10	7.993	164	726523	40.00	ppm	0.00
69) Phenanthrene-d10	10.578	188	1444095	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	1398894	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1524103	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	354996	40.00	ppm	0.00
103) Acenaphthene-d10a	7.993	164	726523	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	1398894	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	1398894	40.00	ppm	0.00
110) Phenanthrene-d10a	10.578	188	1444095	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	1212660	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	1398894	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.603	112	142571	9.47	ppm	0.00
Spiked Amount 50.000			Recovery =	18.94%		
8) Phenol-d5	4.318	99	179461	9.88	ppm	0.00
Spiked Amount 50.000			Recovery =	19.76%		
25) Nitrobenzene-d5	5.029	82	136646	10.54	ppm	0.00
Spiked Amount 50.000			Recovery =	21.08%		
51) 2-Fluorobiphenyl	7.000	172	286720	11.47	ppm	0.00
Spiked Amount 50.000			Recovery =	22.94%		
73) 2,4,6-Tribromophenol	9.318	330	53310	10.00	ppm	0.00
Spiked Amount 50.000			Recovery =	20.00%		
85) Terphenyl-d14	13.735	244	388476	10.06	ppm	0.00
Spiked Amount 50.000			Recovery =	20.12%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.123	88	68242	9.22	ppm	96
3) Pyridine	2.454	79	171196	9.71	ppm	99
4) N-Nitrosodimethylamine	2.412	42	58566	9.08	ppm	93
6) Indene	4.788	116	199320	11.00	ppm	99
7) Cumene	3.998	105	354334	10.77	ppm	99
9) Phenol	4.329	94	195300	10.85	ppm	93
10) Aniline	4.345	93	193331	12.47	ppm	93
11) bis(2-Chloroethyl)ether	4.393	93	131108	10.81	ppm	96
12) 2-Chlorophenol	4.431	128	132507	10.55	ppm	92
13) Decane	4.479	43	102662	11.66	ppm	98
14) 1,3-Dichlorobenzene	4.548	146	149260	10.63	ppm	99
15) 1,4-Dichlorobenzene	4.601	146	136059	10.49	ppm	98
16) Benzyl alcohol	4.692	108	73456	9.33	ppm	92
17) 1,2-Dichlorobenzene	4.719	146	137712	10.69	ppm	98
18) Acetophenone	4.901	105	173973	11.23	ppm	98
19) 2-Methylphenol	4.783	108	112191	11.03	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.804	121	32853	10.40	ppm		90
21) 3&4-Methylphenol	4.906	108	113940	11.04	ppm	#	84
22) n-Nitroso-di-n-propyla...	4.906	70	89723	11.82	ppm		96
23) Hexachloroethane	4.997	201	57135	10.25	ppm		96
26) Nitrobenzene	5.045	77	136346	11.04	ppm		94
27) Quinoline	6.076	129	242840	10.31	ppm		99
28) Isophorone	5.253	82	250383	10.65	ppm		98
29) 2-Nitrophenol	5.328	139	65246	9.97	ppm		93
30) 2,4-Dimethylphenol	5.365	107	97255	9.21	ppm		94
31) Benzoic acid	5.445	105	72328	8.05	ppm		94
32) bis(2-Chloroethoxy)met...	5.451	93	147970	10.71	ppm		99
33) 2,4-Dichlorophenol	5.557	162	106062	10.32	ppm		97
34) 2,6-Dichlorophenol	5.782	162	98096	10.66	ppm		98
35) 1,3,5-Trichlorobenzene	5.338	180	136442	11.53	ppm		98
36) 1,2,4-Trichlorobenzene	5.643	180	131241	11.10	ppm		98
37) 1,2,3-Trichlorobenzene	5.873	180	121904	11.47	ppm		97
38) Naphthalene	5.718	128	311293	10.75	ppm		99
39) 4-Chloroaniline	5.771	127	141463	10.76	ppm		98
40) 2,3-Dichloroaniline	6.871	161	138949	10.96	ppm		97
41) Caprolactam	6.134	55	50065	9.97	ppm		96
42) Hexachlorobutadiene	5.862	225	78782	11.12	ppm		99
43) 4-Chloro-3-methylphenol	6.327	107	111891	9.93	ppm		98
44) 2-Methylnaphthalene	6.503	141	202399	10.87	ppm		99
45) 1-Methylnaphthalene	6.631	142	253283	10.88	ppm		99
46) Dimethylnaphthalene	7.357	156	226014	11.09	ppm		99
48) Hexachlorocyclopentadiene	6.727	237	152262	20.26	ppm		97
49) 2,4,6-Trichlorophenol	6.882	196	86106	11.12	ppm		98
50) 2,4,5-Trichlorophenol	6.925	196	92540	10.94	ppm		96
52) 2-Chloronaphthalene	7.149	162	237187	11.79	ppm		99
53) Biphenyl	7.133	154	312413	11.33	ppm		99
54) 2-Nitroaniline	7.304	65	65215	9.59	ppm		98
55) Dimethylphthalate	7.608	163	289710	10.84	ppm		98
56) Acenaphthylene	7.758	152	377514	11.24	ppm		98
57) 2,6-Dinitrotoluene	7.678	165	55885	9.32	ppm		90
58) 3-Nitroaniline	7.934	138	66595	9.75	ppm		94
59) Acenaphthene	8.041	153	221964	10.70	ppm		96
60) 2,4-Dinitrophenol	8.100	184	36774	12.07	ppm		94
61) 4-Nitrophenol	8.249	109	33300	8.77	ppm		99
62) Dibenzofuran	8.324	168	338793	11.40	ppm		98
63) 2,4-Dinitrotoluene	8.324	165	72549	10.04	ppm		85
64) 2,3,4,6-Tetrachlorophenol	8.543	232	83290	9.94	ppm		95
65) Diethylphthalate	8.789	149	279571	10.52	ppm		99
66) Fluorene	8.896	166	277441	10.93	ppm		97
67) 4-Chlorophenyl-phenyle...	8.938	204	145069	11.42	ppm		99
68) 4-Nitroaniline	8.949	138	61446	10.11	ppm		99
70) 4,6-Dinitro-2-methylph...	9.013	198	32862	7.20	ppm		96
71) n-Nitrosodiphenylamine	9.147	169	207178	11.29	ppm		97
72) 1,2-Diphenylhydrazine	9.211	77	285601	11.43	ppm		98
74) 4-Bromophenyl-phenylether	9.798	248	106153	10.92	ppm		93
75) Hexachlorobenzene	9.884	284	116490	11.45	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

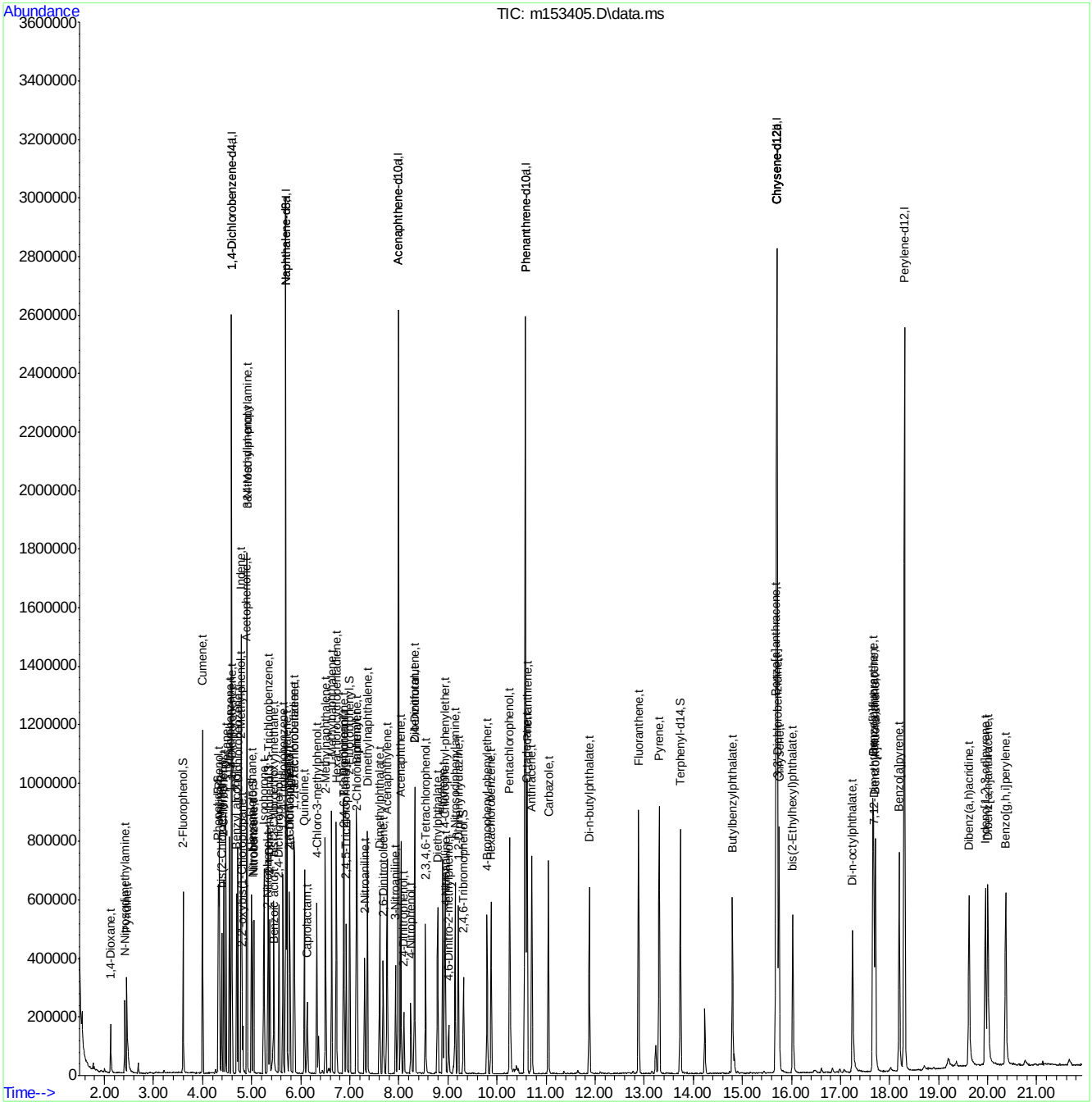
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.258	266	133443	19.86	ppm	98
77) Phenanthrene	10.615	178	378895	11.50	ppm	98
78) Anthracene	10.706	178	409530	11.31	ppm	99
79) Carbazole	11.048	167	393565	11.05	ppm	99
80) Di-n-butylphthalate	11.881	149	487217	10.59	ppm	98
81) Fluoranthene	12.885	202	520091	11.23	ppm	98
82) Octadecane	10.605	57	124800	11.03	ppm	97
84) Pyrene	13.307	202	536799	10.44	ppm	99
86) Butylbenzylphthalate	14.798	149	213025	9.08	ppm	94
87) Benzo[a]anthracene	15.684	228	489844	9.57	ppm	99
88) 3,3'-Dichlorobenzidine	15.722	252	159967	8.86	ppm	100
89) Chrysene	15.748	228	428205	10.07	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.026	149	257248	8.66	ppm	99
92) Di-n-octylphthalate	17.244	149	458672	8.90	ppm	99
93) Benzo[b]fluoranthene	17.660	252	536283	10.64	ppm	99
94) Benzo[k]fluoranthene	17.708	252	493811	11.24	ppm	99
95) Benzo[a]pyrene	18.200	252	474301	10.37	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.952	276	418872	9.99	ppm	98
97) Dibenz(a,h)acridine	19.621	279	417188	9.87	ppm	85
98) Dibenz[a,h]anthracene	20.005	278	446655	10.58	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.682	256	186797	9.04	ppm	99
100) Benzo[g,h,i]perylene	20.368	276	449372	10.58	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	362931	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	1246004	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	740803	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1448565	40.00	ppm	0.00
83) Chrysene-d12	15.706	240	1422398	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1538825	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	362931	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	740803	40.00	ppm	0.00
106) Chrysene-d12a	15.706	240	1422398	40.00	ppm	0.00
108) Chrysene-d12b	15.706	240	1422398	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	1448565	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	1246004	40.00	ppm	0.00
115) Chrysene-d12c	15.706	240	1422398	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.603	112	70644	4.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.18%	
8) Phenol-d5	4.319	99	88665	4.77	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.54%	
25) Nitrobenzene-d5	5.029	82	70282	5.28	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.56%	
51) 2-Fluorobiphenyl	7.000	172	148985	5.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	11.68%	
73) 2,4,6-Tribromophenol	9.318	330	25439	4.76	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.52%	
85) Terphenyl-d14	13.735	244	191984	4.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.78%	
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.129	88	33693	4.45	ppm	96
3) Pyridine	2.465	79	86154	4.78	ppm	97
4) N-Nitrosodimethylamine	2.417	42	29834	4.53	ppm	91
6) Indene	4.789	116	103122	5.56	ppm	96
7) Cumene	3.998	105	178887	5.32	ppm	97
9) Phenol	4.329	94	97959	5.33	ppm	93
10) Aniline	4.340	93	104277	6.58	ppm	96
11) bis(2-Chloroethyl)ether	4.393	93	68122	5.49	ppm	96
12) 2-Chlorophenol	4.431	128	68286	5.32	ppm	93
13) Decane	4.479	43	53401	5.93	ppm	97
14) 1,3-Dichlorobenzene	4.548	146	79026	5.50	ppm	98
15) 1,4-Dichlorobenzene	4.602	146	69316	5.23	ppm	97
16) Benzyl alcohol	4.692	108	36952	4.59	ppm	95
17) 1,2-Dichlorobenzene	4.719	146	69919	5.31	ppm	96
18) Acetophenone	4.901	105	90244	5.70	ppm	97
19) 2-Methylphenol	4.783	108	58474	5.62	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	17308	5.36	ppm		97
21) 3&4-Methylphenol	4.906	108	56842	5.39	ppm	#	82
22) n-Nitroso-di-n-propyla...	4.906	70	46968	6.05	ppm		97
23) Hexachloroethane	4.997	201	29612	5.20	ppm		97
26) Nitrobenzene	5.045	77	68536	5.40	ppm		96
27) Quinoline	6.076	129	122244	5.05	ppm		99
28) Isophorone	5.253	82	125513	5.20	ppm		99
29) 2-Nitrophenol	5.328	139	29393	4.37	ppm		95
30) 2,4-Dimethylphenol	5.365	107	48293	4.45	ppm		93
31) Benzoic acid	5.429	105	26139	2.83	ppm		95
32) bis(2-Chloroethoxy)met...	5.451	93	77057	5.43	ppm		99
33) 2,4-Dichlorophenol	5.552	162	55157	5.22	ppm		98
34) 2,6-Dichlorophenol	5.782	162	51151	5.41	ppm		96
35) 1,3,5-Trichlorobenzene	5.339	180	70750	5.82	ppm		99
36) 1,2,4-Trichlorobenzene	5.638	180	68256	5.62	ppm		94
37) 1,2,3-Trichlorobenzene	5.873	180	63064	5.78	ppm		96
38) Naphthalene	5.718	128	162154	5.45	ppm		98
39) 4-Chloroaniline	5.771	127	72570	5.37	ppm		99
40) 2,3-Dichloroaniline	6.872	161	71480	5.49	ppm		99
41) Caprolactam	6.124	55	24890	4.82	ppm		95
42) Hexachlorobutadiene	5.862	225	40703	5.59	ppm		99
43) 4-Chloro-3-methylphenol	6.327	107	55171	4.76	ppm		98
44) 2-Methylnaphthalene	6.503	141	103175	5.39	ppm		95
45) 1-Methylnaphthalene	6.631	142	130708	5.46	ppm		97
46) Dimethylnaphthalene	7.358	156	116566	5.57	ppm		98
48) Hexachlorocyclopentadiene	6.722	237	74016	9.66	ppm		99
49) 2,4,6-Trichlorophenol	6.882	196	42257	5.35	ppm		96
50) 2,4,5-Trichlorophenol	6.925	196	43620	5.06	ppm		97
52) 2-Chloronaphthalene	7.149	162	126157	6.15	ppm		99
53) Biphenyl	7.133	154	158517	5.64	ppm		97
54) 2-Nitroaniline	7.304	65	30403	4.39	ppm		92
55) Dimethylphthalate	7.609	163	145142	5.33	ppm		98
56) Acenaphthylene	7.758	152	192037	5.61	ppm		98
57) 2,6-Dinitrotoluene	7.678	165	25057	4.10	ppm		95
58) 3-Nitroaniline	7.929	138	30026	4.31	ppm		91
59) Acenaphthene	8.041	153	113242	5.36	ppm		96
60) 2,4-Dinitrophenol	8.100	184	12104	3.90	ppm		89
61) 4-Nitrophenol	8.244	109	13988	3.61	ppm		94
62) Dibenzofuran	8.319	168	176984	5.84	ppm		95
63) 2,4-Dinitrotoluene	8.324	165	31453	4.27	ppm		78
64) 2,3,4,6-Tetrachlorophenol	8.543	232	40001	4.68	ppm		97
65) Diethylphthalate	8.789	149	139896	5.16	ppm		98
66) Fluorene	8.896	166	141985	5.49	ppm		99
67) 4-Chlorophenyl-phenyle...	8.939	204	75706	5.84	ppm		93
68) 4-Nitroaniline	8.944	138	30140	4.86	ppm		97
70) 4,6-Dinitro-2-methylph...	9.013	198	11641	2.54	ppm		88
71) n-Nitrosodiphenylamine	9.147	169	105291	5.72	ppm		99
72) 1,2-Diphenylhydrazine	9.206	77	141494	5.64	ppm		95
74) 4-Bromophenyl-phenylether	9.804	248	52386	5.37	ppm		98
75) Hexachlorobenzene	9.884	284	58771	5.76	ppm		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.258	266	60539	8.98	ppm	96
77) Phenanthrene	10.616	178	194160	5.87	ppm	97
78) Anthracene	10.706	178	205982	5.67	ppm	99
79) Carbazole	11.048	167	198330	5.55	ppm	99
80) Di-n-butylphthalate	11.881	149	229812	4.98	ppm	99
81) Fluoranthene	12.886	202	258142	5.56	ppm	98
82) Octadecane	10.605	57	61435	5.41	ppm	98
84) Pyrene	13.302	202	270696	5.18	ppm	98
86) Butylbenzylphthalate	14.798	149	96861	4.06	ppm	98
87) Benzo[a]anthracene	15.684	228	241117	4.63	ppm	97
88) 3,3'-Dichlorobenzidine	15.722	252	74185	4.04	ppm	97
89) Chrysene	15.748	228	218513	5.05	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.031	149	114005	3.77	ppm	96
92) Di-n-octylphthalate	17.244	149	180377	3.47	ppm	98
93) Benzo[b]fluoranthene	17.661	252	258950	5.09	ppm	99
94) Benzo[k]fluoranthene	17.709	252	249484	5.62	ppm	99
95) Benzo[a]pyrene	18.195	252	223126	4.83	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.952	276	180234	4.26	ppm	97
97) Dibenz(a,h)acridine	19.621	279	182514	4.28	ppm	98
98) Dibenz[a,h]anthracene	20.005	278	207861	4.88	ppm	97
99) 7,12-Dimethylbenz(a)an...	17.677	256	76015	3.64	ppm	98
100) Benzo[g,h,i]perylene	20.368	276	206161	4.81	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

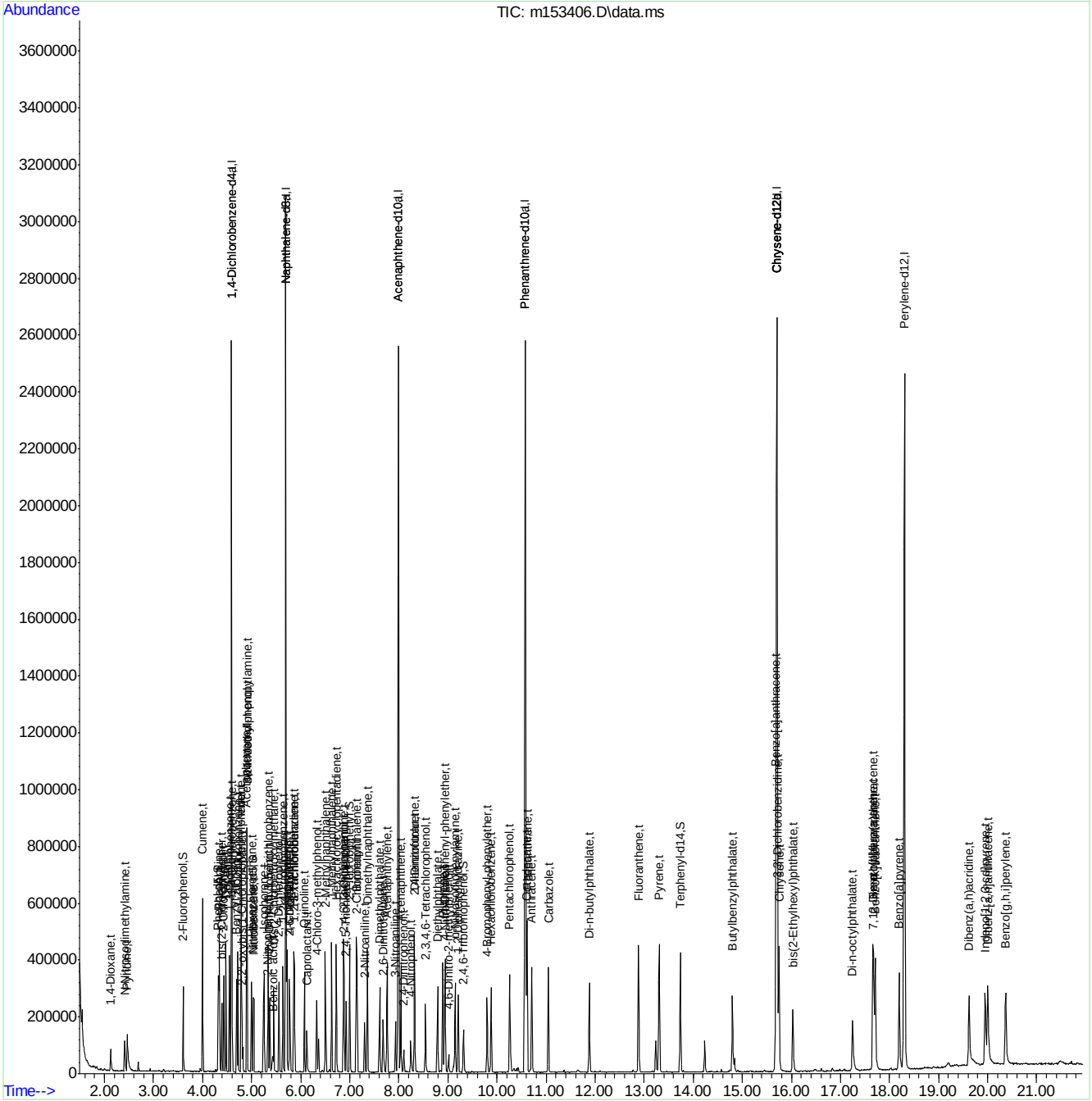
9.6.36

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	321302	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	1086613	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	624876	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	1221213	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	1187922	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	1279525	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	321302	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	624876	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	1187922	40.00	ppm	-0.01
108) Chrysene-d12b	15.701	240	1187922	40.00	ppm	-0.01
110) Phenanthrene-d10a	10.574	188	1221213	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	1086613	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	1187922	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.604	112	22357	1.64	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.28%	
8) Phenol-d5	4.319	99	28291	1.72	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.44%	
25) Nitrobenzene-d5	5.030	82	21979	1.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.78%	
51) 2-Fluorobiphenyl	7.001	172	51123	2.38	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.76%	
73) 2,4,6-Tribromophenol	9.313	330	6411	1.42	ppm	-0.01
Spiked Amount 50.000			Recovery	=	2.84%	
85) Terphenyl-d14	13.736	244	60854	1.86	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.72%	
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.130	88	11381	1.70	ppm	90
3) Pyridine	2.482	79	27623	1.73	ppm	97
4) N-Nitrosodimethylamine	2.418	42	9815	1.68	ppm	93
6) Indene	4.789	116	35295	2.15	ppm	94
7) Cumene	3.999	105	60597	2.04	ppm	96
9) Phenol	4.330	94	32262	1.98	ppm	97
10) Aniline	4.341	93	35832	2.55	ppm	96
11) bis(2-Chloroethyl)ether	4.389	93	23172	2.11	ppm	94
12) 2-Chlorophenol	4.432	128	21560	1.90	ppm	92
13) Decane	4.480	43	18451	2.32	ppm	96
14) 1,3-Dichlorobenzene	4.549	146	27382	2.15	ppm	99
15) 1,4-Dichlorobenzene	4.602	146	24815	2.11	ppm	96
16) Benzyl alcohol	4.693	108	11499	1.61	ppm	97
17) 1,2-Dichlorobenzene	4.720	146	23744	2.04	ppm	98
18) Acetophenone	4.902	105	30620	2.18	ppm	97
19) 2-Methylphenol	4.784	108	18590	2.02	ppm	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	5582	1.95	ppm		97
21) 3&4-Methylphenol	4.907	108	18888	2.02	ppm		85
22) n-Nitroso-di-n-propyla...	4.907	70	15794	2.30	ppm		93
23) Hexachloroethane	4.998	201	9876	1.96	ppm		92
26) Nitrobenzene	5.040	77	22994	2.08	ppm		97
27) Quinoline	6.077	129	39477	1.87	ppm		99
28) Isophorone	5.254	82	41790	1.98	ppm		96
29) 2-Nitrophenol	5.329	139	8483	1.45	ppm		93
30) 2,4-Dimethylphenol	5.366	107	14556	1.54	ppm		98
32) bis(2-Chloroethoxy)met...	5.452	93	25887	2.09	ppm		99
33) 2,4-Dichlorophenol	5.553	162	17282	1.88	ppm		98
34) 2,6-Dichlorophenol	5.783	162	16133	1.96	ppm		99
35) 1,3,5-Trichlorobenzene	5.340	180	24781	2.34	ppm		96
36) 1,2,4-Trichlorobenzene	5.639	180	23847	2.25	ppm		93
37) 1,2,3-Trichlorobenzene	5.874	180	21881	2.30	ppm		95
38) Naphthalene	5.719	128	53779	2.07	ppm		96
39) 4-Chloroaniline	5.772	127	24490	2.08	ppm		99
40) 2,3-Dichloroaniline	6.872	161	23482	2.07	ppm		98
41) Caprolactam	6.119	55	7211	1.60	ppm		86
42) Hexachlorobutadiene	5.858	225	13305	2.10	ppm		97
43) 4-Chloro-3-methylphenol	6.322	107	16880	1.67	ppm		92
44) 2-Methylnaphthalene	6.504	141	33355	2.00	ppm		98
45) 1-Methylnaphthalene	6.627	142	44650	2.14	ppm		95
46) Dimethylnaphthalene	7.358	156	38554	2.11	ppm		99
48) Hexachlorocyclopentadiene	6.723	237	21743	3.36	ppm		93
49) 2,4,6-Trichlorophenol	6.878	196	13988	2.10	ppm		93
50) 2,4,5-Trichlorophenol	6.920	196	14693	2.02	ppm		89
52) 2-Chloronaphthalene	7.150	162	43258	2.50	ppm		98
53) Biphenyl	7.134	154	53685	2.26	ppm		98
54) 2-Nitroaniline	7.300	65	7430	1.27	ppm		92
55) Dimethylphthalate	7.604	163	47572	2.07	ppm		99
56) Acenaphthylene	7.759	152	62856	2.18	ppm		97
57) 2,6-Dinitrotoluene	7.679	165	6502	1.26	ppm		97
58) 3-Nitroaniline	7.930	138	8052	1.37	ppm		75
59) Acenaphthene	8.037	153	36991	2.07	ppm		96
60) 2,4-Dinitrophenol	8.101	184	2307	0.88	ppm		86
62) Dibenzofuran	8.320	168	59165	2.31	ppm		97
63) 2,4-Dinitrotoluene	8.320	165	7001	1.13	ppm	#	48
64) 2,3,4,6-Tetrachlorophenol	8.544	232	11072	1.54	ppm		96
65) Diethylphthalate	8.785	149	44675	1.95	ppm		96
66) Fluorene	8.897	166	47360	2.17	ppm		98
67) 4-Chlorophenyl-phenyle...	8.934	204	25071	2.29	ppm		94
68) 4-Nitroaniline	8.945	138	8066	1.54	ppm		94
70) 4,6-Dinitro-2-methylph...	9.014	198	2444	0.63	ppm		97
71) n-Nitrosodiphenylamine	9.142	169	33425	2.15	ppm		97
72) 1,2-Diphenylhydrazine	9.206	77	45557	2.16	ppm		99
74) 4-Bromophenyl-phenylether	9.799	248	16693	2.03	ppm		91
75) Hexachlorobenzene	9.879	284	20541	2.39	ppm		90
76) Pentachlorophenol	10.259	266	13876	2.44	ppm		97
77) Phenanthrene	10.611	178	66733	2.40	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

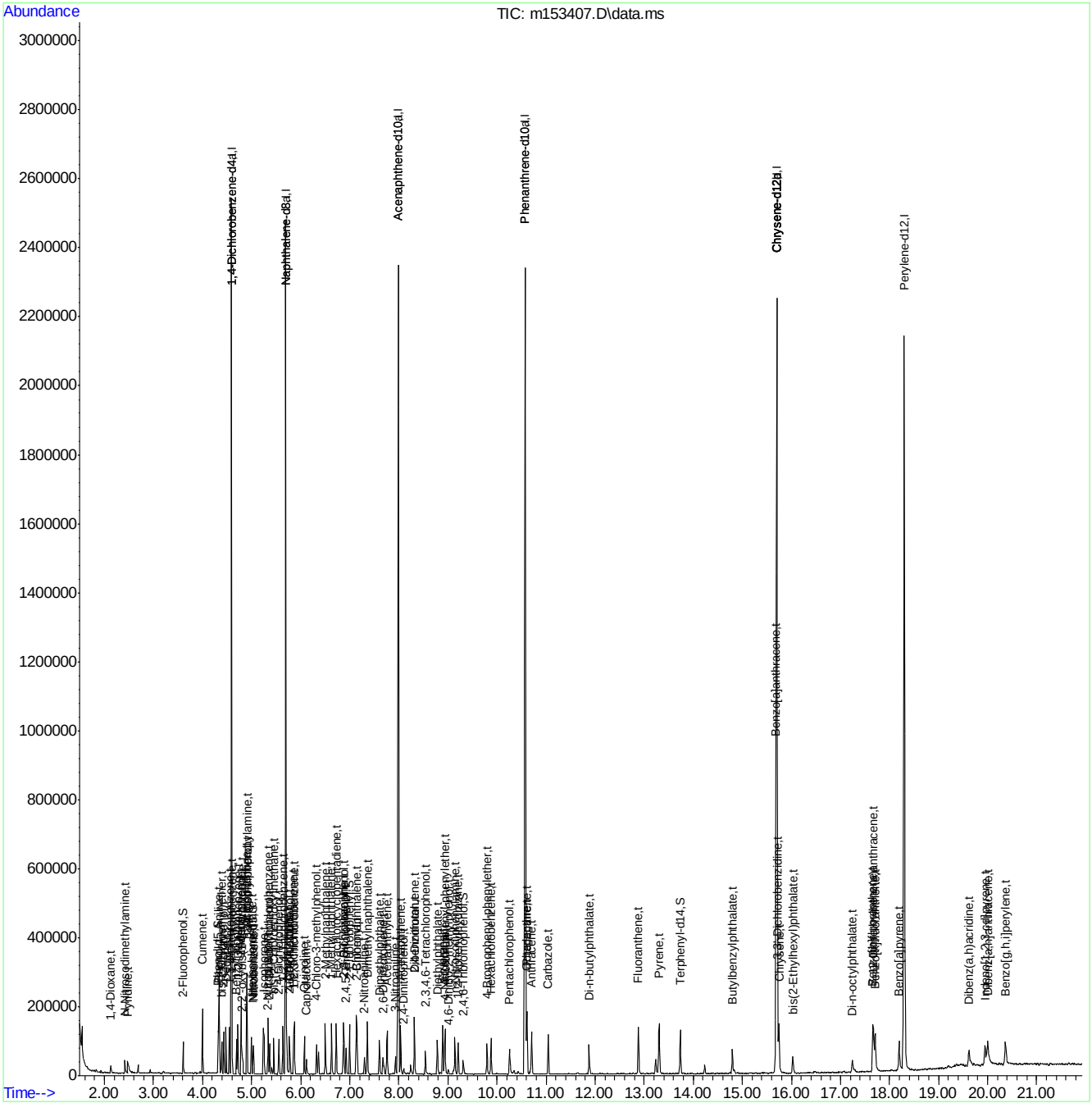
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.707	178	66921	2.18	ppm	98
79) Carbazole	11.044	167	61545	2.04	ppm	99
80) Di-n-butylphthalate	11.877	149	64886	1.67	ppm	98
81) Fluoranthene	12.881	202	79743	2.04	ppm	97
82) Octadecane	10.606	57	19409	2.03	ppm	93
84) Pyrene	13.303	202	86090	1.97	ppm	97
86) Butylbenzylphthalate	14.799	149	25053	1.26	ppm	91
87) Benzo[a]anthracene	15.685	228	73939	1.70	ppm	97
88) 3,3'-Dichlorobenzidine	15.723	252	19312	1.26	ppm	96
89) Chrysene	15.749	228	72902	2.02	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.032	149	25473	1.01	ppm	97
92) Di-n-octylphthalate	17.239	149	37963	0.88	ppm	97
93) Benzo[b]fluoranthene	17.656	252	71309	1.69	ppm	97
94) Benzo[k]fluoranthene	17.704	252	81842	2.22	ppm	98
95) Benzo[a]pyrene	18.195	252	61108	1.59	ppm	96
96) Indeno[1,2,3-cd]pyrene	19.947	276	44478	1.26	ppm	98
97) Dibenz(a,h)acridine	19.622	279	45973	1.30	ppm	80
98) Dibenz[a,h]anthracene	20.001	278	52605	1.48	ppm	98
99) 7,12-Dimethylbenz(a)an...	17.672	256	22406	1.29	ppm	99
100) Benzo[g,h,i]perylene	20.364	276	56491	1.58	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	361595	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	1234210	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	719774	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1399253	40.00	ppm	0.00
83) Chrysene-d12	15.703	240	1374109	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1498240	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	361595	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	719774	40.00	ppm	0.00
106) Chrysene-d12a	15.703	240	1374109	40.00	ppm	0.00
108) Chrysene-d12b	15.703	240	1374109	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1399253	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	1234210	40.00	ppm	0.00
115) Chrysene-d12c	15.703	240	1374109	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.606	112	12086	0.79	ppm	0.00
Spiked Amount 50.000			Recovery =	1.58%		
8) Phenol-d5	4.321	99	16302	0.88	ppm	0.00
Spiked Amount 50.000			Recovery =	1.76%		
25) Nitrobenzene-d5	5.026	82	13024	0.99	ppm	0.00
Spiked Amount 50.000			Recovery =	1.98%		
51) 2-Fluorobiphenyl	6.997	172	29626	1.20	ppm	0.00
Spiked Amount 50.000			Recovery =	2.40%		
73) 2,4,6-Tribromophenol	9.321	330	3925	0.76	ppm	0.00
Spiked Amount 50.000			Recovery =	1.52%		
85) Terphenyl-d14	13.732	244	35772	0.94	ppm	0.00
Spiked Amount 50.000			Recovery =	1.88%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.137	88	6820	0.90	ppm	93
3) Pyridine	2.489	79	14453	0.80	ppm	97
4) N-Nitrosodimethylamine	2.425	42	5387	0.82	ppm	95
6) Indene	4.791	116	21025	1.14	ppm	94
7) Cumene	3.995	105	34265	1.02	ppm	99
9) Phenol	4.332	94	18877	1.03	ppm	95
10) Aniline	4.343	93	20382	1.29	ppm	95
11) bis(2-Chloroethyl)ether	4.391	93	13058	1.06	ppm	98
12) 2-Chlorophenol	4.433	128	11977	0.94	ppm	94
13) Decane	4.476	43	10763	1.20	ppm	96
14) 1,3-Dichlorobenzene	4.546	146	15906	1.11	ppm	97
15) 1,4-Dichlorobenzene	4.599	146	13381	1.01	ppm	94
16) Benzyl alcohol	4.695	108	7183	0.90	ppm	88
17) 1,2-Dichlorobenzene	4.722	146	13810	1.05	ppm	99
18) Acetophenone	4.903	105	18563	1.18	ppm	97
19) 2-Methylphenol	4.786	108	11075	1.07	ppm	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.802	121	3806	1.18	ppm		95
21) 3&4-Methylphenol	4.903	108	10956	1.04	ppm	#	58
22) n-Nitroso-di-n-propyla...	4.903	70	8960	1.16	ppm		88
23) Hexachloroethane	4.994	201	5686	1.00	ppm		89
26) Nitrobenzene	5.042	77	12725	1.01	ppm		99
27) Quinoline	6.073	129	22674	0.95	ppm		93
28) Isophorone	5.251	82	23667	0.99	ppm		96
29) 2-Nitrophenol	5.325	139	4443	0.67	ppm		98
30) 2,4-Dimethylphenol	5.368	107	7754	0.72	ppm		85
32) bis(2-Chloroethoxy)met...	5.454	93	15522	1.10	ppm		99
33) 2,4-Dichlorophenol	5.555	162	10227	0.98	ppm		94
34) 2,6-Dichlorophenol	5.785	162	8877	0.95	ppm		96
35) 1,3,5-Trichlorobenzene	5.341	180	14638	1.22	ppm		90
36) 1,2,4-Trichlorobenzene	5.641	180	13384	1.11	ppm		94
37) 1,2,3-Trichlorobenzene	5.870	180	13641	1.26	ppm		90
38) Naphthalene	5.715	128	32776	1.11	ppm		97
39) 4-Chloroaniline	5.769	127	13320	1.00	ppm		94
40) 2,3-Dichloroaniline	6.874	161	12827	0.99	ppm		99
41) Caprolactam	6.116	55	3769	0.74	ppm		84
42) Hexachlorobutadiene	5.860	225	8056	1.12	ppm		94
43) 4-Chloro-3-methylphenol	6.324	107	8832	0.77	ppm		97
44) 2-Methylnaphthalene	6.506	141	20018	1.06	ppm		96
45) 1-Methylnaphthalene	6.629	142	26361	1.11	ppm		96
46) Dimethylnaphthalene	7.360	156	21537	1.04	ppm		94
48) Hexachlorocyclopentadiene	6.725	237	12043	1.62	ppm		95
49) 2,4,6-Trichlorophenol	6.880	196	7522	0.98	ppm		88
50) 2,4,5-Trichlorophenol	6.928	196	7962	0.95	ppm		80
52) 2-Chloronaphthalene	7.152	162	25386	1.27	ppm		94
53) Biphenyl	7.136	154	31420	1.15	ppm		95
54) 2-Nitroaniline	7.302	65	4564	0.68	ppm		90
55) Dimethylphthalate	7.606	163	28427	1.07	ppm		98
56) Acenaphthylene	7.761	152	36620	1.10	ppm		98
57) 2,6-Dinitrotoluene	7.681	165	3512	0.59	ppm		85
59) Acenaphthene	8.039	153	21927	1.07	ppm		94
62) Dibenzofuran	8.322	168	33666	1.14	ppm		97
63) 2,4-Dinitrotoluene	8.322	165	4112	0.57	ppm	#	48
64) 2,3,4,6-Tetrachlorophenol	8.541	232	5257	0.63	ppm		94
65) Diethylphthalate	8.786	149	25405	0.97	ppm		98
66) Fluorene	8.899	166	28200	1.12	ppm		96
67) 4-Chlorophenyl-phenyle...	8.936	204	15259	1.21	ppm		97
68) 4-Nitroaniline	8.941	138	4000	0.66	ppm		92
71) n-Nitrosodiphenylamine	9.144	169	19772	1.11	ppm		97
72) 1,2-Diphenylhydrazine	9.208	77	26698	1.10	ppm		83
74) 4-Bromophenyl-phenylether	9.801	248	10051	1.07	ppm		96
75) Hexachlorobenzene	9.881	284	12007	1.22	ppm		90
77) Phenanthrene	10.613	178	39852	1.25	ppm		99
78) Anthracene	10.709	178	37676	1.07	ppm		98
79) Carbazole	11.046	167	34716	1.01	ppm		94
80) Di-n-butylphthalate	11.879	149	35987	0.81	ppm		94
81) Fluoranthene	12.883	202	46006	1.03	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
82) Octadecane	10.602	57	11357	1.04	ppm	89
84) Pyrene	13.305	202	49946	0.99	ppm	96
87) Benzo[a]anthracene	15.687	228	44818	0.89	ppm	98
89) Chrysene	15.746	228	42317	1.01	ppm	99
93) Benzo[b]fluoranthene	17.658	252	37401	0.76	ppm	99
94) Benzo[k]fluoranthene	17.706	252	46383	1.07	ppm	99
95) Benzo[a]pyrene	18.197	252	33232	0.74	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.944	276	22073	0.54	ppm	84
98) Dibenz[a,h]anthracene	19.997	278	26530	0.64	ppm	87
100) Benzo[g,h,i]perylene	20.366	276	31660	0.76	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

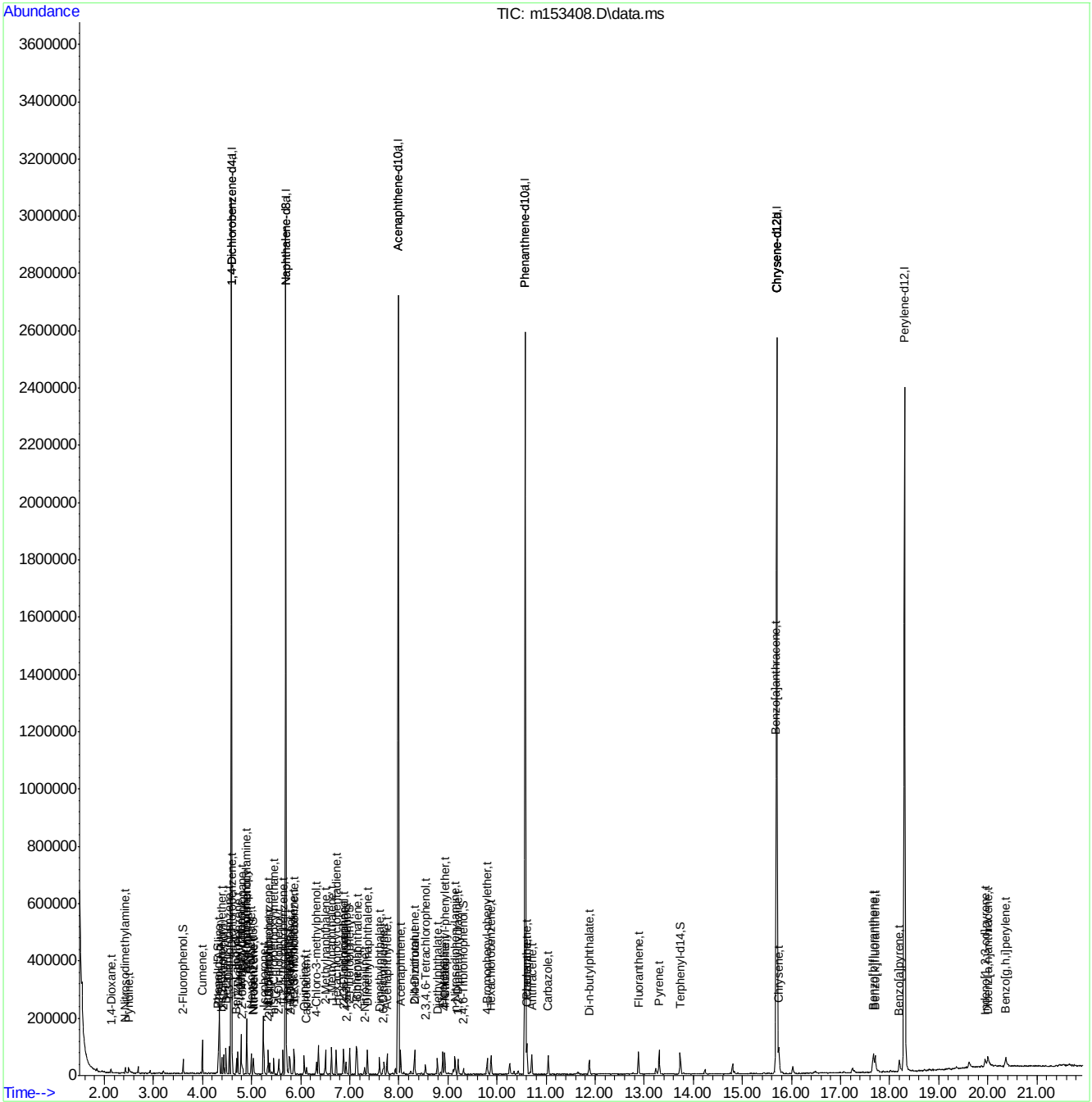
9.6.38

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.590	152	255989	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	854763	40.00	ppm	0.00
47) Acenaphthene-d10	7.993	164	517248	40.00	ppm	0.00
69) Phenanthrene-d10	10.572	188	1007716	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	815608	40.00	ppm	0.00
91) Perylene-d12	18.301	264	903170	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.590	152	255989	40.00	ppm	0.00
103) Acenaphthene-d10a	7.993	164	517248	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	815608	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	815608	40.00	ppm	0.00
110) Phenanthrene-d10a	10.572	188	1007716	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	854763	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	815608	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	2.422	42	180752	41.67	ppm	95
11) bis(2-Chloroethyl)ether	4.393	93	459749	51.17	ppm	96
14) 1,3-Dichlorobenzene	4.548	146	485227	46.81	ppm	99
15) 1,4-Dichlorobenzene	4.601	146	442586	47.02	ppm	98
17) 1,2-Dichlorobenzene	4.719	146	431561	46.33	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.804	121	128350	55.26	ppm	96
22) n-Nitroso-di-n-propyla...	4.906	70	301654	51.35	ppm	97
23) Hexachloroethane	4.996	201	179100	45.04	ppm	97
26) Nitrobenzene	5.044	77	398131	44.97	ppm	96
28) Isophorone	5.253	82	755092	45.71	ppm	100
32) bis(2-Chloroethoxy)met...	5.456	93	489120	48.81	ppm	100
36) 1,2,4-Trichlorobenzene	5.643	180	410184	47.19	ppm	98
38) Naphthalene	5.717	128	989343	47.27	ppm	100
42) Hexachlorobutadiene	5.862	225	249878	48.24	ppm	99
48) Hexachlorocyclopentadiene	6.727	237	243786	48.47	ppm	100
52) 2-Chloronaphthalene	7.154	162	760150	47.77	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration

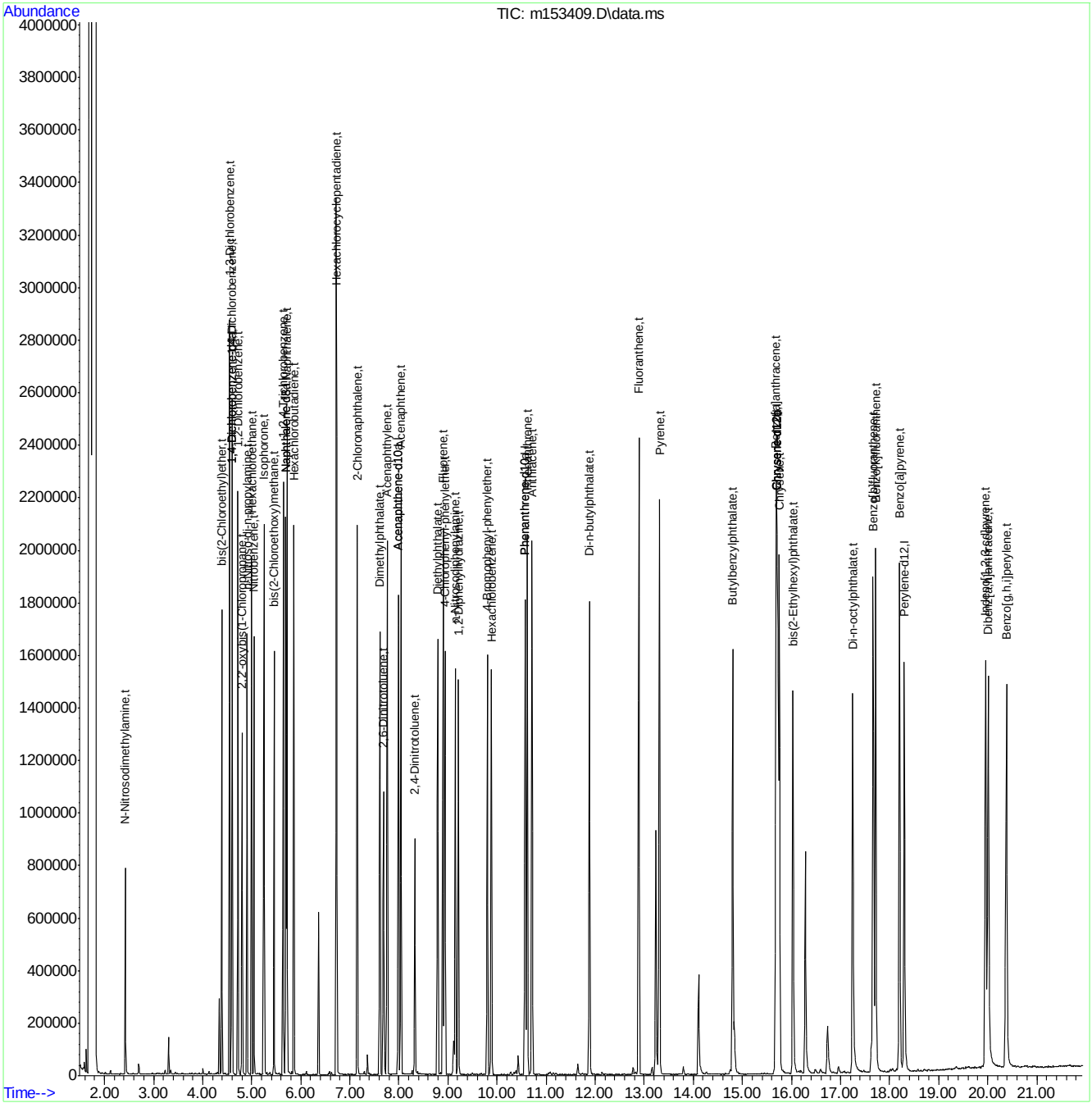
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Dimethylphthalate	7.613	163	861945	44.34	ppm	99
56) Acenaphthylene	7.763	152	1066980	42.70	ppm	99
57) 2,6-Dinitrotoluene	7.683	165	158034	43.40	ppm	93
59) Acenaphthene	8.041	153	642939	42.50	ppm	96
63) 2,4-Dinitrotoluene	8.329	165	196523	38.32	ppm	89
65) Diethylphthalate	8.794	149	829797	44.17	ppm	99
66) Fluorene	8.901	166	816843	43.52	ppm	99
67) 4-Chlorophenyl-phenyle...	8.938	204	406549	41.70	ppm	98
71) n-Nitrosodiphenylamine	9.152	169	560669	41.85	ppm	98
72) 1,2-Diphenylhydrazine	9.210	77	798413	43.46	ppm	100
74) 4-Bromophenyl-phenylether	9.803	248	309156	44.93	ppm	94
75) Hexachlorobenzene	9.889	284	319865	41.86	ppm	99
77) Phenanthrene	10.621	178	1138336	45.56	ppm	99
78) Anthracene	10.711	178	1163645	44.21	ppm	99
80) Di-n-butylphthalate	11.881	149	1391234	45.65	ppm	100
81) Fluoranthene	12.890	202	1438085	43.54	ppm	98
84) Pyrene	13.312	202	1383124	46.31	ppm	99
86) Butylbenzylphthalate	14.803	149	607124	49.50	ppm	99
87) Benzo[a]anthracene	15.689	228	1317427	47.18	ppm	100
89) Chrysene	15.753	228	1110896	44.75	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.031	149	750962	45.23	ppm	99
92) Di-n-octylphthalate	17.249	149	1325247	44.04	ppm	100
93) Benzo[b]fluoranthene	17.665	252	1307739	45.96	ppm	98
94) Benzo[k]fluoranthene	17.719	252	1275584	47.10	ppm	99
95) Benzo[a]pyrene	18.205	252	1254031	50.21	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.957	276	1156959	46.70	ppm	99
98) Dibenz[a,h]anthracene	20.015	278	1088531	47.29	ppm	98
100) Benzo[g,h,i]perylene	20.384	276	1210960	51.12	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153410.D
Acq On : 12 Apr 2019 10:12 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 15 11:34:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:20:55 2019
Response via : Initial Calibration

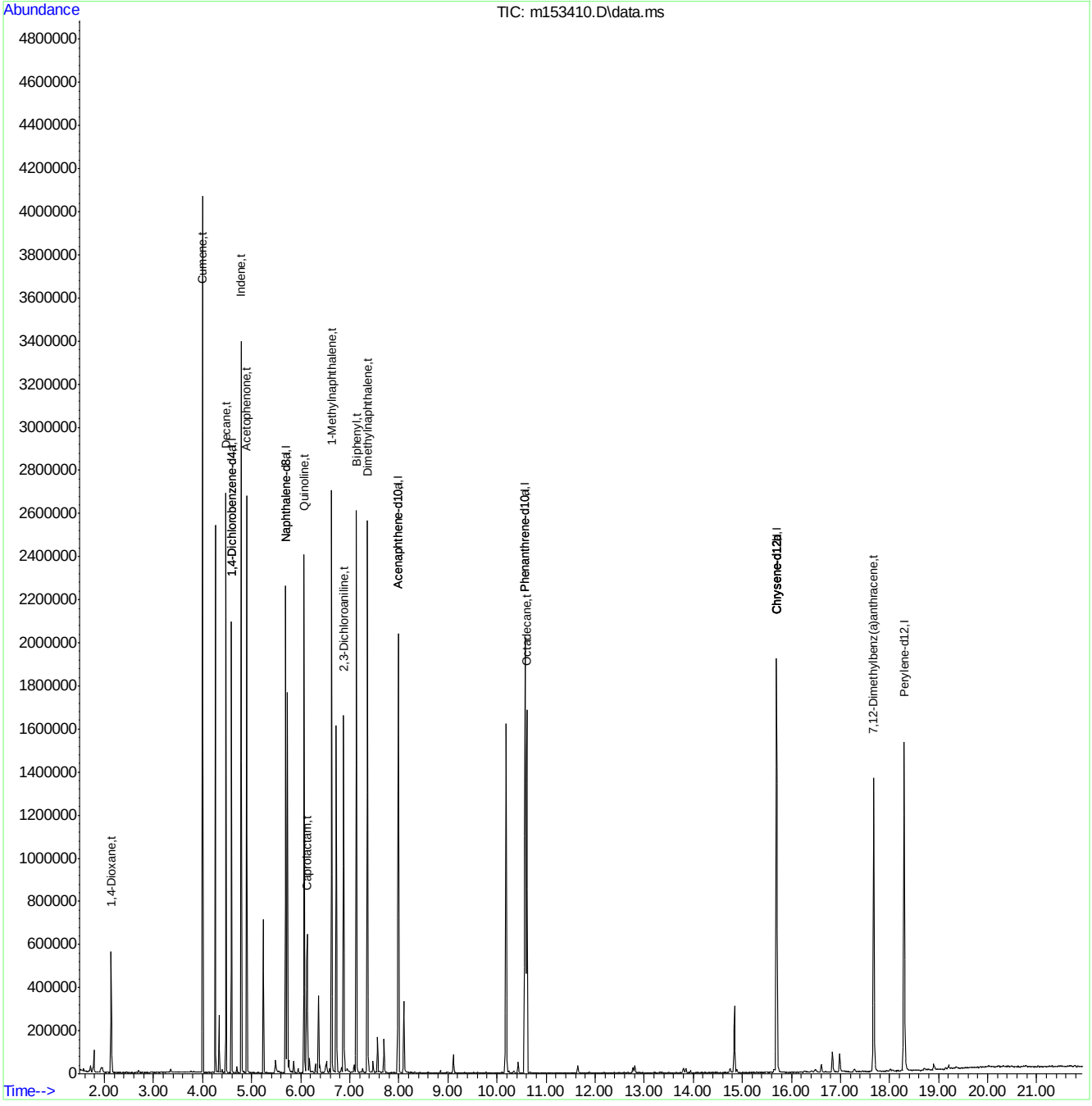
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.587	152	272197	40.00	ppm	0.00
24) Naphthalene-d8	5.698	136	1002860	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	520748	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	1073176	40.00	ppm	0.00
83) Chrysene-d12	15.696	240	1083311	40.00	ppm	-0.02
91) Perylene-d12	18.303	264	923549	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.587	152	272197	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	520748	40.00	ppm	0.00
106) Chrysene-d12a	15.696	240	1083311	40.00	ppm	-0.02
108) Chrysene-d12b	15.696	240	1083311	40.00	ppm	-0.02
110) Phenanthrene-d10a	10.574	188	1073176	40.00	ppm	0.00
113) Naphthalene-d8a	5.698	136	1002860	40.00	ppm	0.00
115) Chrysene-d12c	15.696	240	1083311	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.135	88	227785	42.30	ppm	98
6) Indene	4.790	116	764954	53.15	ppm	97
7) Cumene	3.999	105	1126025	44.28	ppm	99
13) Decane	4.480	43	312181	43.08	ppm	98
18) Acetophenone	4.902	105	581613	46.44	ppm	88
27) Quinoline	6.072	129	812753	42.78	ppm	99
40) 2,3-Dichloroaniline	6.873	161	409589	38.51	ppm	97
41) Caprolactam	6.136	55	144688	37.48	ppm	97
45) 1-Methylnaphthalene	6.632	142	799685	40.40	ppm	99
46) Dimethylnaphthalene	7.364	156	722174	41.91	ppm	99
53) Biphenyl	7.134	154	980730	46.88	ppm	99
82) Octadecane	10.606	57	421400	48.92	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.678	256	447153	40.08	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153410.D
Acq On : 12 Apr 2019 10:12 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 15 11:34:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:20:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	264730	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	863210	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	533118	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	960221	40.00	ppm	0.00
83) Chrysene-d12	15.696	240	910115	40.00	ppm	-0.02
91) Perylene-d12	18.297	264	931035	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.586	152	264730	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	533118	40.00	ppm	0.00
106) Chrysene-d12a	15.696	240	910115	40.00	ppm	-0.02
108) Chrysene-d12b	15.696	240	910115	40.00	ppm	-0.02
110) Phenanthrene-d10a	10.574	188	960221	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	863210	40.00	ppm	0.00
115) Chrysene-d12c	15.696	240	910115	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
9) Phenol	4.335	94	657793	48.97	ppm	89
12) 2-Chlorophenol	4.432	128	463052	50.18	ppm	94
19) 2-Methylphenol	4.784	108	409886	52.76	ppm	98
21) 3&4-Methylphenol	4.907	108	421160	53.92	ppm	98
29) 2-Nitrophenol	5.329	139	230378	55.70	ppm	92
30) 2,4-Dimethylphenol	5.366	107	401819	58.67	ppm	98
31) Benzoic acid	5.478	105	259004	47.58	ppm	97
33) 2,4-Dichlorophenol	5.553	162	354984	49.43	ppm	97
34) 2,6-Dichlorophenol	5.783	162	349388	53.67	ppm	98
43) 4-Chloro-3-methylphenol	6.322	107	374639	50.41	ppm	99
49) 2,4,6-Trichlorophenol	6.883	196	311464	53.97	ppm	99
50) 2,4,5-Trichlorophenol	6.926	196	297762	48.07	ppm	95
60) 2,4-Dinitrophenol	8.101	184	73751	37.76	ppm	89
61) 4-Nitrophenol	8.250	109	114332	44.50	ppm	97
64) 2,3,4,6-Tetrachlorophenol	8.544	232	267965	48.31	ppm	95
70) 4,6-Dinitro-2-methylph...	9.014	198	140324	46.69	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration

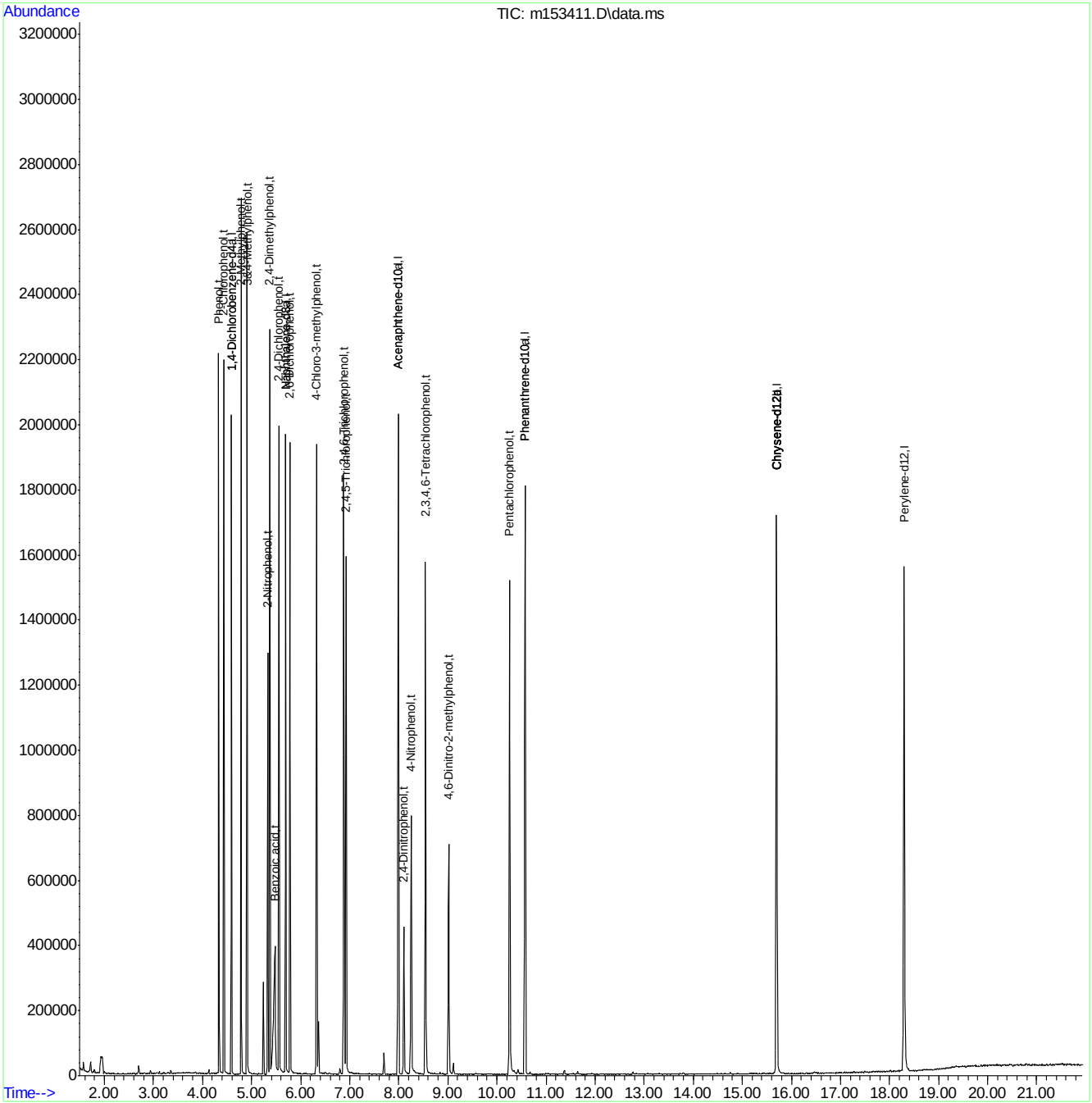
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.259	266	259692	64.03	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153413.D
Acq On : 12 Apr 2019 11:37 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 15 11:55:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

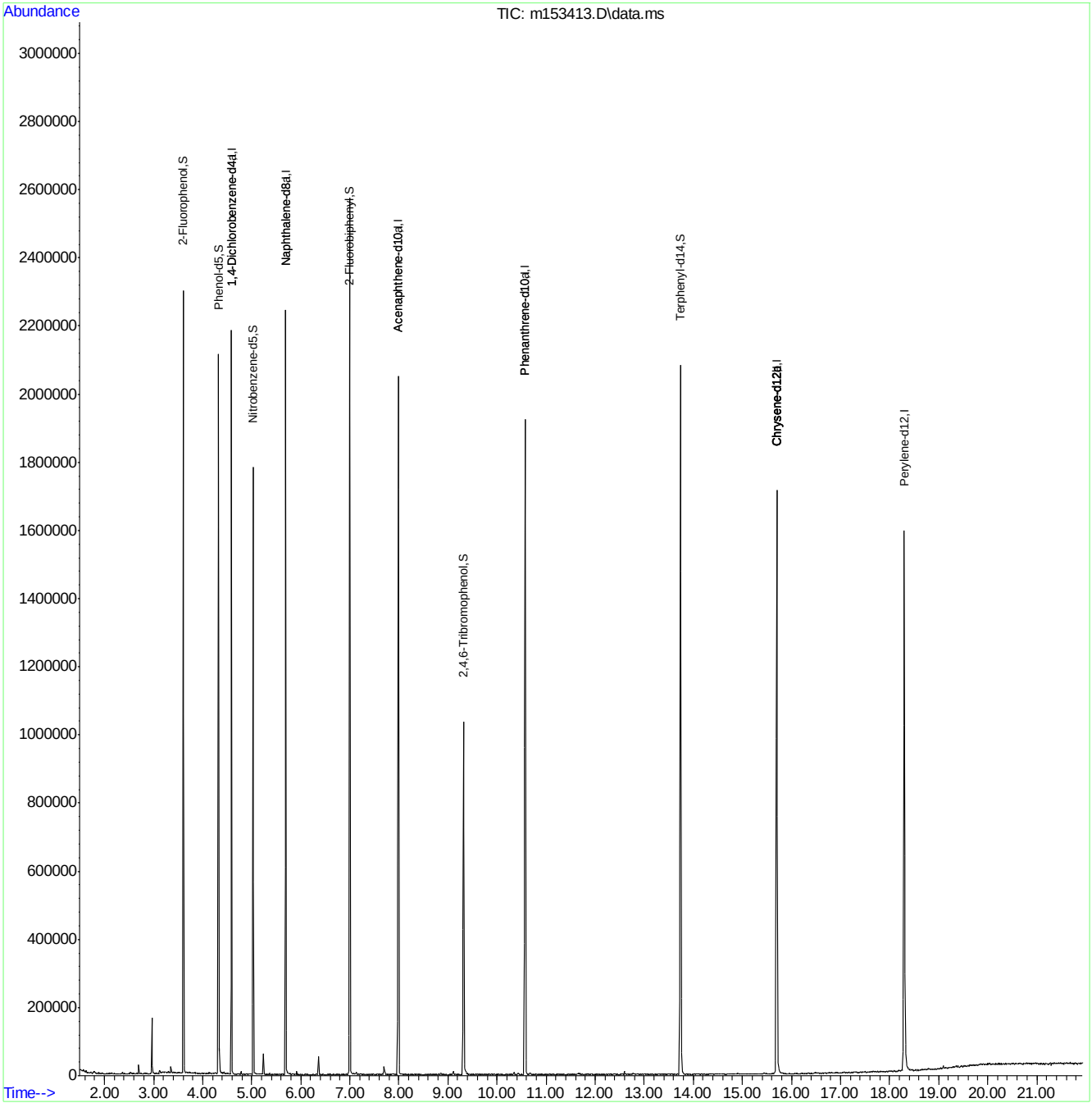
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	281722	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	960107	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	539229	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1006489	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	882944	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	919162	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	281722	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	539229	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	882944	40.00	ppm	-0.01
108) Chrysene-d12b	15.700	240	882944	40.00	ppm	-0.01
110) Phenanthrene-d10a	10.573	188	1006489	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	960107	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	882944	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.608	112	474038	43.04	ppm	0.00
Spiked Amount 50.000			Recovery = 86.08%			
8) Phenol-d5	4.324	99	566883	41.67	ppm	0.00
Spiked Amount 50.000			Recovery = 83.34%			
25) Nitrobenzene-d5	5.029	82	458825	44.80	ppm	0.00
Spiked Amount 50.000			Recovery = 89.60%			
51) 2-Fluorobiphenyl	6.999	172	916400	45.71	ppm	0.00
Spiked Amount 50.000			Recovery = 91.42%			
73) 2,4,6-Tribromophenol	9.317	330	171091	50.53	ppm	0.00
Spiked Amount 50.000			Recovery = 101.06%			
85) Terphenyl-d14	13.740	244	1147831	48.21	ppm	0.00
Spiked Amount 50.000			Recovery = 96.42%			
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153413.D
Acq On : 12 Apr 2019 11:37 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 15 11:55:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153414.D
Acq On : 13 Apr 2019 12:06 am
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 15 11:58:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

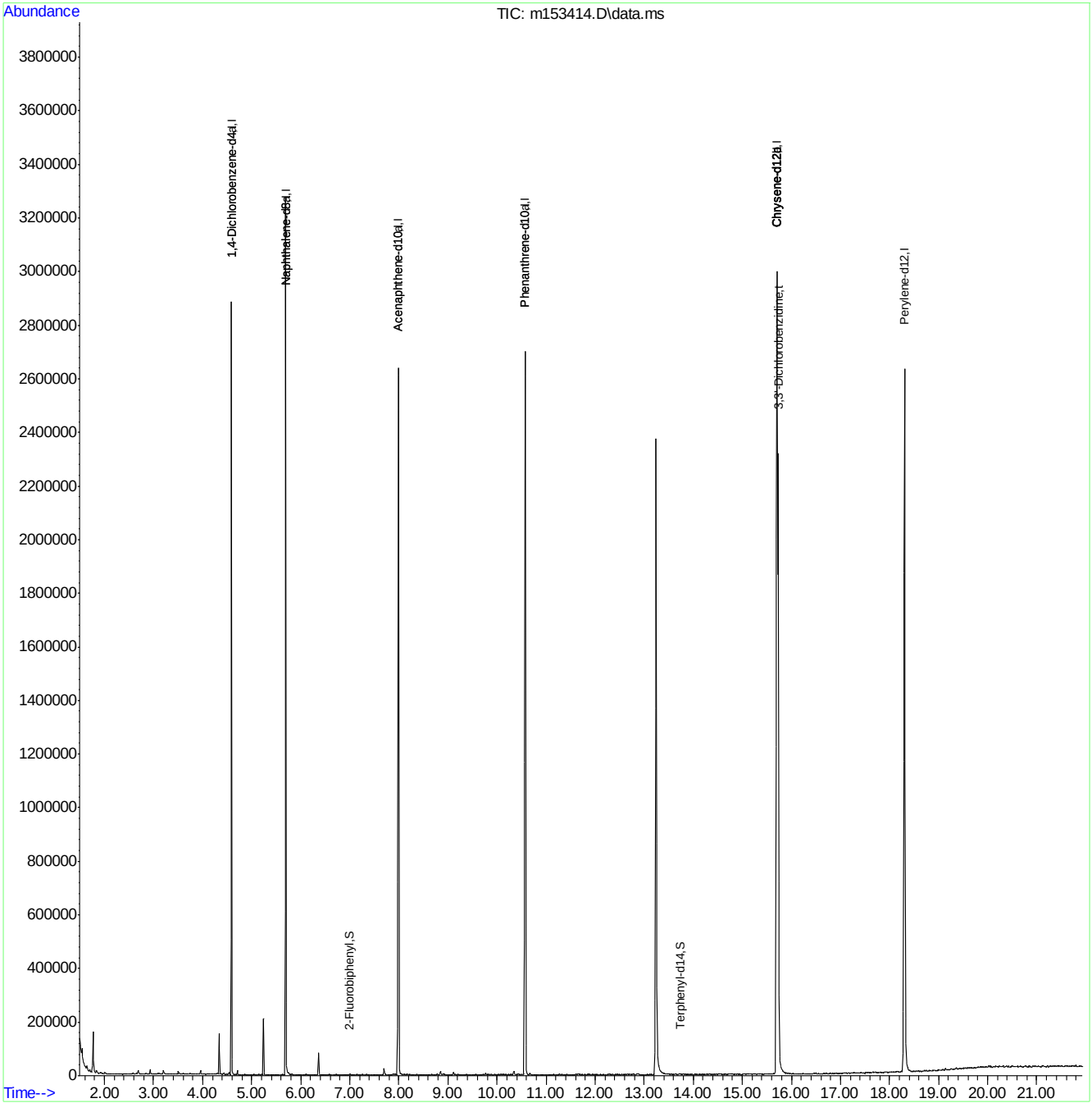
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	391476	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	1323791	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	755879	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1530539	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	1602158	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1647623	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	391476	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	755879	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	1602158	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	1602158	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	1530539	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	1323791	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	1602158	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	7.000	172	894	0.03	ppm	0.00
Spiked Amount 50.000			Recovery =	0.06%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	13.735	244	1429	0.03	ppm	0.00
Spiked Amount 50.000			Recovery =	0.06%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	15.732	252	857087	46.26	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153414.D
Acq On : 13 Apr 2019 12:06 am
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 15 11:58:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153420.D
Acq On : 13 Apr 2019 1:52 am
Operator : chriss2
Sample : ic6557-100
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 12:26:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

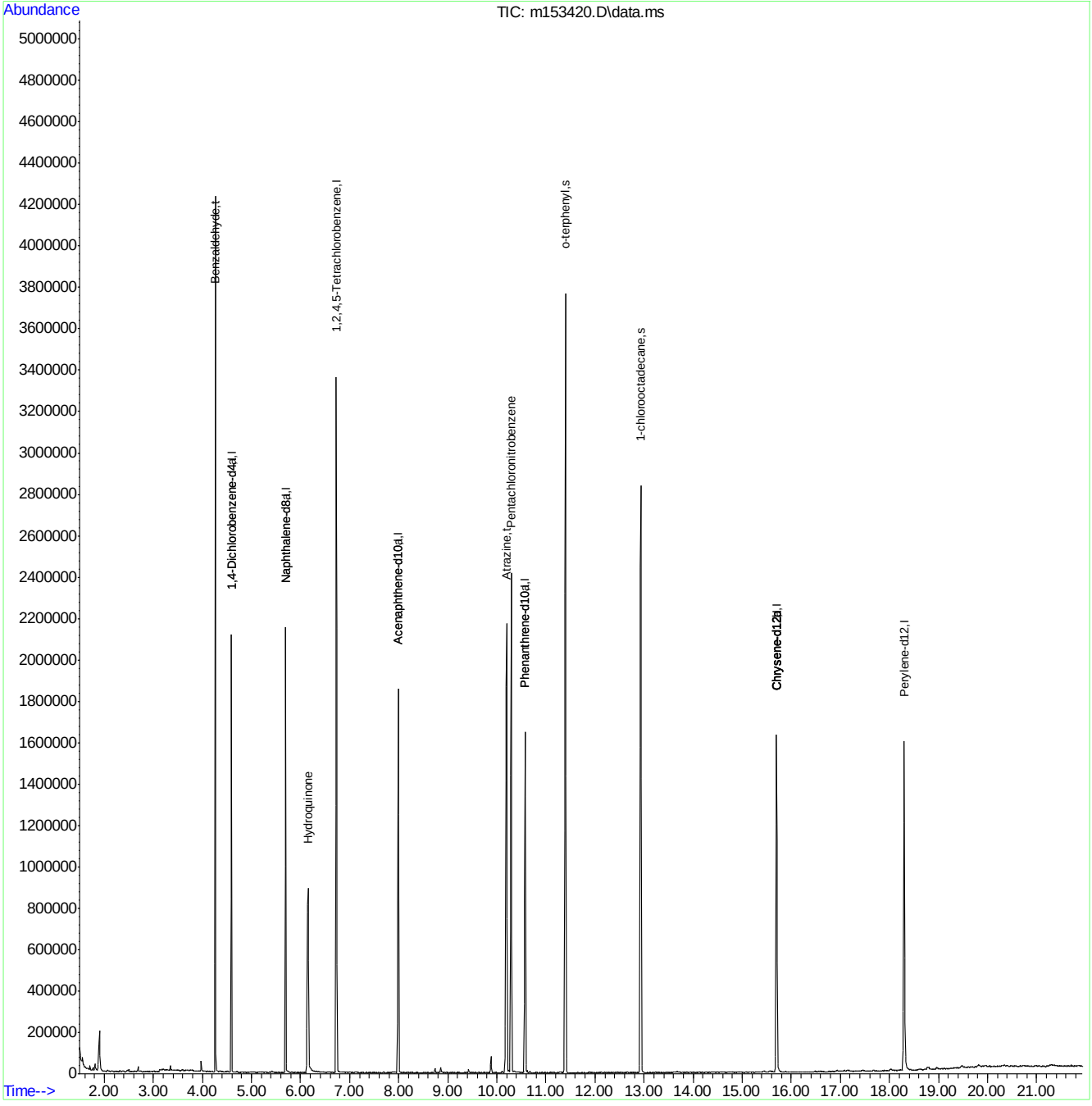
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	248991	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	888990	40.00	ppm	0.00
47) Acenaphthene-d10	7.990	164	494865	40.00	ppm	0.00
69) Phenanthrene-d10	10.575	188	860239	40.00	ppm	0.00
83) Chrysene-d12	15.697	240	867470	40.00	ppm	-0.01
91) Perylene-d12	18.304	264	944528	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	248991	40.00	ppm	0.00
103) Acenaphthene-d10a	7.990	164	494865	40.00	ppm	0.00
106) Chrysene-d12a	15.697	240	867470	40.00	ppm	0.00
108) Chrysene-d12b	15.697	240	867470	40.00	ppm	0.00
110) Phenanthrene-d10a	10.575	188	860239	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	888990	40.00	ppm	0.00
115) Chrysene-d12c	15.697	240	867470	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.931	57	519520	90.45	ppm	0.00
Spiked Amount 50.000			Recovery =	180.90%		
111) o-terphenyl	11.398	230	1185509	90.52	ppm	0.00
Spiked Amount 50.000			Recovery =	181.04%		
Target Compounds						Qvalue
102) Benzaldehyde	4.262	105	632656	91.41	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.730	216	721687	89.16	ppm	99
105) Atrazine	10.196	215	242842	92.28	ppm	99
112) Pentachloronitrobenzene	10.292	295	110807	95.49	ppm	97
114) Hydroquinone	6.153	110	784835	100.57	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153420.D
Acq On : 13 Apr 2019 1:52 am
Operator : chriss2
Sample : ic6557-100
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 12:26:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



MM6556.M Mon Apr 15 12:27:07 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153421.D
Acq On : 13 Apr 2019 2:20 am
Operator : chriss2
Sample : ic6557-80
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 12:28:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

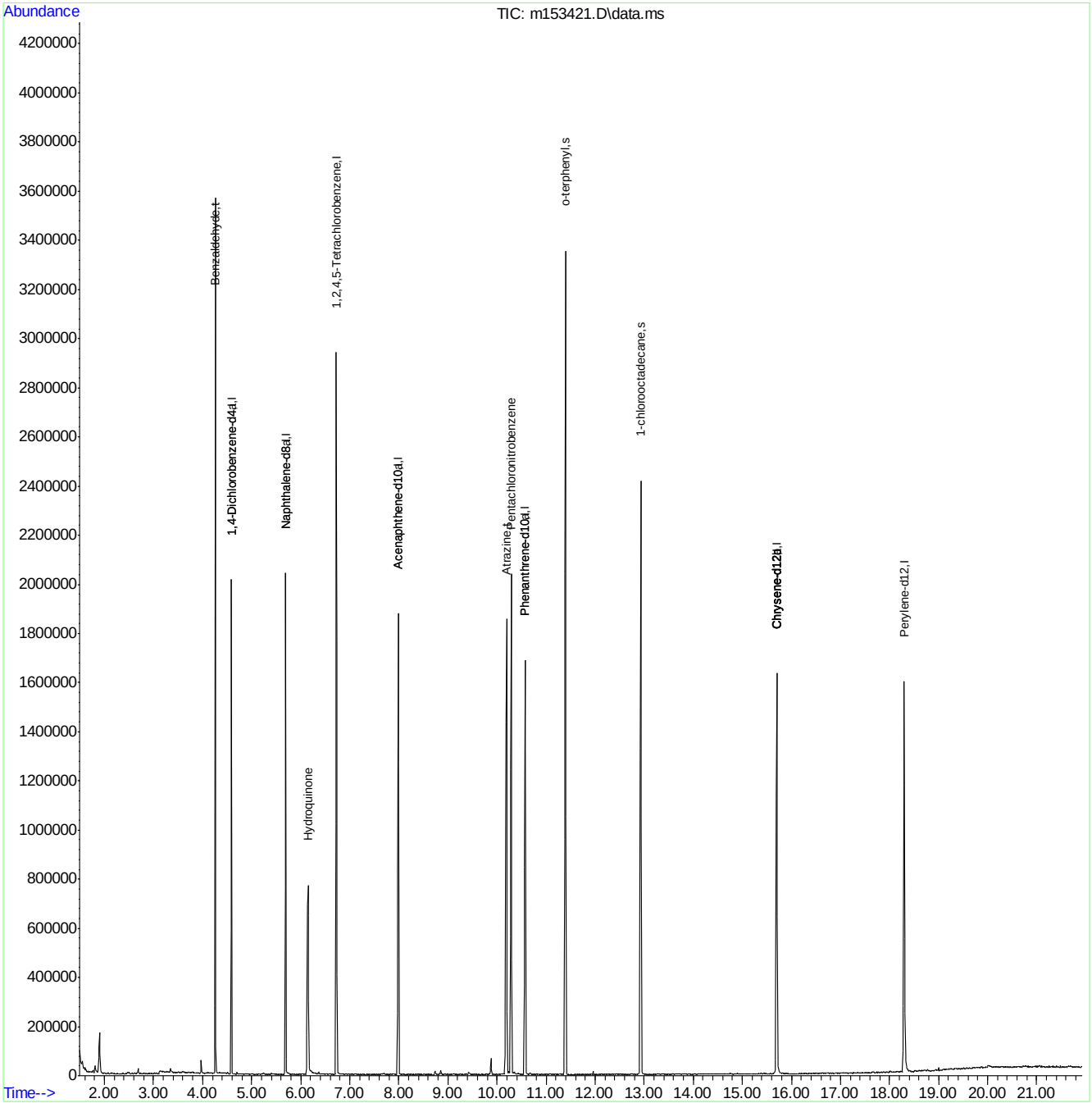
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	243035	40.00	ppm	0.00
24) Naphthalene-d8	5.692	136	874501	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	498260	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	871711	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	870140	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	935216	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	243035	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	498260	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	870140	40.00	ppm	0.00
108) Chrysene-d12b	15.701	240	870140	40.00	ppm	0.00
110) Phenanthrene-d10a	10.574	188	871711	40.00	ppm	0.00
113) Naphthalene-d8a	5.692	136	874501	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	870140	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.929	57	428342	74.35	ppm	0.00
Spiked Amount 50.000			Recovery =	148.70%		
111) o-terphenyl	11.396	230	997159	75.14	ppm	0.00
Spiked Amount 50.000			Recovery =	150.28%		
Target Compounds						Qvalue
102) Benzaldehyde	4.261	105	523047	77.43	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.728	216	608164	74.62	ppm	99
105) Atrazine	10.194	215	201735	76.14	ppm	96
112) Pentachloronitrobenzene	10.291	295	91963	78.21	ppm	99
114) Hydroquinone	6.151	110	623099	81.16	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153421.D
Acq On : 13 Apr 2019 2:20 am
Operator : chriss2
Sample : ic6557-80
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 12:28:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153422.D
Acq On : 13 Apr 2019 2:49 am
Operator : chriss2
Sample : icc6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 12:24:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.585	152	248621	40.00 ppm	0.00
24) Naphthalene-d8	5.696	136	869958	40.00 ppm	0.00
47) Acenaphthene-d10	7.987	164	497180	40.00 ppm	0.00
69) Phenanthrene-d10	10.573	188	887279	40.00 ppm	0.00
83) Chrysene-d12	15.700	240	868264	40.00 ppm	-0.01
91) Perylene-d12	18.301	264	936185	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.585	152	248621	40.00 ppm	0.00
103) Acenaphthene-d10a	7.987	164	497180	40.00 ppm	0.00
106) Chrysene-d12a	15.700	240	868264	40.00 ppm	0.00
108) Chrysene-d12b	15.700	240	868264	40.00 ppm	0.00
110) Phenanthrene-d10a	10.573	188	887279	40.00 ppm	0.00
113) Naphthalene-d8a	5.696	136	869958	40.00 ppm	0.00
115) Chrysene-d12c	15.700	240	868264	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
8) Phenol-d5	0.000	99	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) 1-chlorooctadecane	12.928	57	287441	50.00 ppm	0.00
Spiked Amount 50.000			Recovery	= 100.00%	
111) o-terphenyl	11.395	230	675395	50.00 ppm	0.00
Spiked Amount 50.000			Recovery	= 100.00%	
Target Compounds					Qvalue
102) Benzaldehyde	4.259	105	345534	50.00 ppm	100
104) 1,2,4,5-Tetrachloroben...	6.727	216	406621	50.00 ppm	100
105) Atrazine	10.188	215	132189	50.00 ppm	100
112) Pentachloronitrobenzene	10.289	295	59841	50.00 ppm	100
114) Hydroquinone	6.139	110	381857	50.00 ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

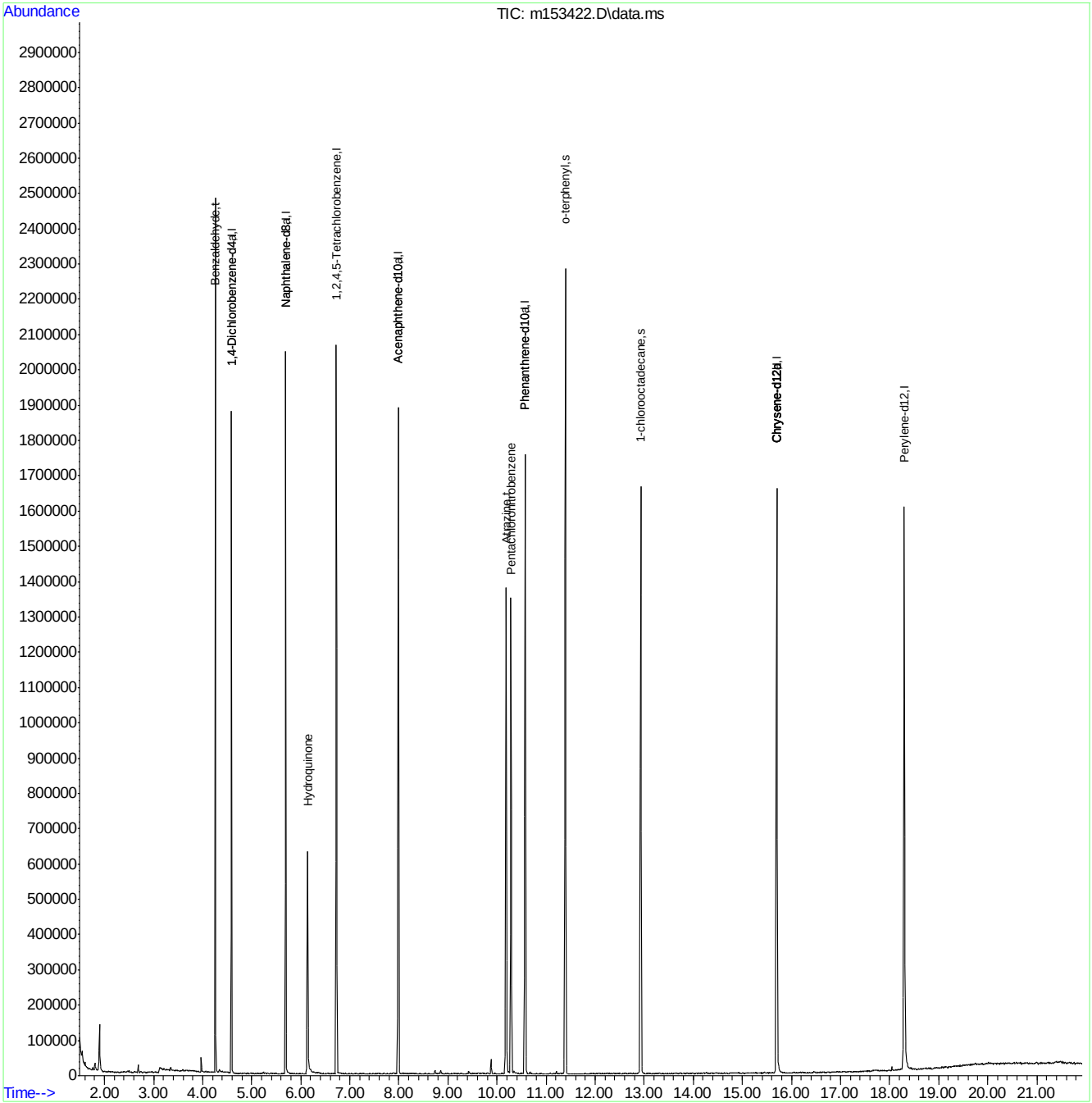
9.6.46

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153422.D
Acq On : 13 Apr 2019 2:49 am
Operator : chriss2
Sample : icc6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 12:24:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153423.D
Acq On : 13 Apr 2019 3:17 am
Operator : chriss2
Sample : ic6557-25
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 12:29:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

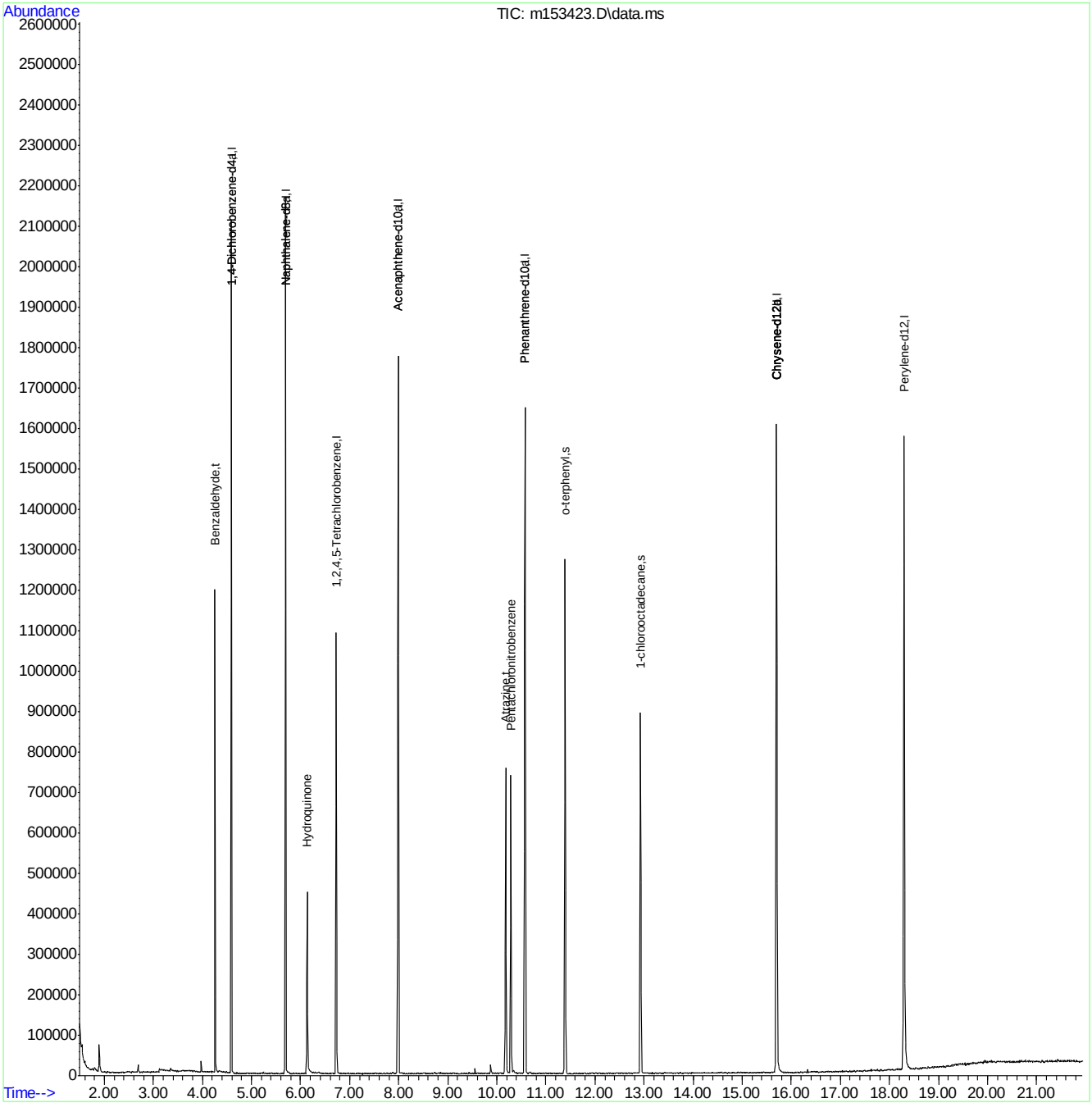
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	248183	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	874946	40.00	ppm	0.00
47) Acenaphthene-d10	7.990	164	491195	40.00	ppm	0.00
69) Phenanthrene-d10	10.570	188	882243	40.00	ppm	0.00
83) Chrysene-d12	15.698	240	849067	40.00	ppm	-0.01
91) Perylene-d12	18.299	264	910419	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	248183	40.00	ppm	0.00
103) Acenaphthene-d10a	7.990	164	491195	40.00	ppm	0.00
106) Chrysene-d12a	15.698	240	849067	40.00	ppm	0.00
108) Chrysene-d12b	15.698	240	849067	40.00	ppm	0.00
110) Phenanthrene-d10a	10.570	188	882243	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	874946	40.00	ppm	0.00
115) Chrysene-d12c	15.698	240	849067	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.926	57	148373	26.39	ppm	0.00
Spiked Amount 50.000			Recovery =	52.78%		
111) o-terphenyl	11.393	230	364283	27.12	ppm	0.00
Spiked Amount 50.000			Recovery =	54.24%		
Target Compounds						Qvalue
102) Benzaldehyde	4.257	105	185136	26.84	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.725	216	220531	27.45	ppm	98
105) Atrazine	10.180	215	65573	25.10	ppm	96
112) Pentachloronitrobenzene	10.287	295	28170	23.67	ppm	96
114) Hydroquinone	6.132	110	179238	23.34	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153423.D
Acq On : 13 Apr 2019 3:17 am
Operator : chriss2
Sample : ic6557-25
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 12:29:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153424.D
Acq On : 13 Apr 2019 3:46 am
Operator : chriss2
Sample : ic6557-10
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 12:31:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

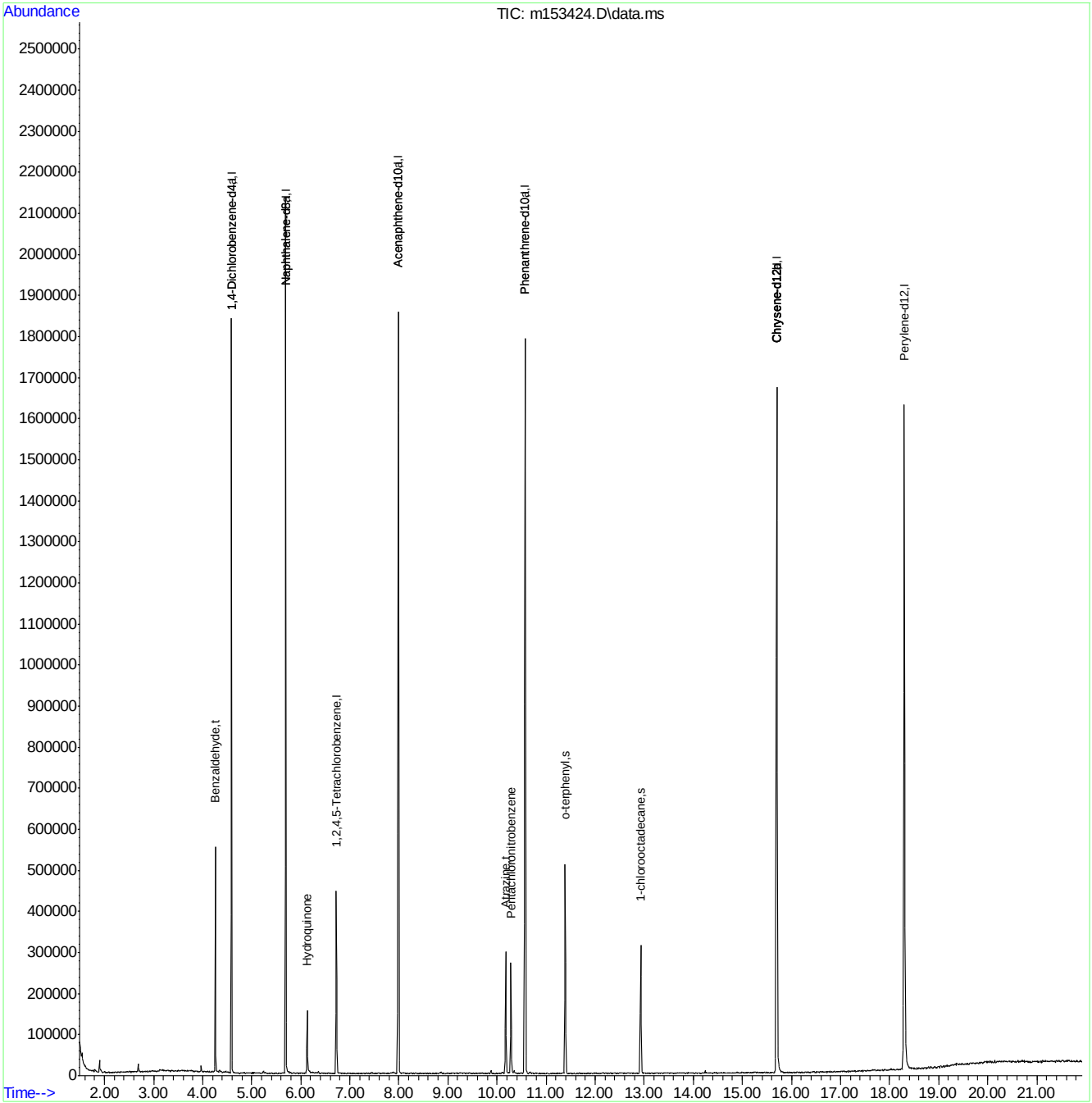
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	255818	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	892243	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	505258	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	938579	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	874604	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	921494	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	255818	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	505258	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	874604	40.00	ppm	0.00
108) Chrysene-d12b	15.700	240	874604	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	938579	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	892243	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	874604	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.928	57	52058	8.99	ppm	0.00
Spiked Amount 50.000			Recovery =	17.98%		
111) o-terphenyl	11.390	230	142404	9.97	ppm	0.00
Spiked Amount 50.000			Recovery =	19.94%		
Target Compounds						Qvalue
102) Benzaldehyde	4.259	105	71952	10.12	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.727	216	89089	10.78	ppm	98
105) Atrazine	10.177	215	23507	8.75	ppm	93
112) Pentachloronitrobenzene	10.284	295	9630	7.61	ppm	97
114) Hydroquinone	6.129	110	53620	6.85	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153424.D
Acq On : 13 Apr 2019 3:46 am
Operator : chriss2
Sample : ic6557-10
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 12:31:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153425.D
Acq On : 13 Apr 2019 4:14 am
Operator : chriss2
Sample : ic6557-5
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 12:32:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

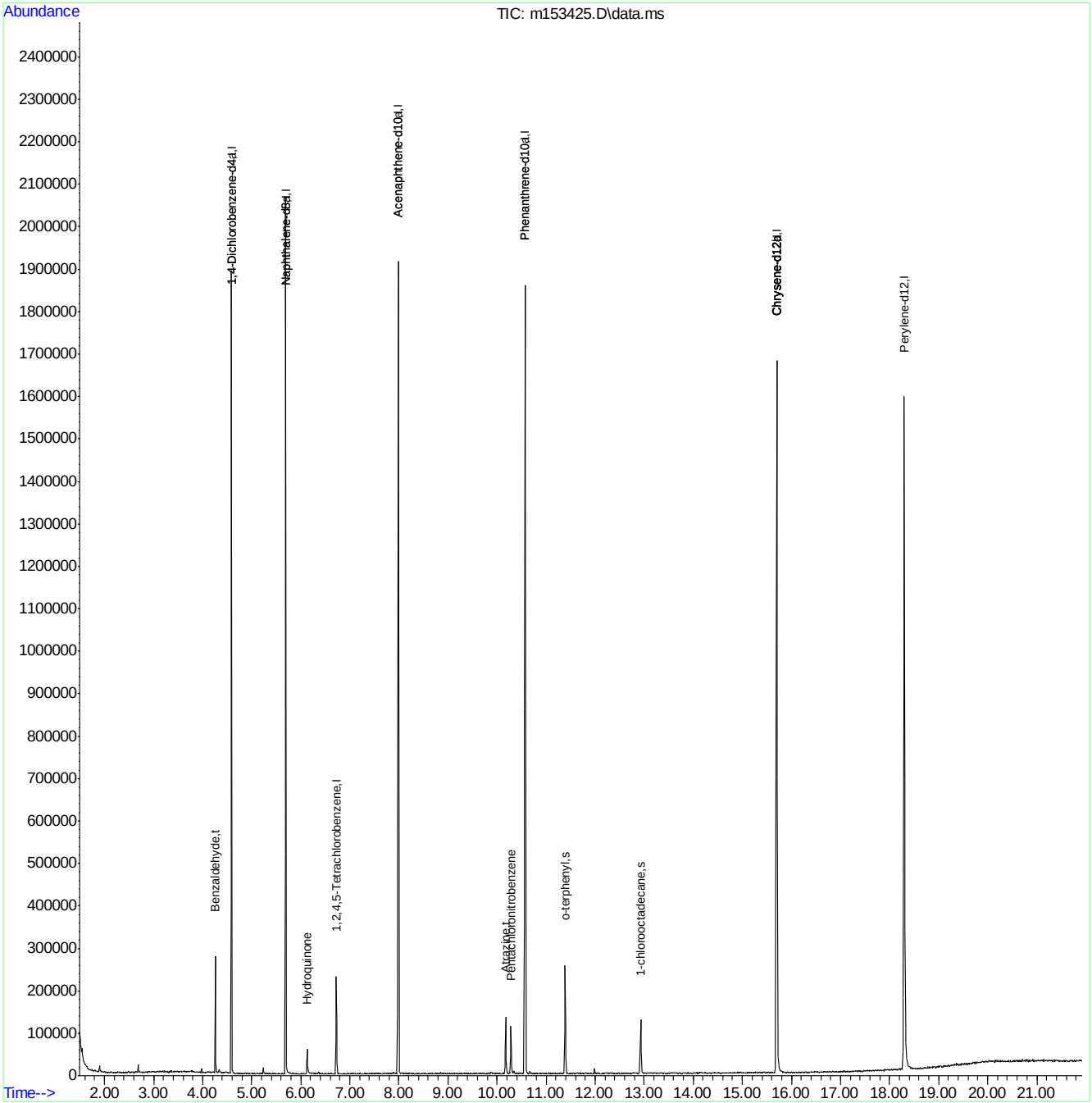
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	260557	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	872990	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	500483	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	936387	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	866791	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	913024	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	260557	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	500483	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	866791	40.00	ppm	0.00
108) Chrysene-d12b	15.700	240	866791	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	936387	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	872990	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	866791	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.928	57	22583	3.93	ppm	0.00
Spiked Amount 50.000			Recovery =	7.86%		
111) o-terphenyl	11.390	230	70987	4.98	ppm	0.00
Spiked Amount 50.000			Recovery =	9.96%		
Target Compounds						Qvalue
102) Benzaldehyde	4.259	105	37284	5.15	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.727	216	45863	5.60	ppm	99
105) Atrazine	10.177	215	10172	3.82	ppm	93
112) Pentachloronitrobenzene	10.284	295	3820	3.02	ppm	85
114) Hydroquinone	6.129	110	22627	2.95	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153425.D
Acq On : 13 Apr 2019 4:14 am
Operator : chriss2
Sample : ic6557-5
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 12:32:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153426.D
Acq On : 13 Apr 2019 4:42 am
Operator : chriss2
Sample : ic6557-2
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:33:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

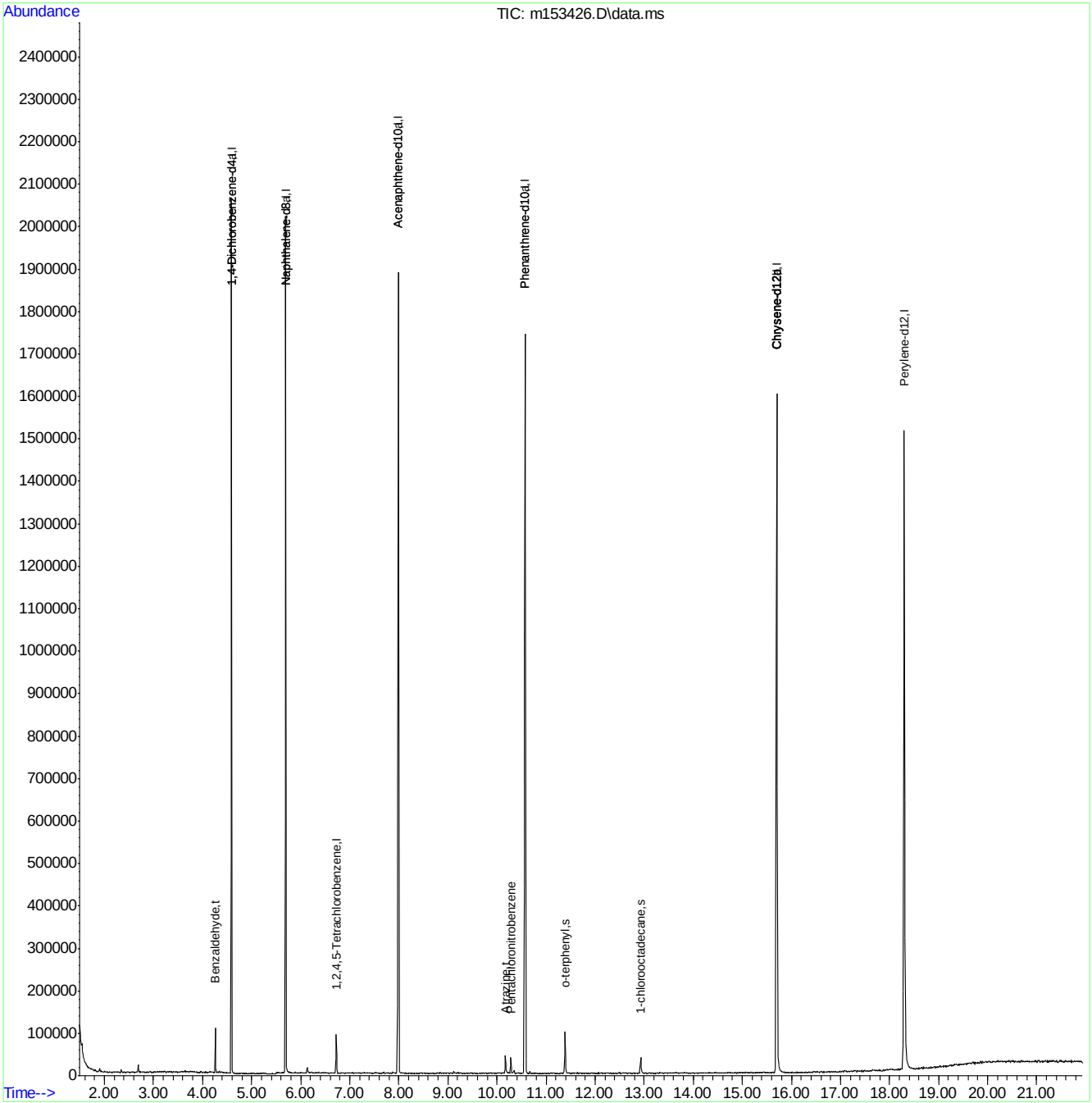
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.586	152	261346	40.00	ppm		0.00
24) Naphthalene-d8	5.697	136	879739	40.00	ppm		0.00
47) Acenaphthene-d10	7.988	164	502520	40.00	ppm		0.00
69) Phenanthrene-d10	10.573	188	929939	40.00	ppm		0.00
83) Chrysene-d12	15.701	240	849953	40.00	ppm		-0.01
91) Perylene-d12	18.302	264	882871	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	261346	40.00	ppm		0.00
103) Acenaphthene-d10a	7.988	164	502520	40.00	ppm		0.00
106) Chrysene-d12a	15.701	240	849953	40.00	ppm		0.00
108) Chrysene-d12b	15.701	240	849953	40.00	ppm		0.00
110) Phenanthrene-d10a	10.573	188	929939	40.00	ppm		0.00
113) Naphthalene-d8a	5.697	136	879739	40.00	ppm		0.00
115) Chrysene-d12c	15.701	240	849953	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	0.000	112	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
109) 1-chlorooctadecane	12.929	57	7346	1.31	ppm		0.00
Spiked Amount 50.000			Recovery =	2.62%			
111) o-terphenyl	11.391	230	26782	1.89	ppm		0.00
Spiked Amount 50.000			Recovery =	3.78%			
Target Compounds							Qvalue
102) Benzaldehyde	4.260	105	15043	2.07	ppm		94
104) 1,2,4,5-Tetrachloroben...	6.728	216	17824	2.17	ppm		94
105) Atrazine	10.178	215	3463	1.30	ppm	#	84
112) Pentachloronitrobenzene	10.285	295	1148	0.92	ppm	#	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153426.D
Acq On : 13 Apr 2019 4:42 am
Operator : chriss2
Sample : ic6557-2
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:33:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153427.D
Acq On : 13 Apr 2019 5:11 am
Operator : chriss2
Sample : ic6557-1
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu Apr 11 08:18:08 2019
Response via : Initial Calibration

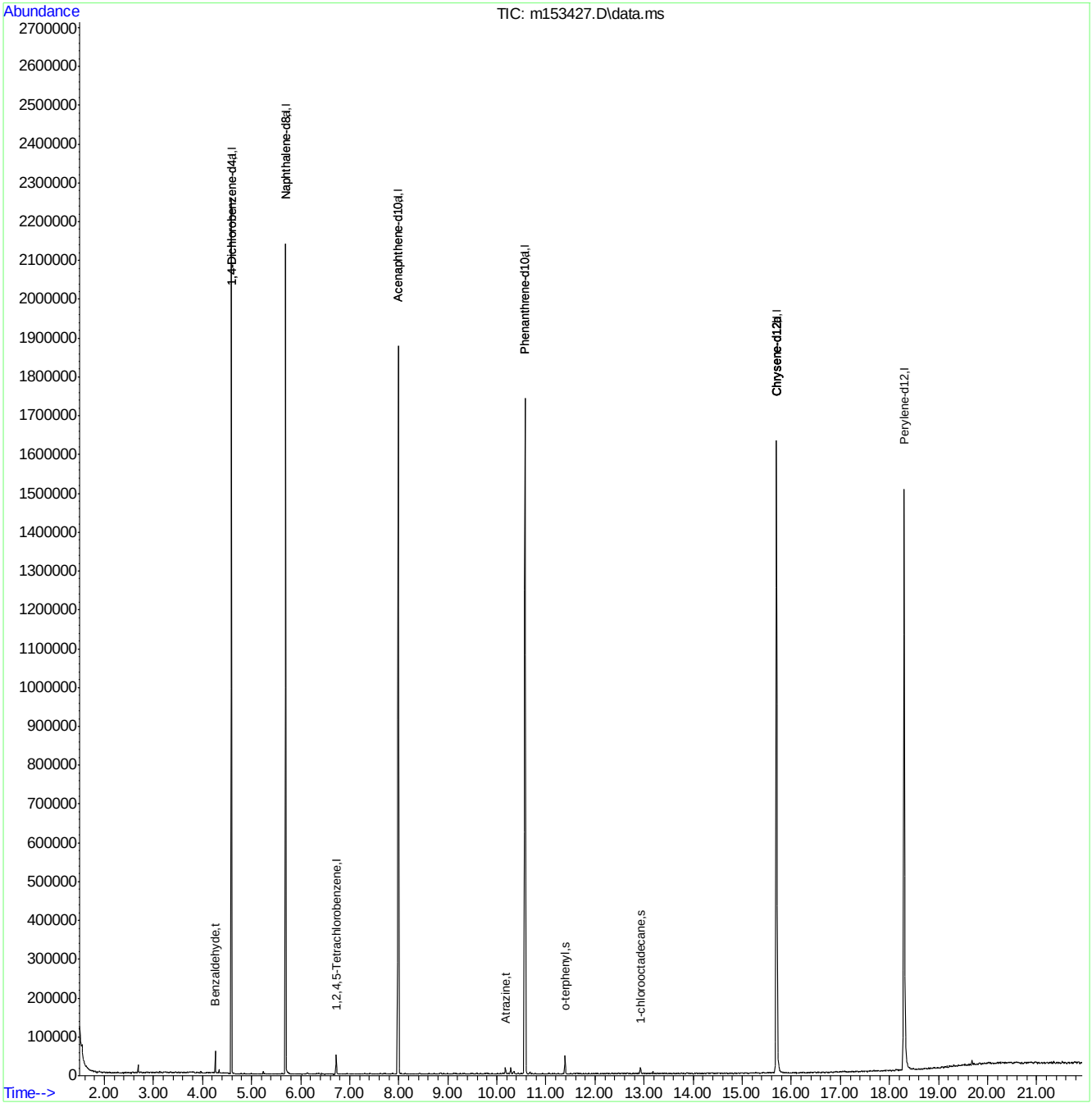
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.587	152	264413	40.00	ppm	-0.02
24) Naphthalene-d8	5.693	136	880440	40.00	ppm	-0.03
47) Acenaphthene-d10	7.990	164	506899	40.00	ppm	-0.04
69) Phenanthrene-d10	10.569	188	938033	40.00	ppm	-0.05
83) Chrysene-d12	15.697	240	843931	40.00	ppm	-0.06
91) Perylene-d12	18.298	264	885109	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.587	152	264413	40.00	ppm	-0.02
103) Acenaphthene-d10a	7.990	164	506899	40.00	ppm	-0.04
106) Chrysene-d12a	15.697	240	843931	40.00	ppm	-0.04
108) Chrysene-d12b	15.697	240	843931	40.00	ppm	-0.05
110) Phenanthrene-d10a	10.569	188	938033	40.00	ppm	-0.05
113) Naphthalene-d8a	5.693	136	880440	40.00	ppm	-0.03
115) Chrysene-d12c	15.697	240	843931	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.925	57	3140	0.54	ppm	-0.05
Spiked Amount 50.000			Recovery =	1.08%		
111) o-terphenyl	11.392	230	13314	0.98	ppm	-0.05
Spiked Amount 50.000			Recovery =	1.96%		
Target Compounds						Qvalue
102) Benzaldehyde	4.262	105	7675	1.00	ppm	90
104) 1,2,4,5-Tetrachloroben...	6.724	216	9523	1.32	ppm	90
105) Atrazine	10.174	215	1573	0.70	ppm	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153427.D
Acq On : 13 Apr 2019 5:11 am
Operator : chriss2
Sample : ic6557-1
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu Apr 11 08:18:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153441.D
Acq On : 14 Apr 2019 7:00 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 15 12:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

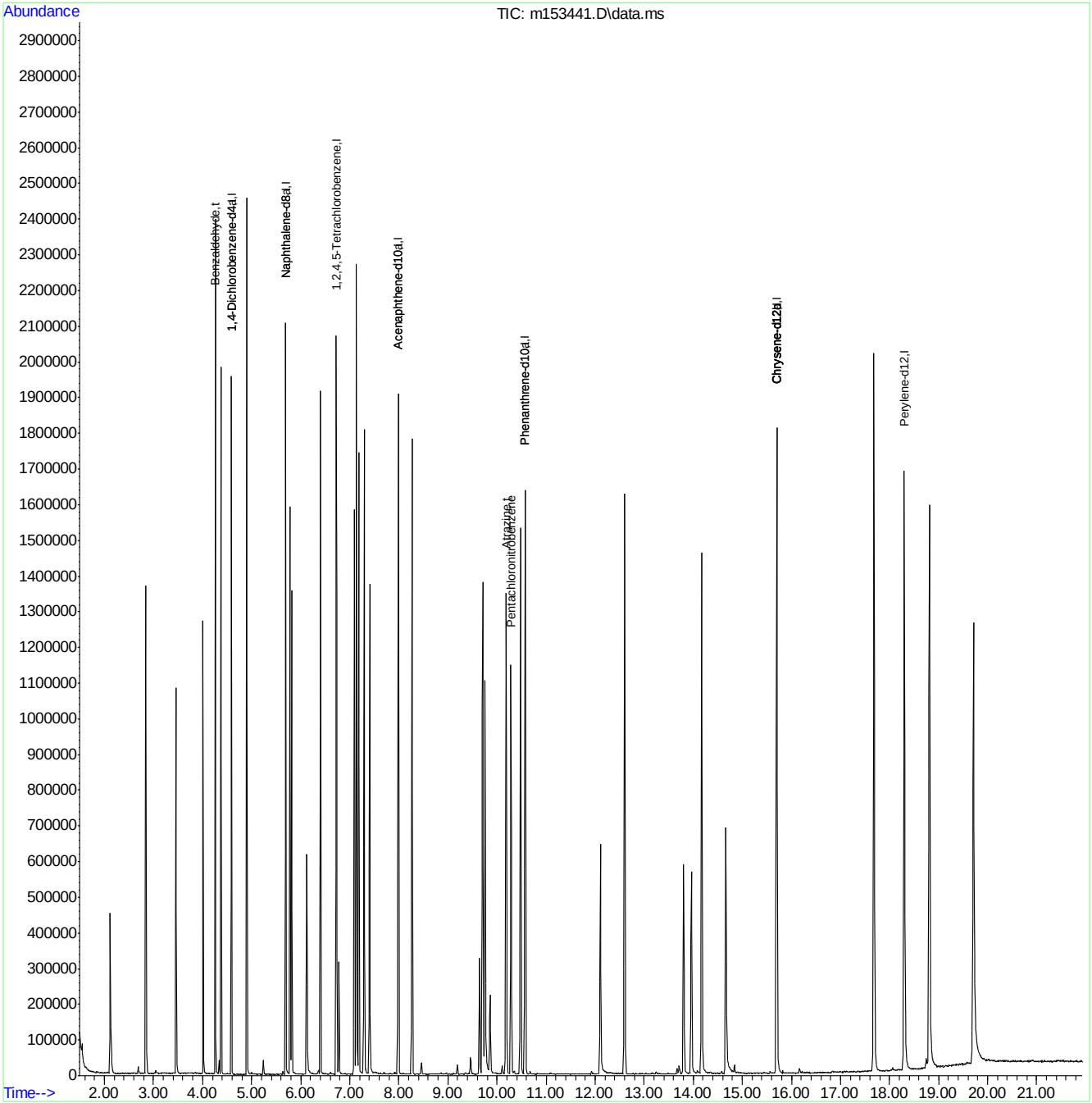
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	251302	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	913631	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	510965	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	883153	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	924351	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	979351	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	251302	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	510965	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	924351	40.00	ppm	0.00
108) Chrysene-d12b	15.701	240	924351	40.00	ppm	0.00
110) Phenanthrene-d10a	10.574	188	883153	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	913631	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	924351	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
102) Benzaldehyde	4.260	105	340363	48.26	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.728	216	409726	46.95	ppm	98
105) Atrazine	10.189	215	131085	54.77	ppm	95
112) Pentachloronitrobenzene	10.290	295	51722	49.67	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153441.D
Acq On : 14 Apr 2019 7:00 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 15 12:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153442.D
Acq On : 14 Apr 2019 7:28 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 15 12:55:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

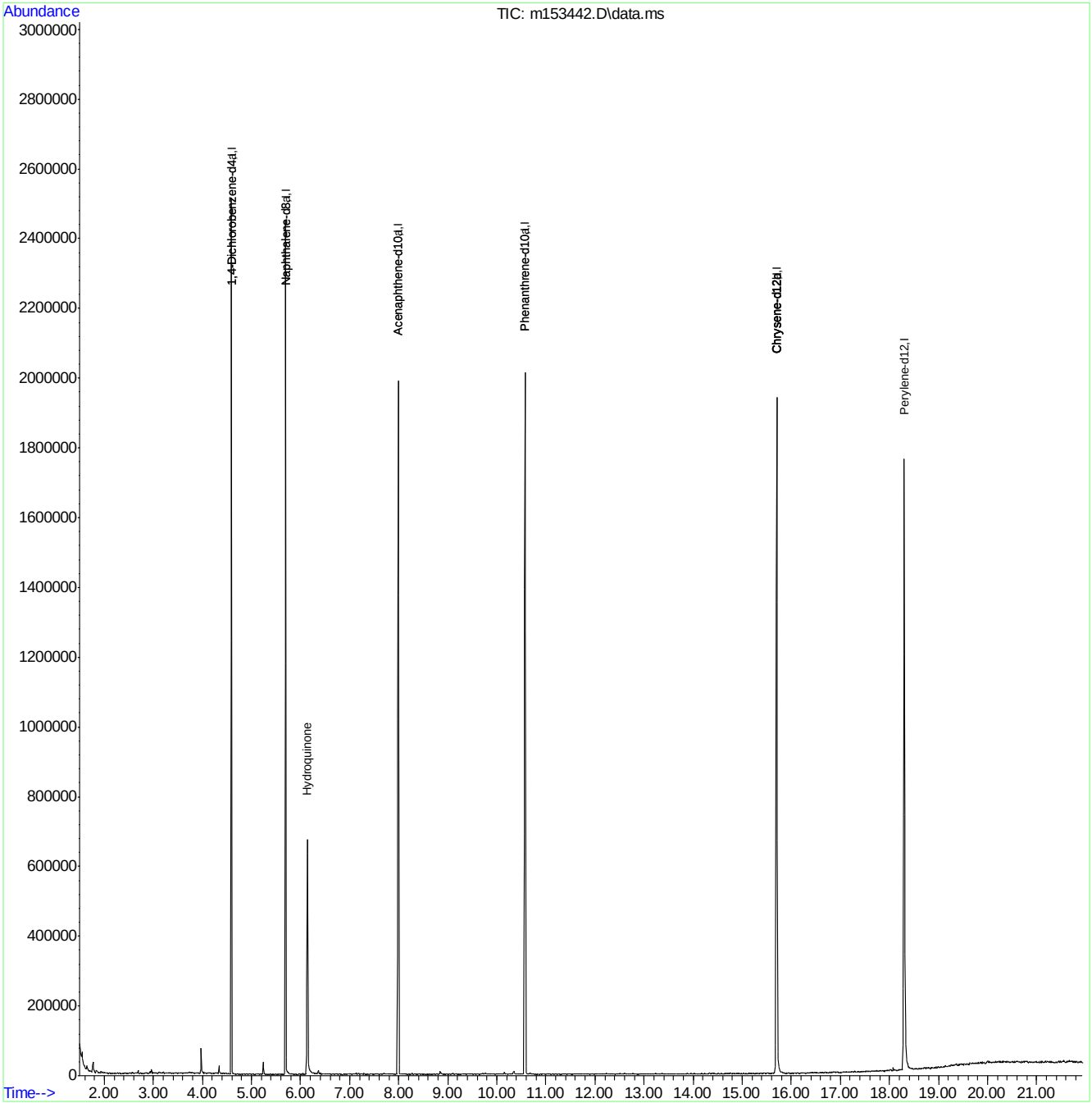
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	292219	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	1010964	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	537966	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1106091	40.00	ppm	0.00
83) Chrysene-d12	15.703	240	1089749	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1043981	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	292219	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	537966	40.00	ppm	0.00
106) Chrysene-d12a	15.703	240	1089749	40.00	ppm	0.00
108) Chrysene-d12b	15.703	240	1089749	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1106091	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	1010964	40.00	ppm	0.00
115) Chrysene-d12c	15.703	240	1089749	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
114) Hydroquinone	6.137	110	384489	46.70	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153442.D
Acq On : 14 Apr 2019 7:28 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 15 12:55:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153444.D
Acq On : 15 Apr 2019 2:05 pm
Operator : christc2
Sample : ic6556-50
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 14:53:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 13:37:21 2019
Response via : Initial Calibration

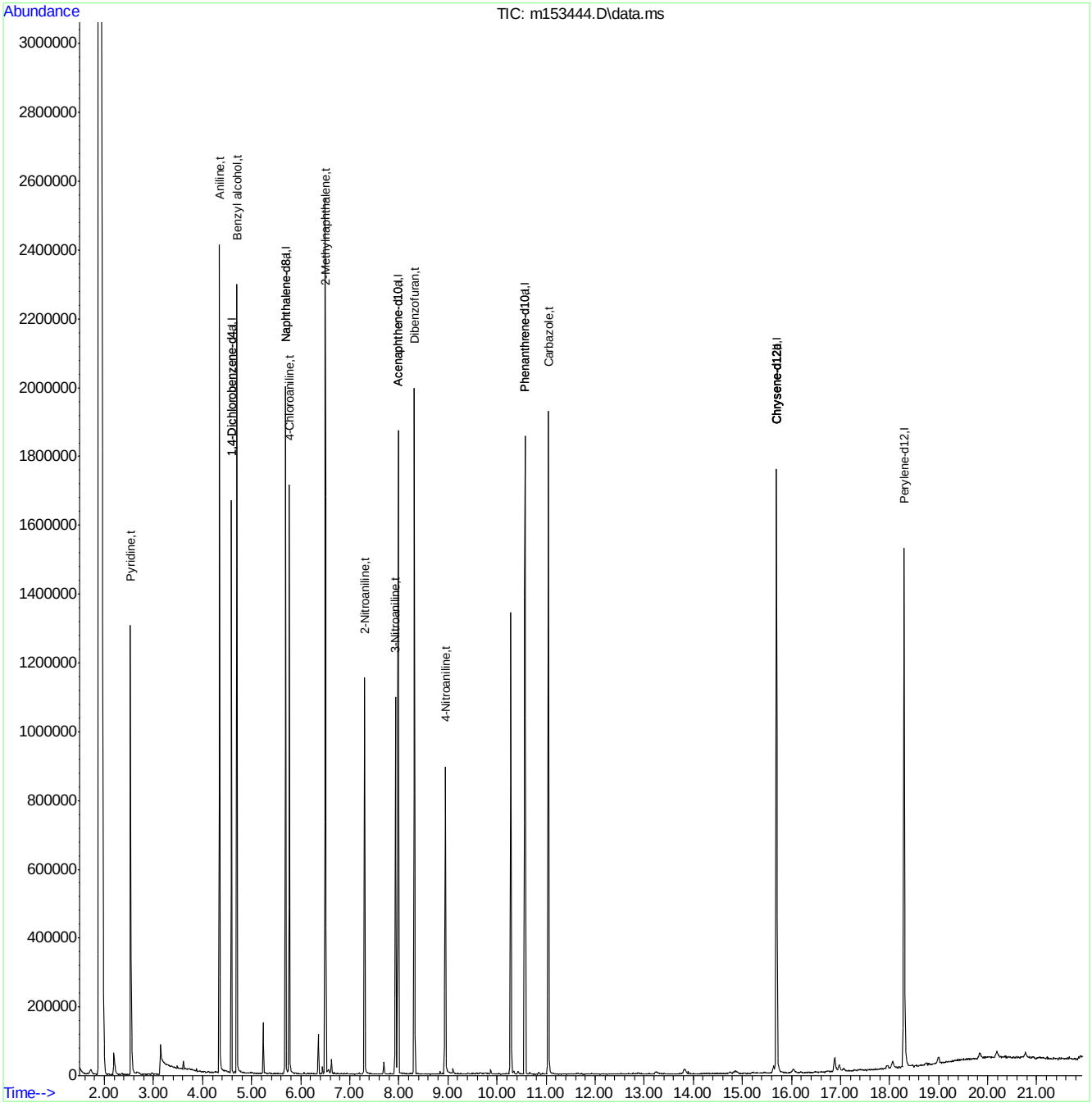
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	259492	40.00	ppm	0.00
24) Naphthalene-d8	5.692	136	951960	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	516788	40.00	ppm	0.00
69) Phenanthrene-d10	10.568	188	984216	40.00	ppm	-0.01
83) Chrysene-d12	15.695	240	882663	40.00	ppm	-0.02
91) Perylene-d12	18.296	264	888272	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.591	152	259492	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	516788	40.00	ppm	0.00
106) Chrysene-d12a	15.695	240	882663	40.00	ppm	0.00
108) Chrysene-d12b	15.695	240	882663	40.00	ppm	0.00
110) Phenanthrene-d10a	10.568	188	984216	40.00	ppm	0.00
113) Naphthalene-d8a	5.692	136	951960	40.00	ppm	0.00
115) Chrysene-d12c	15.695	240	882663	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
3) Pyridine	2.530	79	533530	43.16	ppm	99
10) Aniline	4.346	93	729119	55.28	ppm	98
16) Benzyl alcohol	4.698	108	277294	52.03	ppm	96
39) 4-Chloroaniline	5.772	127	480601	46.53	ppm	99
44) 2-Methylnaphthalene	6.503	141	626814	42.41	ppm	98
54) 2-Nitroaniline	7.305	65	202466	47.22	ppm	96
58) 3-Nitroaniline	7.935	138	212033	47.27	ppm	96
62) Dibenzofuran	8.319	168	1046488	46.31	ppm	98
68) 4-Nitroaniline	8.950	138	204471	51.16	ppm	97
79) Carbazole	11.049	167	1158275	46.87	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153444.D
Acq On : 15 Apr 2019 2:05 pm
Operator : christc2
Sample : ic6556-50
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 14:53:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 13:37:21 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153630.d
Acq On : 20 Apr 2019 10:56 pm
Operator : carolb
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:42:27 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:40:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.537	152	177530	40.00	ppm	0.00
24) Naphthalene-d8	5.638	136	592041	40.00	ppm	0.00
47) Acenaphthene-d10	7.908	164	336150	40.00	ppm	0.00
69) Phenanthrene-d10	10.482	188	651892	40.00	ppm	0.00
83) Chrysene-d12	15.604	240	608216	40.00	ppm	0.00
91) Perylene-d12	18.194	264	657251	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.537	152	177530	40.00	ppm	0.00
103) Acenaphthene-d10a	7.908	164	336150	40.00	ppm	0.00
106) Chrysene-d12a	15.604	240	608216	40.00	ppm	0.00
108) Chrysene-d12b	15.604	240	608216	40.00	ppm	0.00
110) Phenanthrene-d10a	10.482	188	651892	40.00	ppm	0.00
113) Naphthalene-d8a	5.638	136	592041	40.00	ppm	0.00
115) Chrysene-d12c	15.604	240	608216	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.560	112	294624	42.45	ppm	0.00
Spiked Amount 50.000			Recovery = 84.90%			
8) Phenol-d5	4.281	99	375587	43.82	ppm	0.00
Spiked Amount 50.000			Recovery = 87.64%			
25) Nitrobenzene-d5	4.975	82	280753	44.45	ppm	0.00
Spiked Amount 50.000			Recovery = 88.90%			
51) 2-Fluorobiphenyl	6.930	172	616327	49.32	ppm	0.00
Spiked Amount 50.000			Recovery = 98.64%			
73) 2,4,6-Tribromophenol	9.237	330	142578	65.01	ppm	0.00
Spiked Amount 50.000			Recovery = 130.02%			
85) Terphenyl-d14	13.639	244	793412	48.37	ppm	0.00
Spiked Amount 50.000			Recovery = 96.74%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.059	88	136006	38.72	ppm	96
3) Pyridine	2.396	79	309871	36.64	ppm	98
4) N-Nitrosodimethylamine	2.353	42	119689	39.78	ppm	97
6) Indene	4.740	116	475183	50.62	ppm	99
7) Cumene	3.944	105	704022	42.45	ppm	98
9) Phenol	4.292	94	416761	46.27	ppm	89
10) Aniline	4.297	93	386754	42.86	ppm	77
11) bis(2-Chloroethyl)ether	4.345	93	256032	41.09	ppm	95
12) 2-Chlorophenol	4.388	128	295821	47.81	ppm	98
13) Decane	4.431	43	228964	48.45	ppm	96
14) 1,3-Dichlorobenzene	4.500	146	349661	48.64	ppm	95
15) 1,4-Dichlorobenzene	4.553	146	327178	50.12	ppm	95
16) Benzyl alcohol	4.649	108	174628	47.89	ppm	90
17) 1,2-Dichlorobenzene	4.671	146	314960	48.76	ppm	94
18) Acetophenone	4.852	105	382088	46.78	ppm	89
19) 2-Methylphenol	4.746	108	250495	48.08	ppm	96
20) 2,2'-oxybis(1-Chloropr...	4.751	121	67685	42.02	ppm #	78
21) 3&4-Methylphenol	4.863	108	262915	50.19	ppm #	79
22) n-Nitroso-di-n-propyla...	4.858	70	192621	47.28	ppm	98
23) Hexachloroethane	4.943	201	132120	47.91	ppm	93
26) Nitrobenzene	4.991	77	278146	45.35	ppm	95
27) Quinoline	6.017	129	528262	47.10	ppm	96
28) Isophorone	5.200	82	513809	44.91	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153630.d
Acq On : 20 Apr 2019 10:56 pm
Operator : carolb
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:42:27 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:40:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
29) 2-Nitrophenol	5.269	139	168438	59.38	ppm	90
30) 2,4-Dimethylphenol	5.317	107	237626	50.59	ppm	92
31) Benzoic acid	5.429	105	192649	51.60	ppm	92
32) bis(2-Chloroethoxy)met...	5.397	93	306341	44.13	ppm	100
33) 2,4-Dichlorophenol	5.504	162	248828	50.52	ppm	95
34) 2,6-Dichlorophenol	5.723	162	233005	52.19	ppm	96
35) 1,3,5-Trichlorobenzene	5.285	180	309549	50.06	ppm	98
36) 1,2,4-Trichlorobenzene	5.579	180	285881	47.49	ppm	99
37) 1,2,3-Trichlorobenzene	5.809	180	266206	47.63	ppm	99
38) Naphthalene	5.659	128	743082	51.26	ppm	99
39) 4-Chloroaniline	5.718	127	327942	51.05	ppm	96
40) 2,3-Dichloroaniline	6.802	161	309647	49.31	ppm	97
41) Caprolactam	6.108	55	107940	47.37	ppm	94
42) Hexachlorobutadiene	5.798	225	168325	46.91	ppm	99
43) 4-Chloro-3-methylphenol	6.273	107	231525	45.42	ppm	91
44) 2-Methylnaphthalene	6.439	141	441853	48.07	ppm	98
45) 1-Methylnaphthalene	6.562	142	569243	48.71	ppm	96
46) Dimethylnaphthalene	7.288	156	472822	46.47	ppm	95
48) Hexachlorocyclopentadiene	6.652	237	411503	125.89	ppm	99
49) 2,4,6-Trichlorophenol	6.813	196	197087	54.16	ppm	96
50) 2,4,5-Trichlorophenol	6.866	196	204936	52.47	ppm	97
52) 2-Chloronaphthalene	7.080	162	502964	48.64	ppm	96
53) Biphenyl	7.064	154	685075	50.73	ppm	99
54) 2-Nitroaniline	7.240	65	160273	57.47	ppm	87
55) Dimethylphthalate	7.539	163	581027	45.99	ppm	99
56) Acenaphthylene	7.683	152	816655	50.30	ppm	99
57) 2,6-Dinitrotoluene	7.608	165	136321	57.61	ppm	90
58) 3-Nitroaniline	7.865	138	154602	52.99	ppm	91
59) Acenaphthene	7.961	153	509285	51.80	ppm	97
60) 2,4-Dinitrophenol	8.030	184	166066	119.93	ppm	96
61) 4-Nitrophenol	8.196	109	70129	43.29	ppm	86
62) Dibenzofuran	8.244	168	741174	50.42	ppm	83
63) 2,4-Dinitrotoluene	8.249	165	180915	54.81	ppm	94
64) 2,3,4,6-Tetrachlorophenol	8.468	232	196057	56.06	ppm	97
65) Diethylphthalate	8.714	149	572369	46.88	ppm	100
66) Fluorene	8.816	166	608696	49.90	ppm	99
67) 4-Chlorophenyl-phenyle...	8.853	204	295789	46.69	ppm	95
68) 4-Nitroaniline	8.885	138	138487	53.27	ppm	84
70) 4,6-Dinitro-2-methylph...	8.944	198	122456	60.19	ppm	91
71) n-Nitrosodiphenylamine	9.067	169	431477	49.79	ppm	98
72) 1,2-Diphenylhydrazine	9.125	77	538777	45.34	ppm	99
74) 4-Bromophenyl-phenylether	9.718	248	224800	50.50	ppm	97
75) Hexachlorobenzene	9.798	284	256359	51.86	ppm	95
76) Pentachlorophenol	10.178	266	353108	128.25	ppm	98
77) Phenanthrene	10.530	178	869768	53.81	ppm	98
78) Anthracene	10.621	178	868545	51.01	ppm	100
79) Carbazole	10.968	167	843401	51.53	ppm	99
80) Di-n-butylphthalate	11.791	149	1026045	52.04	ppm	99
81) Fluoranthene	12.789	202	1043011	48.82	ppm	97
82) Octadecane	10.519	57	278174	53.16	ppm	99
84) Pyrene	13.211	202	1067760	47.95	ppm	99
86) Butylbenzylphthalate	14.701	149	451530	49.37	ppm	94
87) Benzo[a]anthracene	15.583	228	1013503	48.67	ppm	98
88) 3,3'-Dichlorobenzidine	15.625	252	389392	55.36	ppm	97
89) Chrysene	15.652	228	888202	47.98	ppm	99
90) bis(2-Ethylhexyl)phtha...	15.924	149	589260	47.44	ppm	99
92) Di-n-octylphthalate	17.142	149	1036643	47.34	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153630.d
Acq On : 20 Apr 2019 10:56 pm
Operator : carolb
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:42:27 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:40:39 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) Benzo[b]fluoranthene	17.564	252	1097658	53.01	ppm	98
94) Benzo[k]fluoranthene	17.618	252	947090	48.05	ppm	100
95) Benzo[a]pyrene	18.098	252	952207	52.39	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.840	276	876680	48.67	ppm	97
97) Dibenz(a,h)acridine	19.519	279	860006	51.61	ppm	87
98) Dibenz[a,h]anthracene	19.893	278	876487	52.32	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.580	256	484866	61.07	ppm	94
100) Benzo[g,h,i]perylene	20.251	276	864369	50.14	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

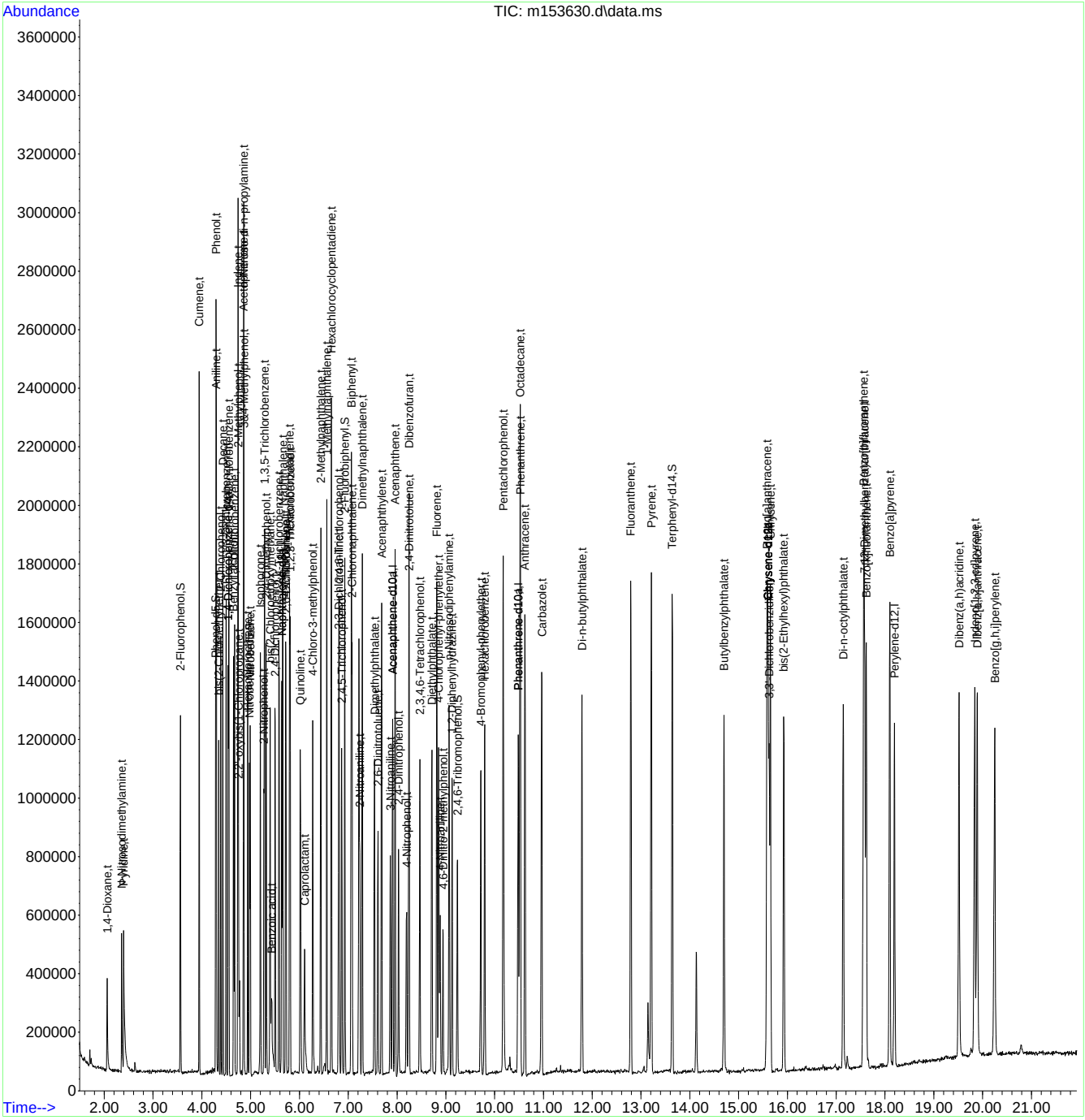
9.6.55

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153630.d
Acq On : 20 Apr 2019 10:56 pm
Operator : carolb
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:42:27 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 22 00:40:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153631.d
Acq On : 20 Apr 2019 11:24 pm
Operator : carolb
Sample : cc6557-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:45:19 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri Apr 19 10:16:57 2019
Response via : Initial Calibration

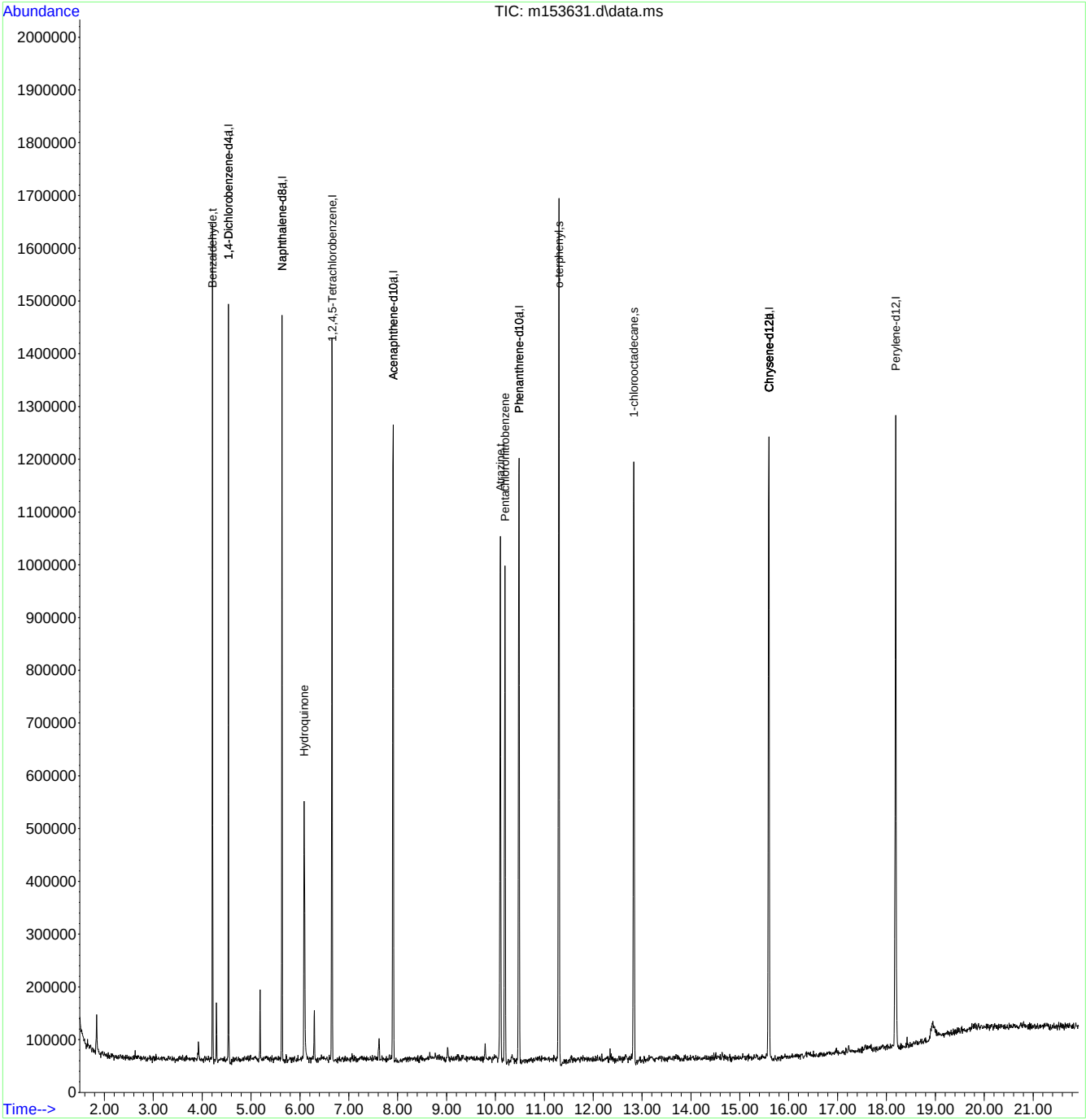
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.538	152	166689	40.00	ppm	0.00
24) Naphthalene-d8	5.633	136	571225	40.00	ppm	0.00
47) Acenaphthene-d10	7.908	164	335473	40.00	ppm	0.00
69) Phenanthrene-d10	10.482	188	616250	40.00	ppm	0.00
83) Chrysene-d12	15.594	240	599697	40.00	ppm	-0.02
91) Perylene-d12	18.190	264	677194	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.538	152	166689	40.00	ppm	0.00
103) Acenaphthene-d10a	7.908	164	335473	40.00	ppm	0.00
106) Chrysene-d12a	15.594	240	599697	40.00	ppm	-0.02
108) Chrysene-d12b	15.594	240	599618	40.00	ppm	-0.02
110) Phenanthrene-d10a	10.482	188	616250	40.00	ppm	0.00
113) Naphthalene-d8a	5.633	136	571225	40.00	ppm	0.00
115) Chrysene-d12c	15.594	240	599697	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.833	57	202428	54.87	ppm	-0.02
Spiked Amount 50.000			Recovery =	109.74%		
111) o-terphenyl	11.300	230	501168	54.79	ppm	0.00
Spiked Amount 50.000			Recovery =	109.58%		
Target Compounds						Qvalue
102) Benzaldehyde	4.212	105	221094	47.27	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.658	216	293119	51.16	ppm	97
105) Atrazine	10.103	215	94074	59.87	ppm	97
112) Pentachloronitrobenzene	10.194	295	45804	63.04	ppm	92
114) Hydroquinone	6.087	110	274597	59.03	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\em6566\
Data File : m153631.d
Acq On : 20 Apr 2019 11:24 pm
Operator : carolb
Sample : cc6557-50 Inst : MSM
Misc : op17006,em6566,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: Apr 22 00:45:19 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri Apr 19 10:16:57 2019
Response via : Initial Calibration



Manual Integrations APPROVED
(compounds with "m" flag)
Kristi Schollenberger
04/26/19 13:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	83235	40.00	ppm	0.00
24) Naphthalene-d8	5.007	136	353866	40.00	ppm	0.00
47) Acenaphthene-d10	6.258	164	214840	40.00	ppm	0.00
69) Phenanthrene-d10	7.652	188	368816	40.00	ppm	0.00
83) Chrysene-d12	11.258	240	389826	40.00	ppm	0.01
91) Perylene-d12	13.293	264	341947	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4a	4.078	152	83235	40.00	ppm	0.00
103) Phenanthrene-d10a	7.652	188	368816	40.00	ppm	0.00
107) Chrysene-d12a	11.258	240	389826	40.00	ppm	0.01
109) Acenaphthene-d10a	6.258	164	214840	40.00	ppm	0.00
111) Naphthalene-d8a	5.007	136	353866	40.00	ppm	0.00
113) Phenanthrene-d10b	7.652	188	368816	40.00	ppm	0.00
115) Chrysene-d12b	11.258	240	389826	40.00	ppb	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.084	112	270934	110.51	ppm	0.00
Spiked Amount 50.000			Recovery = 221.02%			
8) Phenol-d5	3.864	99	396253	109.55	ppm	0.01
Spiked Amount 50.000			Recovery = 219.10%			
25) Nitrobenzene-d5	4.500	82	347615	99.06	ppm	0.00
Spiked Amount 50.000			Recovery = 198.12%			
51) 2-Fluorobiphenyl	5.777	172	776270	99.75	ppm	0.00
Spiked Amount 50.000			Recovery = 199.50%			
73) 2,4,6-Tribromophenol	6.947	330	114848	110.27	ppm	0.01
Spiked Amount 50.000			Recovery = 220.54%			
85) Terphenyl-d14	9.762	244	845133	97.86	ppm	0.01
Spiked Amount 50.000			Recovery = 195.72%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.450	88	69159	98.24	ppm	97
3) Pyridine	1.727	79	234507	102.79	ppm	99
4) N-Nitrosodimethylamine	1.706	74	133378	102.20	ppm	96
6) Indene	4.270	116	488168	102.65	ppm	99
7) Cumene	3.464	105	628403	100.30	ppm	98
9) Phenol	3.875	94	444631	114.18	ppm	96
10) Aniline	3.843	93	349975	103.83	ppm	94
11) bis(2-Chloroethyl)ether	3.902	93	254901	101.61	ppm	96
12) 2-Chlorophenol	3.934	128	334902	106.32	ppm	96
13) Decane	3.982	43	234090	88.17	ppm	97
14) 1,3-Dichlorobenzene	4.041	146	341224	103.50	ppm	97
15) 1,4-Dichlorobenzene	4.094	146	359770	105.71	ppm	98
16) Benzyl alcohol	4.211	108	205504	106.71	ppm	96
17) 1,2-Dichlorobenzene	4.206	146	346935	103.57	ppm	96
18) Acetophenone	4.398	105	445610	101.80	ppm	90
19) 2-Methylphenol	4.313	108	301981	106.20	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.302	121	79199	98.68	ppm	#	86
21) 3&4-Methylphenol	4.425	108	321125	107.09	ppm		97
22) n-Nitroso-di-n-propyla...	4.409	70	232719	97.63	ppm		98
23) Hexachloroethane	4.447	201	114346	102.56	ppm		95
26) Nitrobenzene	4.516	77	361988	101.57	ppm		89
27) Quinoline	5.291	129	679898	102.42	ppm		98
28) Isophorone	4.692	82	543067	91.95	ppm		95
29) 2-Nitrophenol	4.746	139	207172	108.66	ppm		96
30) 2,4-Dimethylphenol	4.799	107	337359	107.84	ppm		98
31) Benzoic Acid	4.943	105	166456	95.82	ppm		96
32) bis(2-Chloroethoxy)met...	4.853	93	351936	99.60	ppm		99
33) 2,4-Dichlorophenol	4.927	162	303136	109.55	ppm		97
34) 2,6-Dichlorophenol	5.082	162	303905	109.94	ppm		99
35) 1,3,5-Trichlorobenzene	4.746	180	313872	105.33	ppm		98
36) 1,2,4-Trichlorobenzene	4.970	180	298594	106.97	ppm		98
37) 1,2,3-Trichlorobenzene	5.130	180	308667	108.04	ppm		99
38) Naphthalene	5.024	128	1000210	105.16	ppm		100
39) 4-Chloroaniline	5.082	127	425500	106.81	ppm		96
40) 2,3-Dichloroaniline	5.718	161	384018	107.89	ppm		98
41) Caprolactam	5.365	55	151287m	100.28	ppm		
42) Hexachlorobutadiene	5.120	225	157617	103.52	ppm		99
43) 4-Chloro-3-methylphenol	5.451	107	305814	105.36	ppm	#	26
44) 2-Methylnaphthalene	5.515	141	572956	106.97	ppm		98
45) 1-Methylnaphthalene	5.584	141	653085	100.64	ppm		97
46) Dimethylnaphthalene	5.953	156	644952	109.19	ppm		98
48) Hexachlorocyclopentadiene	5.627	237	296903	226.54	ppm		99
49) 2,4,6-Trichlorophenol	5.729	196	217566	102.75	ppm		97
50) 2,4,5-Trichlorophenol	5.766	196	233244	101.77	ppm		98
52) 2-Chloronaphthalene	5.857	162	677892	101.83	ppm		98
53) Biphenyl	5.846	154	893629	99.80	ppm		98
54) 2-Nitroaniline	5.942	65	208657	92.67	ppm		92
55) Dimethylphthalate	6.076	163	754670	97.68	ppm		99
56) Acenaphthylene	6.151	152	1083041	99.64	ppm		100
57) 2,6-Dinitrotoluene	6.119	165	173530	99.47	ppm		82
58) 3-Nitroaniline	6.252	138	210015	97.53	ppm		96
59) Acenaphthene	6.290	153	730162	99.70	ppm		99
60) 2,4-Dinitrophenol	6.343	184	218436	217.52	ppm		82
61) 4-Nitrophenol	6.423	109	115229	92.38	ppm	#	1
62) Dibenzofuran	6.429	168	963015	100.08	ppm		95
63) 2,4-Dinitrotoluene	6.439	165	249630	100.88	ppm		98
64) 2,3,4,6-Tetrachlorophenol	6.546	232	186862	102.72	ppm		93
65) Diethylphthalate	6.642	149	797603	97.66	ppm		100
66) Fluorene	6.717	166	794896	97.27	ppm		98
67) 4-Chlorophenyl-phenyle...	6.722	204	341646	99.21	ppm		98
68) 4-Nitroaniline	6.781	138	202502	94.80	ppm		98
70) 4,6-Dinitro-2-methylph...	6.808	198	145536	105.94	ppm	#	96
71) n-Nitrosodiphenylamine	6.845	169	558569	102.54	ppm		96
72) 1,2-Diphenylhydrazine	6.872	77	866289	104.87	ppm		94
74) 4-Bromophenyl-phenylether	7.187	248	207837	104.41	ppm		97
75) Hexachlorobenzene	7.257	284	229824	105.36	ppm		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

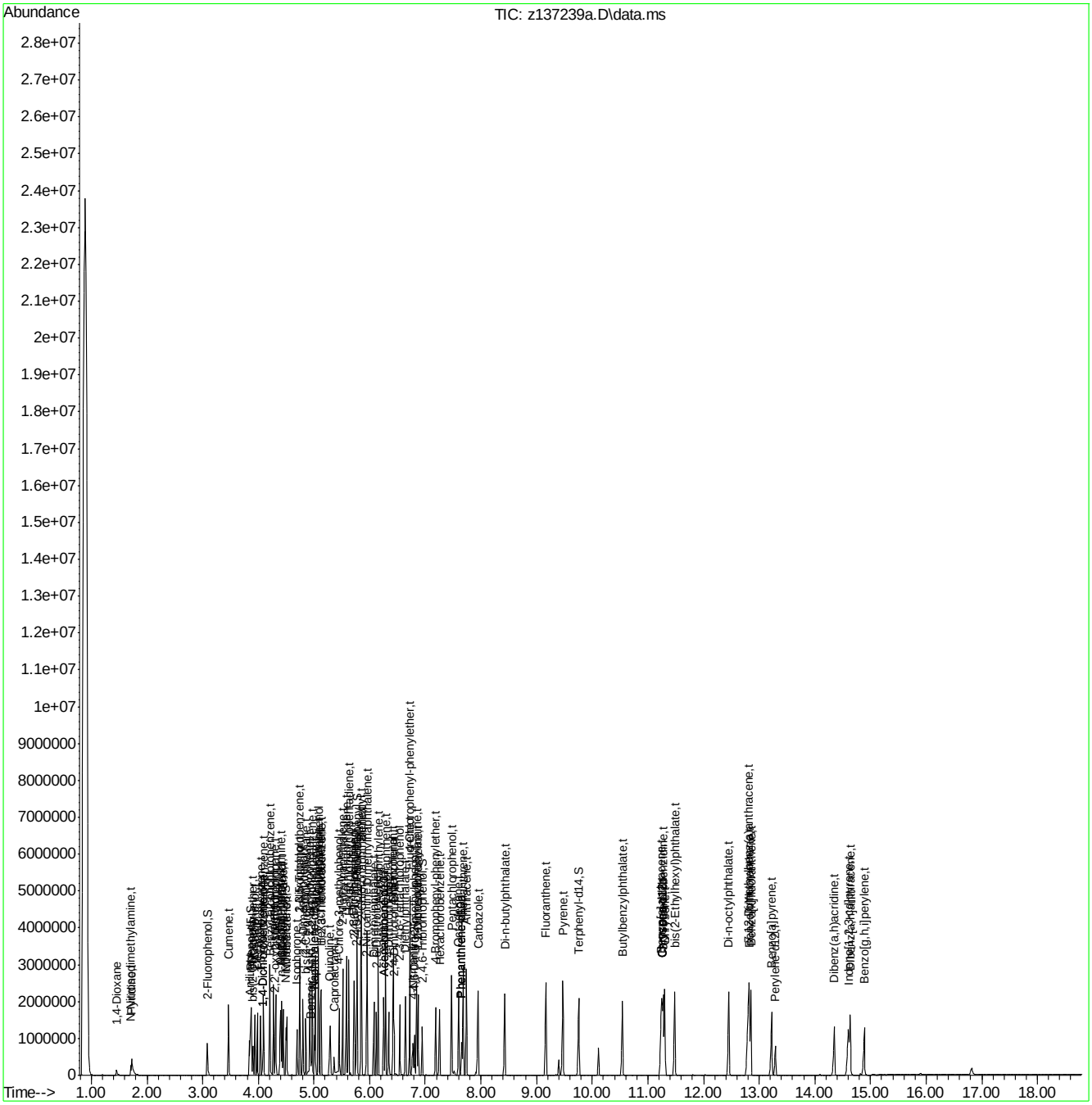
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.476	266	312726	231.66	ppm	100
77) Phenanthrene	7.684	178	1140864	102.41	ppm	99
78) Anthracene	7.743	178	1150678	104.13	ppm	100
79) Carbazole	7.951	167	1142189	101.57	ppm	99
80) Di-n-butylphthalate	8.432	149	1475242	99.21	ppm	100
81) Fluoranthene	9.169	202	1289553	103.87	ppm	98
82) Octadecane	7.598	57	409509	94.30	ppm	97
84) Pyrene	9.474	202	1336533	98.48	ppm	99
86) Butylbenzylphthalate	10.542	149	699642	96.49	ppm	96
87) Benzo[a]anthracene	11.247	228	1213098	98.24	ppm	99
88) 3,3'-Dichlorobenzidine	11.279	252	503428	99.64	ppm	99
89) Chrysene	11.306	228	1199966	98.92	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.482	149	951409	95.64	ppm	98
92) Di-n-octylphthalate	12.449	149	1710643	107.63	ppm	99
93) Benzo[b]fluoranthene	12.823	252	1410858	116.18	ppm	96
94) Benzo[k]fluoranthene	12.855	252	1007957m	98.42	ppm	
95) Benzo[a]pyrene	13.229	252	1007834	104.88	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.602	276	852682	87.84	ppm	99
97) Dibenz(a,h)acridine	14.351	279	769159	87.70	ppm	99
98) Dibenz[a,h]anthracene	14.640	278	898637	91.76	ppm	99
99) 7,12-Dimethylbenz(a)an...	12.813	256	536124	112.28	ppm	99
100) Benzo[g,h,i]perylene	14.891	276	732019	85.87	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration



Manual Integration Approval Summary

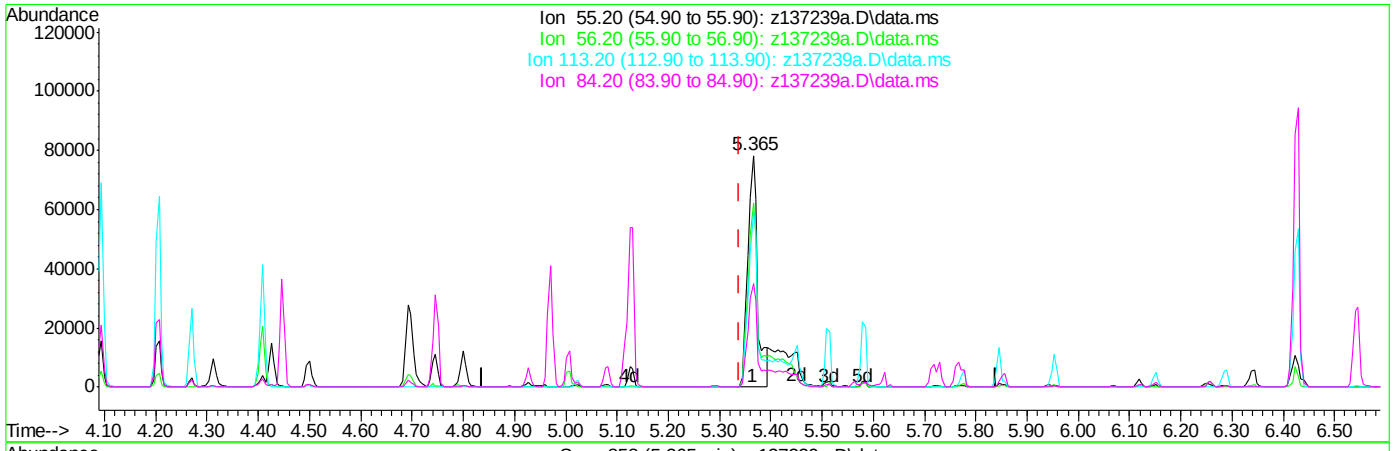
Sample Number: EZ6761-IC6761
Lab FileID: Z137239A.D
Injection Time: 04/25/19 05:54
Method: SW846 8270D
Analyst approved: 04/25/19 12:03 Ying Li
Supervisor approved: 04/26/19 13:18 Kristi Schollenberger

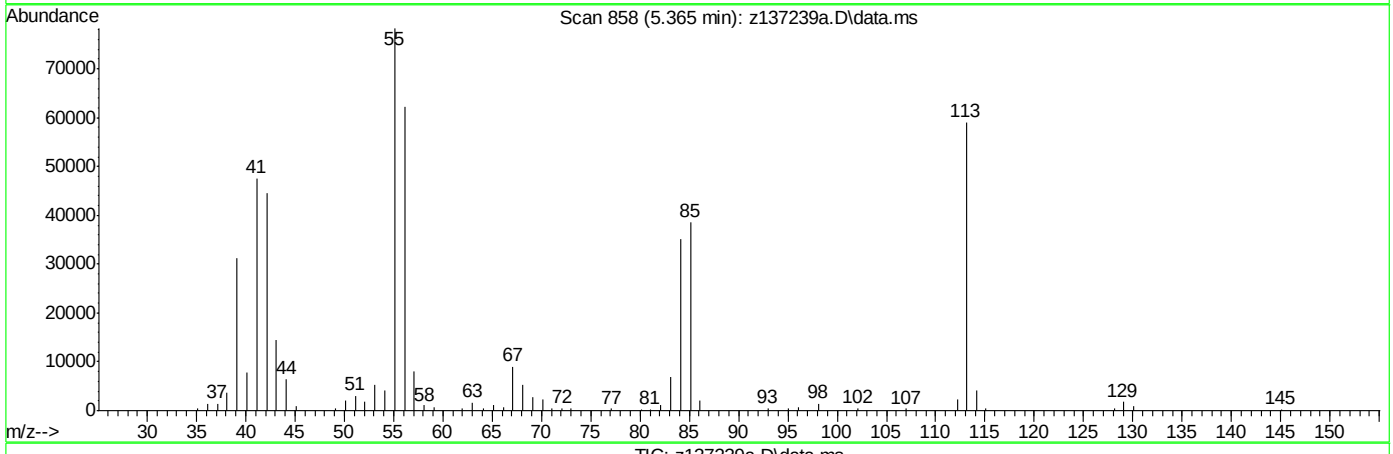
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.37	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		12.86	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\initial raw\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 11:34:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration





TIC: z137239a.D\data.ms

(41) Caprolactam (t)

5.365min (+0.026) 72.95ppm

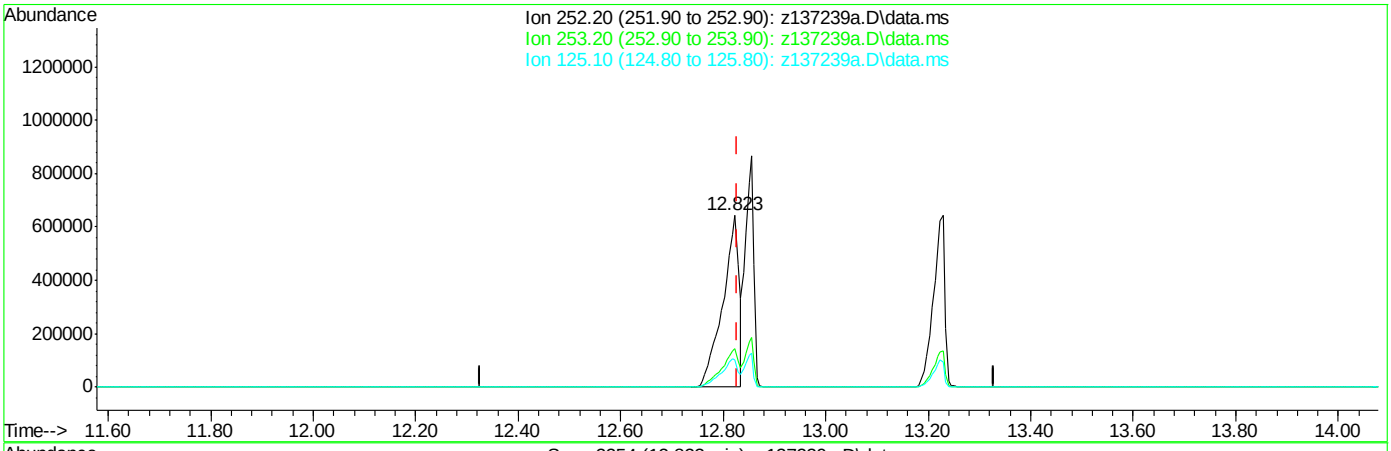
response 105905

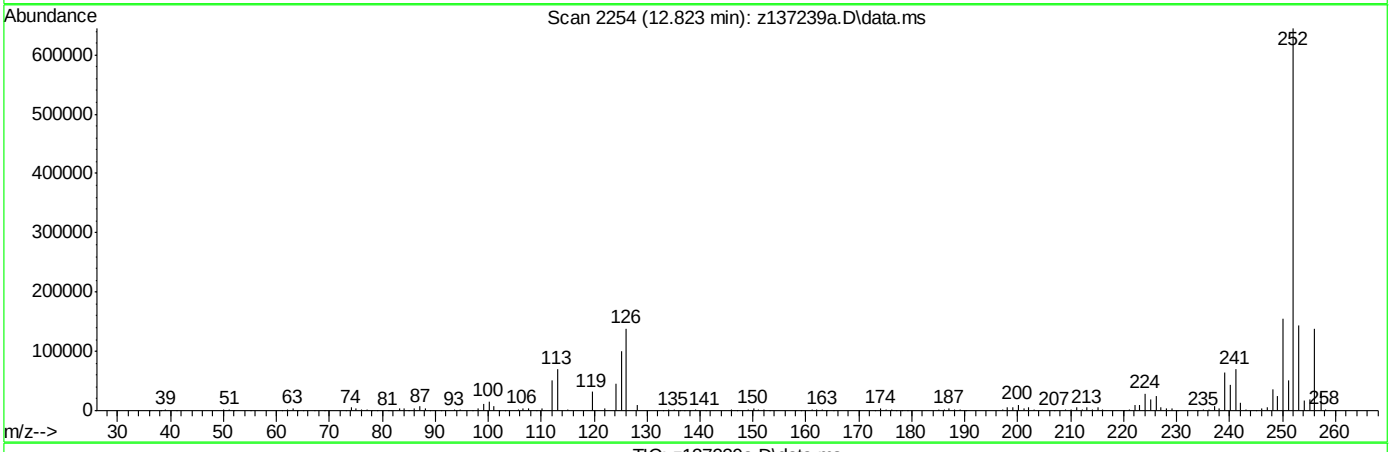
Ion	Exp%	Act%
55.20	100	100
56.20	76.60	79.77
113.20	73.20	76.22
84.20	45.50	45.24

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\initial raw\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 11:34:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration





TIC: z137239a.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.823min (-0.005) 146.37ppm

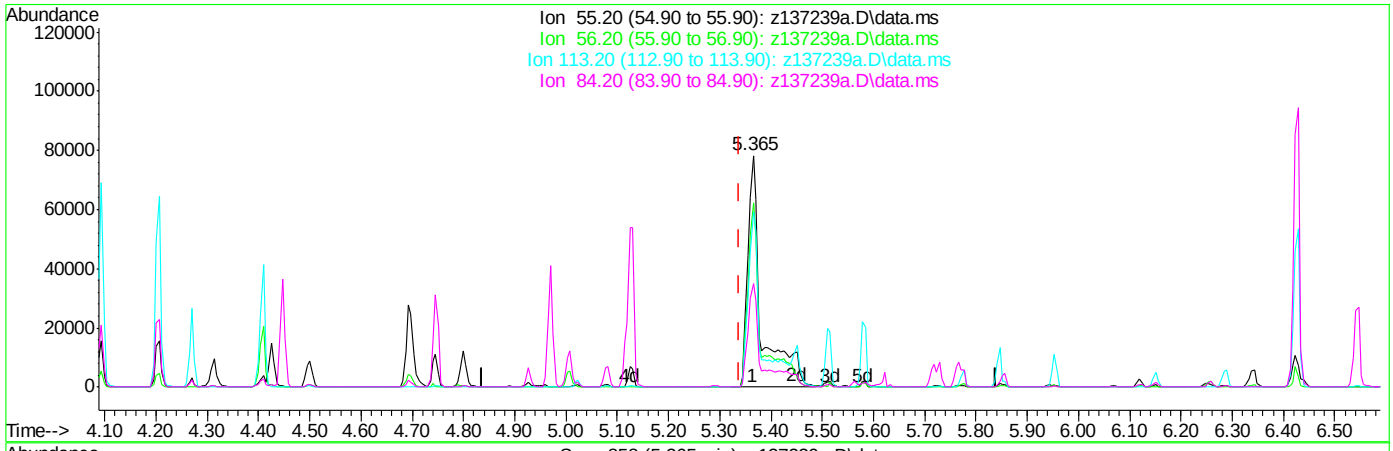
response 1410858

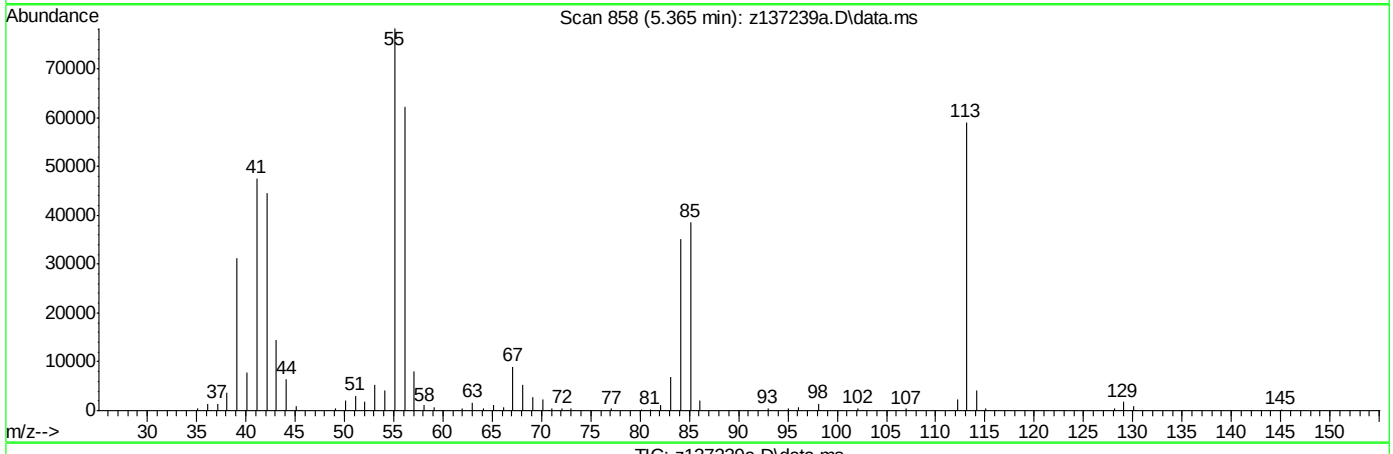
Ion	Exp%	Act%
252.20	100	100
253.20	22.70	22.72
125.10	13.80	16.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration





TIC: z137239a.D\data.ms

(41) Caprolactam (t)

5.365min (+0.027) 100.28ppm m

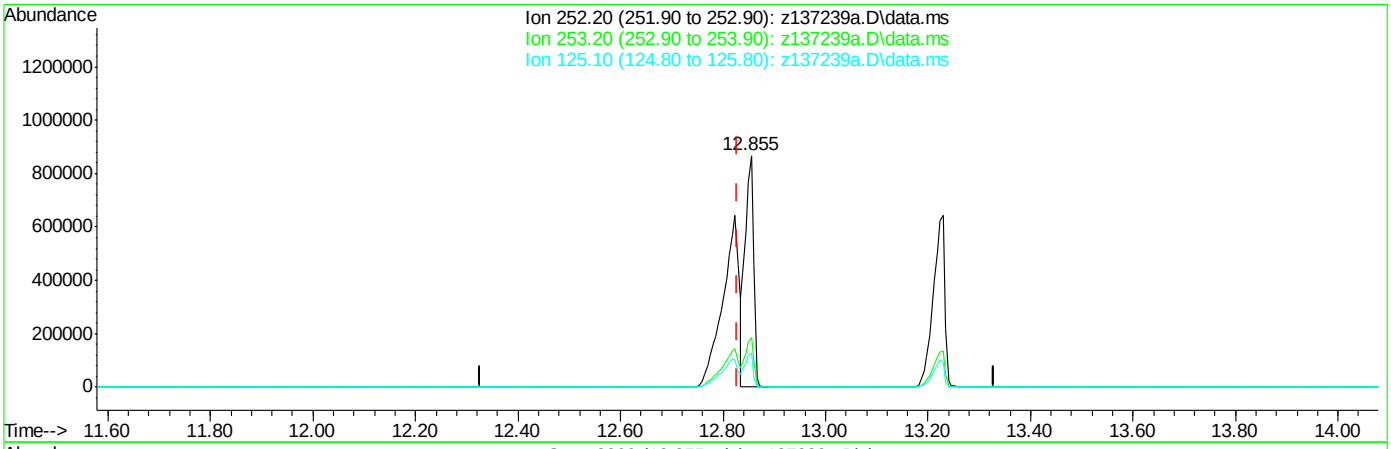
response 151287

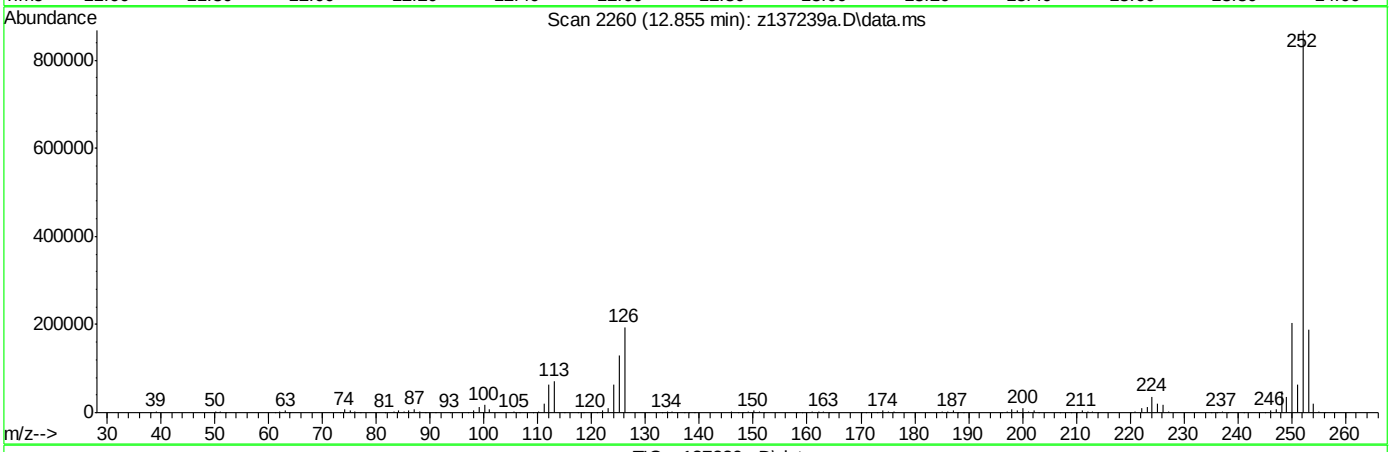
Ion	Exp%	Act%
55.20	100	100
56.20	76.60	79.48
113.20	73.20	75.48
84.20	45.50	44.75

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137239a.D
Acq On : 25 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6761-100
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:46:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration





TIC: z137239a.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.855min (+0.027) 98.42ppm m

response 1007957

Ion	Exp%	Act%
252.20	100	100
253.20	22.70	21.61
125.10	13.80	14.92
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 13:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	79471	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	332628	40.00	ppm	0.00
47) Acenaphthene-d10	6.257	164	199945	40.00	ppm	0.00
69) Phenanthrene-d10	7.652	188	356119	40.00	ppm	0.00
83) Chrysene-d12	11.258	240	365672	40.00	ppm	0.01
91) Perylene-d12	13.288	264	349261	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	79471	40.00	ppm	0.00
103) Phenanthrene-d10a	7.652	188	356119	40.00	ppm	0.00
107) Chrysene-d12a	11.258	240	365672	40.00	ppm	0.01
109) Acenaphthene-d10a	6.257	164	199945	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	332628	40.00	ppm	0.00
113) Phenanthrene-d10b	7.652	188	356119	40.00	ppm	0.00
115) Chrysene-d12b	11.258	240	365672	40.00	ppb	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.079	112	195102	83.35	ppm	0.00
Spiked Amount 50.000			Recovery = 166.70%			
8) Phenol-d5	3.859	99	299581	86.75	ppm	0.00
Spiked Amount 50.000			Recovery = 173.50%			
25) Nitrobenzene-d5	4.495	82	270164	81.90	ppm	0.00
Spiked Amount 50.000			Recovery = 163.80%			
51) 2-Fluorobiphenyl	5.771	172	590463	81.52	ppm	0.00
Spiked Amount 50.000			Recovery = 163.04%			
73) 2,4,6-Tribromophenol	6.941	330	83127	82.66	ppm	0.00
Spiked Amount 50.000			Recovery = 165.32%			
85) Terphenyl-d14	9.757	244	635216	78.41	ppm	0.00
Spiked Amount 50.000			Recovery = 156.82%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.449	88	54595	81.24	ppm	98
3) Pyridine	1.727	79	185070	85.33	ppm	97
4) N-Nitrosodimethylamine	1.706	74	104159	83.59	ppm	96
6) Indene	4.270	116	372080	81.95	ppm	98
7) Cumene	3.463	105	483547	80.83	ppm	99
9) Phenol	3.870	94	325039	87.42	ppm	98
10) Aniline	3.837	93	270015	83.90	ppm	98
11) bis(2-Chloroethyl)ether	3.902	93	200168	83.57	ppm	95
12) 2-Chlorophenol	3.934	128	248634	82.67	ppm	95
13) Decane	3.982	43	191034	75.36	ppm	100
14) 1,3-Dichlorobenzene	4.035	146	259907	82.57	ppm	99
15) 1,4-Dichlorobenzene	4.094	146	270817	83.35	ppm	99
16) Benzyl alcohol	4.206	108	155064	84.33	ppm	96
17) 1,2-Dichlorobenzene	4.206	146	264485	82.70	ppm	96
18) Acetophenone	4.393	105	339428	81.17	ppm	97
19) 2-Methylphenol	4.308	108	231272	85.19	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	60905	79.48	ppm		97
21) 3&4-Methylphenol	4.425	108	250725	87.57	ppm		99
22) n-Nitroso-di-n-propyla...	4.404	70	182752	80.30	ppm		99
23) Hexachloroethane	4.446	201	86955	81.69	ppm		99
26) Nitrobenzene	4.511	77	270757	80.82	ppm		98
27) Quinoline	5.285	129	530218	84.97	ppm		99
28) Isophorone	4.692	82	433104	78.01	ppm		96
29) 2-Nitrophenol	4.740	139	149730	83.55	ppm		82
30) 2,4-Dimethylphenol	4.799	107	258043	87.75	ppm		99
31) Benzoic Acid	4.927	105	105540	64.63	ppm		94
32) bis(2-Chloroethoxy)met...	4.852	93	272477	82.04	ppm		99
33) 2,4-Dichlorophenol	4.927	162	226353	87.03	ppm		98
34) 2,6-Dichlorophenol	5.077	162	227155	87.42	ppm		98
35) 1,3,5-Trichlorobenzene	4.746	180	234147	83.60	ppm		98
36) 1,2,4-Trichlorobenzene	4.970	180	221830	84.54	ppm		97
37) 1,2,3-Trichlorobenzene	5.125	180	229605	85.50	ppm		96
38) Naphthalene	5.018	128	758047	84.79	ppm		99
39) 4-Chloroaniline	5.077	127	321745	85.93	ppm		99
40) 2,3-Dichloroaniline	5.713	161	288763	86.31	ppm		97
41) Caprolactam	5.355	55	114903m	81.03	ppm		
42) Hexachlorobutadiene	5.114	225	118105	82.53	ppm		99
43) 4-Chloro-3-methylphenol	5.445	107	235574	86.34	ppm		100
44) 2-Methylnaphthalene	5.510	141	425866	84.59	ppm		99
45) 1-Methylnaphthalene	5.579	141	487787	85.79	ppm		98
46) Dimethylnaphthalene	5.953	156	482057	86.82	ppm		97
48) Hexachlorocyclopentadiene	5.627	237	225570	184.93	ppm		97
49) 2,4,6-Trichlorophenol	5.729	196	164118	83.28	ppm		97
50) 2,4,5-Trichlorophenol	5.761	196	175477	82.27	ppm		97
52) 2-Chloronaphthalene	5.851	162	512187	82.67	ppm		98
53) Biphenyl	5.841	154	668237	80.19	ppm		99
54) 2-Nitroaniline	5.937	65	166551	79.48	ppm		97
55) Dimethylphthalate	6.071	163	571145	79.44	ppm		99
56) Acenaphthylene	6.151	152	845285	83.56	ppm		100
57) 2,6-Dinitrotoluene	6.119	165	130661	80.48	ppm		95
58) 3-Nitroaniline	6.247	138	156347	78.01	ppm		90
59) Acenaphthene	6.284	153	551057	80.85	ppm		99
60) 2,4-Dinitrophenol	6.338	184	161464	172.76	ppm		83
61) 4-Nitrophenol	6.418	109	91896	79.17	ppm	#	13
62) Dibenzofuran	6.423	168	735758	82.16	ppm		97
63) 2,4-Dinitrotoluene	6.439	165	190999	82.93	ppm		82
64) 2,3,4,6-Tetrachlorophenol	6.541	232	142732	84.31	ppm		96
65) Diethylphthalate	6.637	149	607249	79.89	ppm		99
66) Fluorene	6.717	166	607567	79.89	ppm		98
67) 4-Chlorophenyl-phenyle...	6.722	204	261171	81.49	ppm		94
68) 4-Nitroaniline	6.776	138	156359	78.65	ppm		93
70) 4,6-Dinitro-2-methylph...	6.802	198	110972	83.66	ppm	#	100
71) n-Nitrosodiphenylamine	6.840	169	420473	79.94	ppm		97
72) 1,2-Diphenylhydrazine	6.867	77	621287	77.89	ppm		99
74) 4-Bromophenyl-phenylether	7.187	248	155166	80.73	ppm		97
75) Hexachlorobenzene	7.251	284	170186	80.80	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

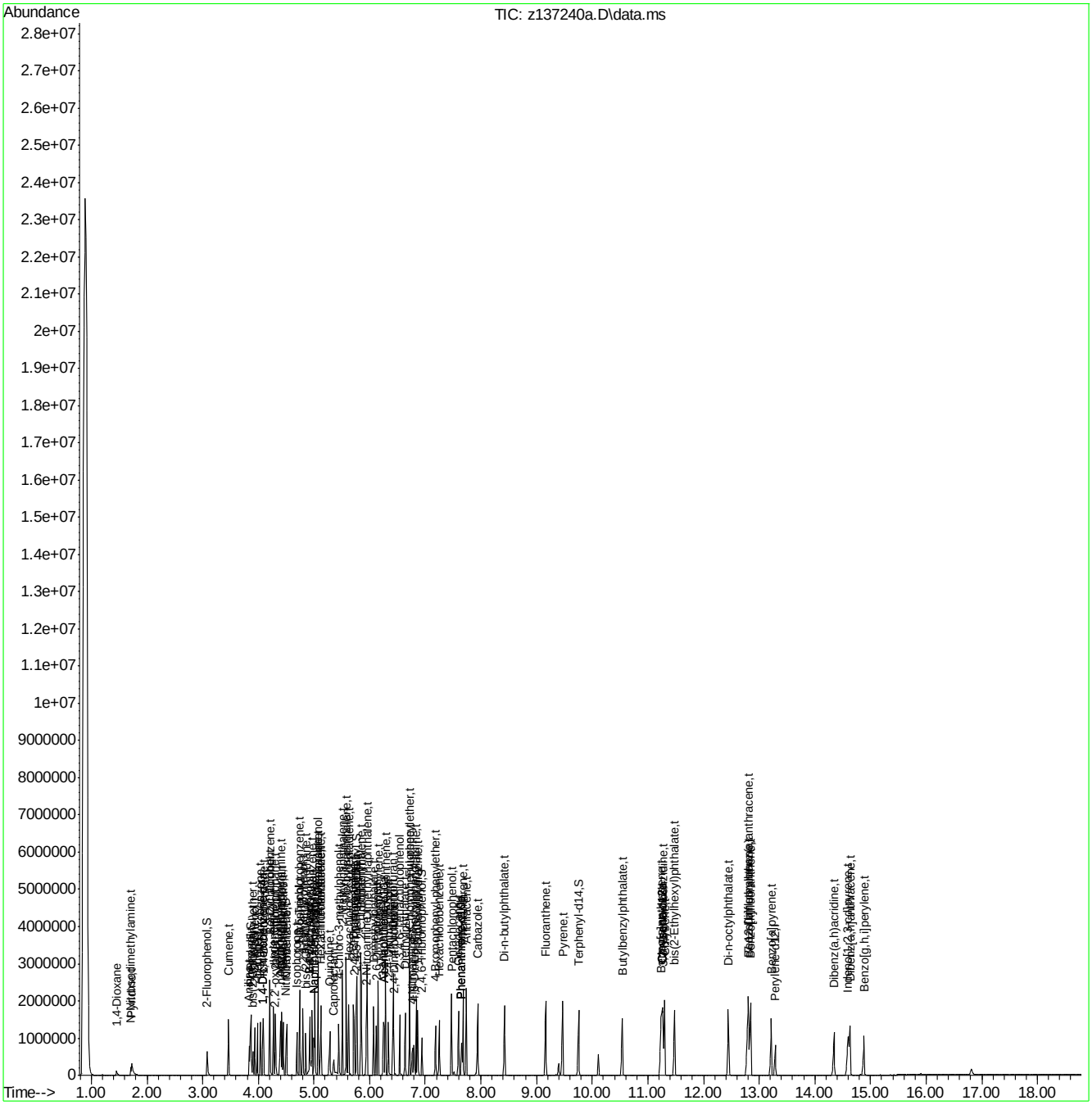
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.476	266	227387	174.45	ppm	98
77) Phenanthrene	7.679	178	871831	81.05	ppm	100
78) Anthracene	7.737	178	869975	81.53	ppm	99
79) Carbazole	7.946	167	883270	81.35	ppm	98
80) Di-n-butylphthalate	8.426	149	1131790	78.83	ppm	100
81) Fluoranthene	9.164	202	970828	80.99	ppm	97
82) Octadecane	7.598	57	324980	77.50	ppm	97
84) Pyrene	9.468	202	1022407	80.31	ppm	99
86) Butylbenzylphthalate	10.542	149	527499	77.55	ppm	95
87) Benzo[a]anthracene	11.236	228	924256	79.80	ppm	99
88) 3,3'-Dichlorobenzidine	11.269	252	377805	79.72	ppm	100
89) Chrysene	11.301	228	910614	80.03	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.477	149	738695	79.17	ppm	98
92) Di-n-octylphthalate	12.449	149	1361592	83.87	ppm	98
93) Benzo[b]fluoranthene	12.812	252	1058034	85.30	ppm	98
94) Benzo[k]fluoranthene	12.844	252	859851	82.20	ppm	95
95) Benzo[a]pyrene	13.218	252	815972	83.14	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.597	276	698508	73.36	ppm	96
97) Dibenz(a,h)acridine	14.346	279	650368	72.60	ppm	99
98) Dibenz[a,h]anthracene	14.634	278	726783	72.66	ppm	98
99) 7,12-Dimethylbenz(a)an...	12.807	256	419921	86.10	ppm	99
100) Benzo[g,h,i]perylene	14.885	276	586841	67.40	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Manual Integration Approval Summary

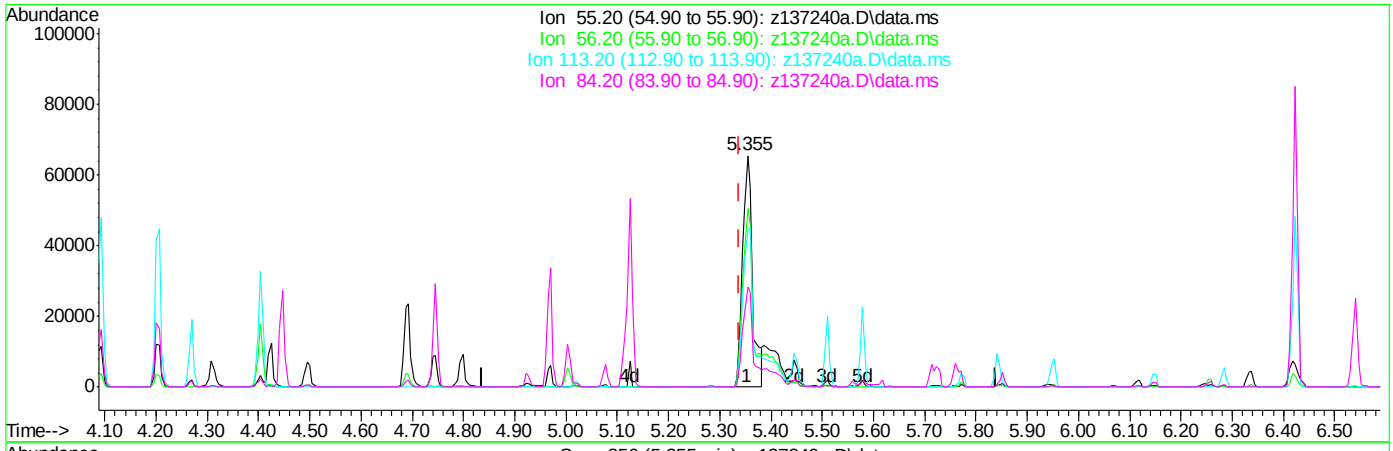
Sample Number:	EZ6761-IC6761	**Method:**	SW846 8270D
Lab FileID:	Z137240A.D	**Analyst approved:**	04/25/19 12:03 Ying Li
Injection Time:	04/25/19 06:22	**Supervisor approved:**	04/26/19 13:18 Kristi Schollenberger

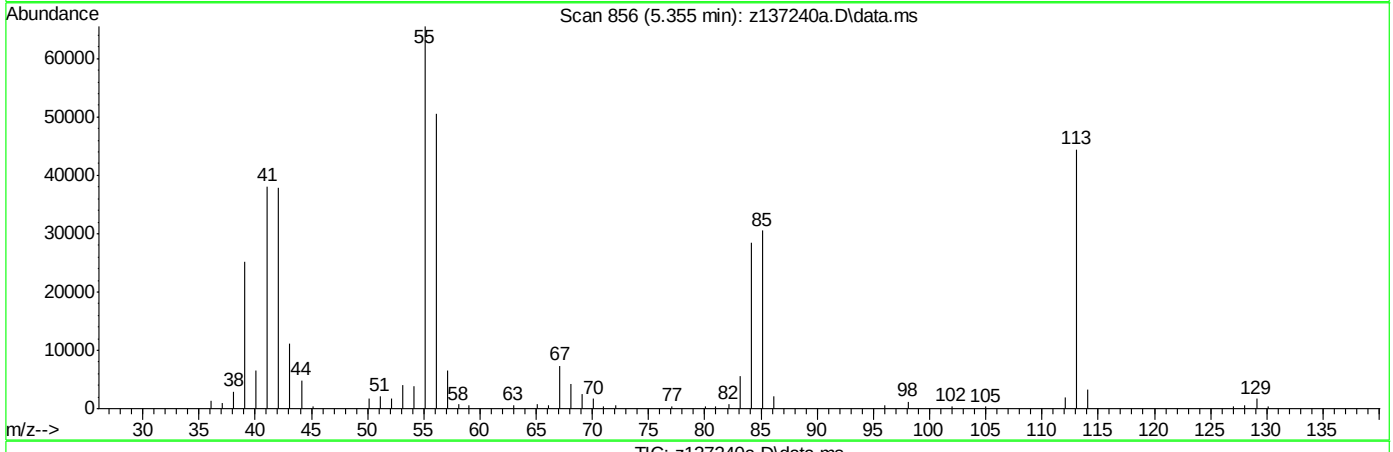
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.35	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:47:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137240a.D\data.ms

(41) Caprolactam (t)

5.355min (+0.016) 63.31ppm

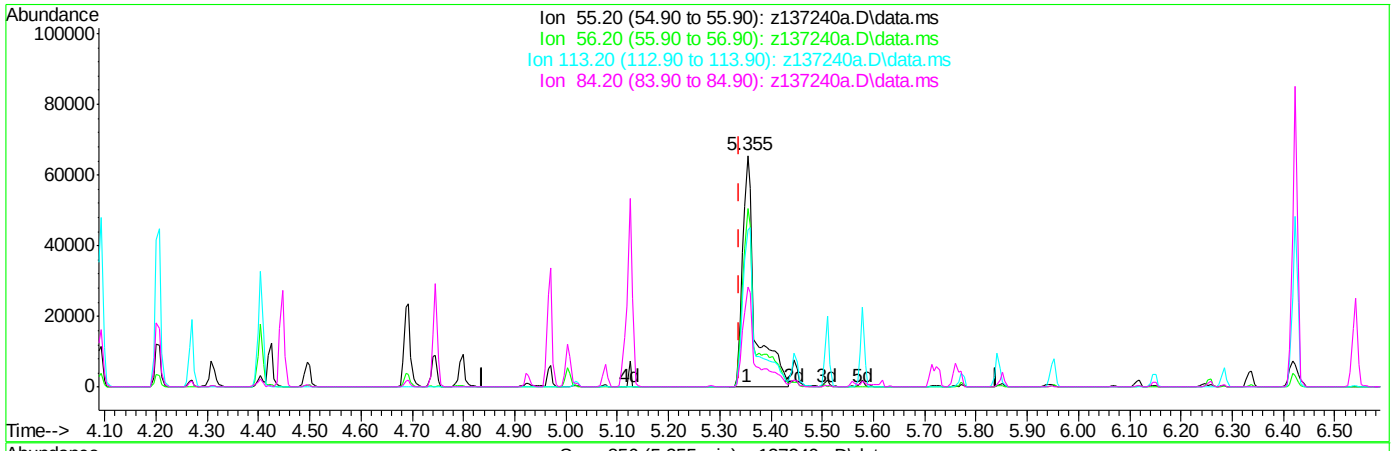
response 89774

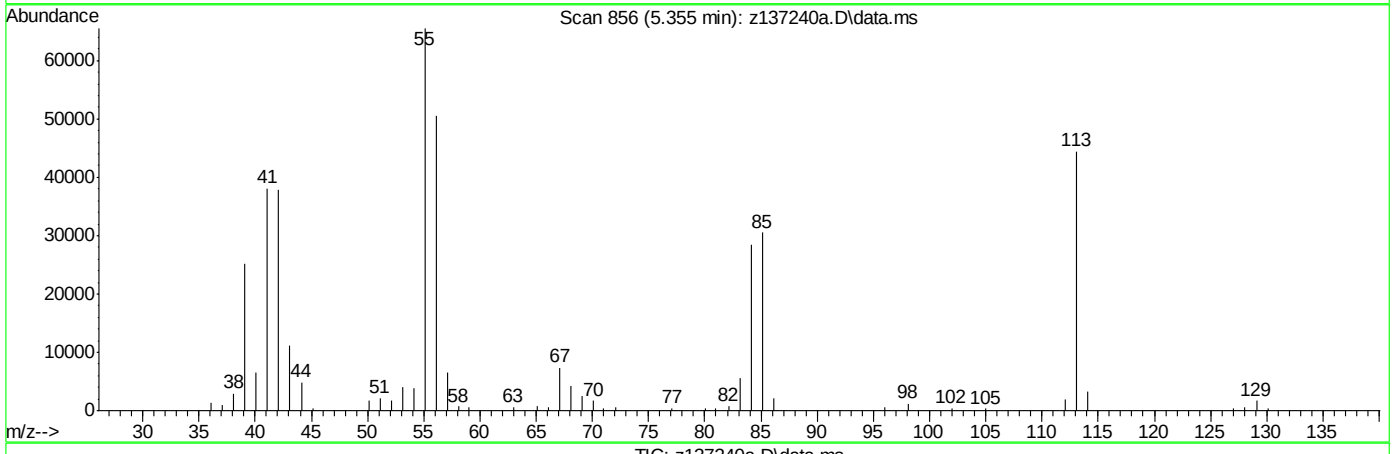
Ion	Exp%	Act%
55.20	100	100
56.20	76.60	76.86
113.20	73.20	67.21
84.20	45.50	43.39

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137240a.D
Acq On : 25 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6761-80
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137240a.D\data.ms

(41) Caprolactam (t)

5.355min (+0.016) 81.03ppm m

response 114903

Ion	Exp%	Act%
55.20	100	100
56.20	76.60	77.16
113.20	73.20	67.77
84.20	45.50	43.39

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 13:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	66047	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	280888	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	158306	40.00	ppm	0.00
69) Phenanthrene-d10	7.646	188	276162	40.00	ppm	0.00
83) Chrysene-d12	11.247	240	285482	40.00	ppm	0.00
91) Perylene-d12	13.283	264	290037	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	66047	40.00	ppm	0.00
103) Phenanthrene-d10a	7.646	188	276162	40.00	ppm	0.00
107) Chrysene-d12a	11.247	240	285482	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	158306	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	280888	40.00	ppm	0.00
113) Phenanthrene-d10b	7.646	188	276162	40.00	ppm	0.00
115) Chrysene-d12b	11.247	240	285482	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.079	112	97267	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
8) Phenol-d5	3.853	99	143507	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
25) Nitrobenzene-d5	4.495	82	139277	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
51) 2-Fluorobiphenyl	5.771	172	286725	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
73) 2,4,6-Tribromophenol	6.936	330	38992	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
85) Terphenyl-d14	9.751	244	316235	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.455	88	27924	49.99	ppm	100
3) Pyridine	1.733	79	90130	49.79	ppm	100
4) N-Nitrosodimethylamine	1.711	74	51778	50.00	ppm	100
6) Indene	4.270	116	188681	50.00	ppm	100
7) Cumene	3.463	105	248581	50.00	ppm	100
9) Phenol	3.864	94	154498	50.00	ppm	100
10) Aniline	3.837	93	133731	50.00	ppm	100
11) bis(2-Chloroethyl)ether	3.896	93	99534	50.00	ppm	100
12) 2-Chlorophenol	3.928	128	124979	50.00	ppm	100
13) Decane	3.982	43	105338	50.00	ppm	100
14) 1,3-Dichlorobenzene	4.035	146	130799	50.00	ppm	100
15) 1,4-Dichlorobenzene	4.094	146	135023	50.00	ppm	100
16) Benzyl alcohol	4.201	108	76408	50.00	ppm	100
17) 1,2-Dichlorobenzene	4.201	146	132902	50.00	ppm	100
18) Acetophenone	4.388	105	173775	50.03	ppm	100
19) 2-Methylphenol	4.308	108	112813	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	31843	50.00	ppm	100
21) 3&4-Methylphenol	4.420	108	118972	50.00	ppm	100
22) n-Nitroso-di-n-propyla...	4.398	70	94572	50.00	ppm	100
23) Hexachloroethane	4.446	201	44233	50.00	ppm	100
26) Nitrobenzene	4.505	77	141452	50.00	ppm	100
27) Quinoline	5.269	129	263465	50.00	ppm	100
28) Isophorone	4.681	82	234415	50.00	ppm	100
29) 2-Nitrophenol	4.740	139	75670	50.00	ppm	100
30) 2,4-Dimethylphenol	4.794	107	124162	50.00	ppm	100
31) Benzoic Acid	4.922	105	68948	50.00	ppm	100
32) bis(2-Chloroethoxy)met...	4.847	93	140240	50.00	ppm	100
33) 2,4-Dichlorophenol	4.922	162	109821	50.00	ppm	100
34) 2,6-Dichlorophenol	5.077	162	109713	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	4.746	180	118262	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	4.965	180	110784	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	5.125	180	113385	50.00	ppm	100
38) Naphthalene	5.018	128	377492	50.00	ppm	100
39) 4-Chloroaniline	5.071	127	158101	50.00	ppm	100
40) 2,3-Dichloroaniline	5.713	161	141264	50.00	ppm	100
41) Caprolactam	5.339	55	59875	50.00	ppm	100
42) Hexachlorobutadiene	5.114	225	60426	50.00	ppm	100
43) 4-Chloro-3-methylphenol	5.440	107	115201	50.00	ppm	100
44) 2-Methylnaphthalene	5.510	141	212573	50.00	ppm	100
45) 1-Methylnaphthalene	5.579	141	240074	46.61	ppm	100
46) Dimethylnaphthalene	5.948	156	234425	50.00	ppm	100
48) Hexachlorocyclopentadiene	5.622	237	96573	100.00	ppm	100
49) 2,4,6-Trichlorophenol	5.723	196	78012	50.00	ppm	100
50) 2,4,5-Trichlorophenol	5.755	196	84437	50.00	ppm	100
52) 2-Chloronaphthalene	5.851	162	245275	50.00	ppm	100
53) Biphenyl	5.841	154	329895	50.00	ppm	100
54) 2-Nitroaniline	5.932	65	82960	50.00	ppm	100
55) Dimethylphthalate	6.065	163	284632	50.00	ppm	100
56) Acenaphthylene	6.145	152	400461	50.00	ppm	100
57) 2,6-Dinitrotoluene	6.113	165	64271	50.00	ppm	100
58) 3-Nitroaniline	6.241	138	79336	50.00	ppm	100
59) Acenaphthene	6.279	153	269824	50.00	ppm	100
60) 2,4-Dinitrophenol	6.327	184	73997	100.00	ppm	100
61) 4-Nitrophenol	6.407	109	45953	50.00	ppm	100
62) Dibenzofuran	6.418	168	354512	50.00	ppm	100
63) 2,4-Dinitrotoluene	6.428	165	91171	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	6.535	232	67019	50.00	ppm	100
65) Diethylphthalate	6.631	149	300911	50.00	ppm	100
66) Fluorene	6.712	166	301078	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	6.717	204	126871	50.00	ppm	100
68) 4-Nitroaniline	6.754	138	78701	50.00	ppm	100
70) 4,6-Dinitro-2-methylph...	6.792	198	51431	50.00	ppm	100
71) n-Nitrosodiphenylamine	6.829	169	203934	50.00	ppm	100
72) 1,2-Diphenylhydrazine	6.861	77	309265	50.00	ppm	100
74) 4-Bromophenyl-phenylether	7.182	248	74529	50.00	ppm	100
75) Hexachlorobenzene	7.246	284	81666	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration

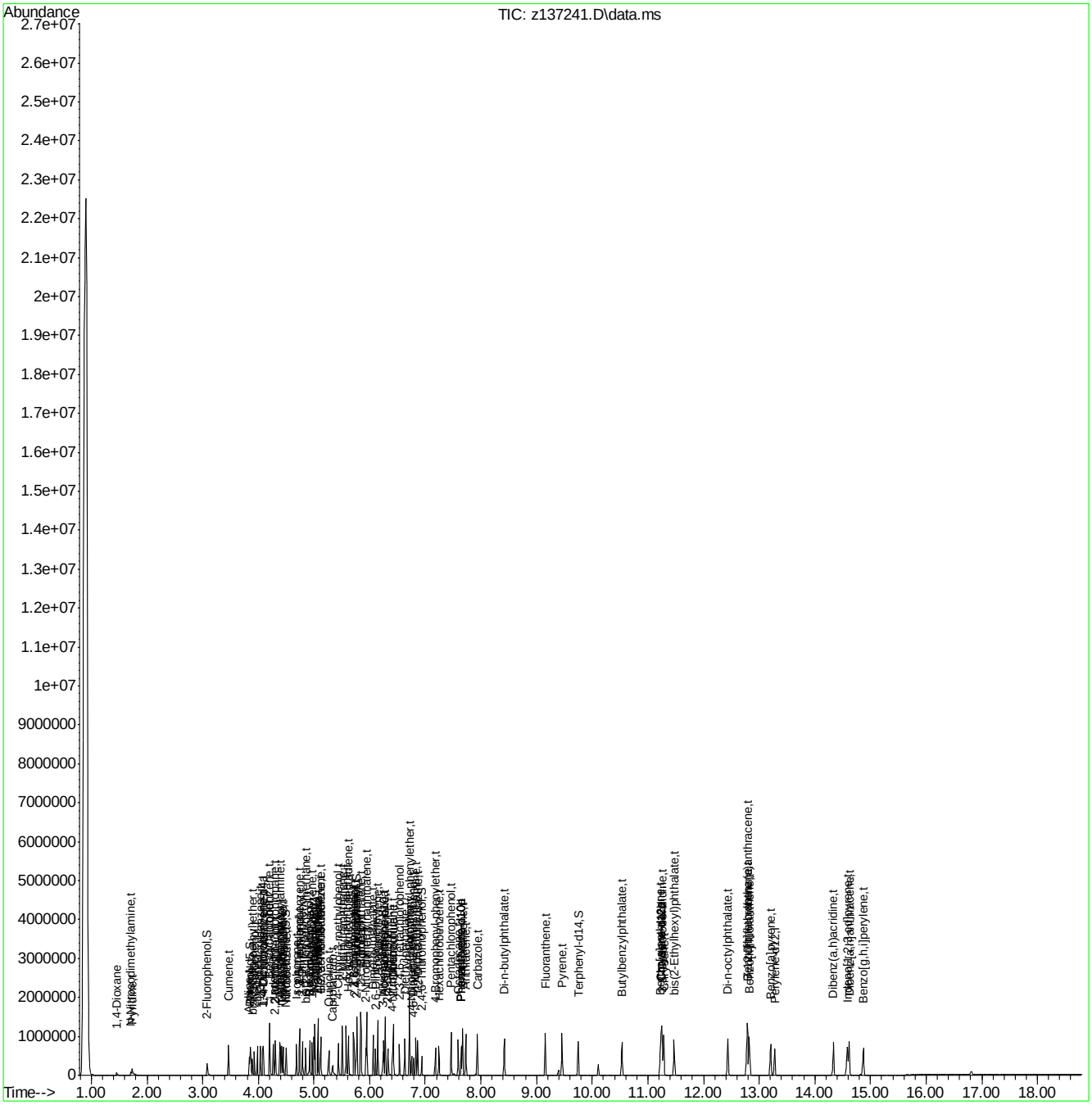
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	Pentachlorophenol	7.465	266	101081	100.00	ppm	100
77)	Phenanthrene	7.673	178	417091	50.00	ppm	100
78)	Anthracene	7.732	178	413726	50.00	ppm	100
79)	Carbazole	7.935	167	420994	50.00	ppm	100
80)	Di-n-butylphthalate	8.421	149	556699	50.00	ppm	100
81)	Fluoranthene	9.158	202	464808	50.00	ppm	100
82)	Octadecane	7.593	57	162587	50.00	ppm	100
84)	Pyrene	9.457	202	496950	50.00	ppm	100
86)	Butylbenzylphthalate	10.531	149	265514	50.00	ppm	100
87)	Benzo[a]anthracene	11.231	228	452131	50.00	ppm	100
88)	3,3'-Dichlorobenzidine	11.258	252	184996	50.00	ppm	100
89)	Chrysene	11.285	228	444184	50.00	ppm	100
90)	bis(2-Ethylhexyl)phtha...	11.471	149	364235	50.00	ppm	100
92)	Di-n-octylphthalate	12.433	149	674067	50.00	ppm	100
93)	Benzo[b]fluoranthene	12.786	252	515002	50.00	ppm	99
94)	Benzo[k]fluoranthene	12.828	252	434314	50.00	ppm	100
95)	Benzo[a]pyrene	13.208	252	407530	50.00	ppm	100
96)	Indeno[1,2,3-cd]pyrene	14.586	276	395348m	48.02	ppm	
97)	Dibenz(a,h)acridine	14.335	279	371956	50.00	ppm	100
98)	Dibenz[a,h]anthracene	14.618	278	415312	50.00	ppm	100
99)	7,12-Dimethylbenz(a)an...	12.791	256	202500	50.00	ppm	100
100)	Benzo[g,h,i]perylene	14.874	276	361530	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration



Manual Integration Approval Summary

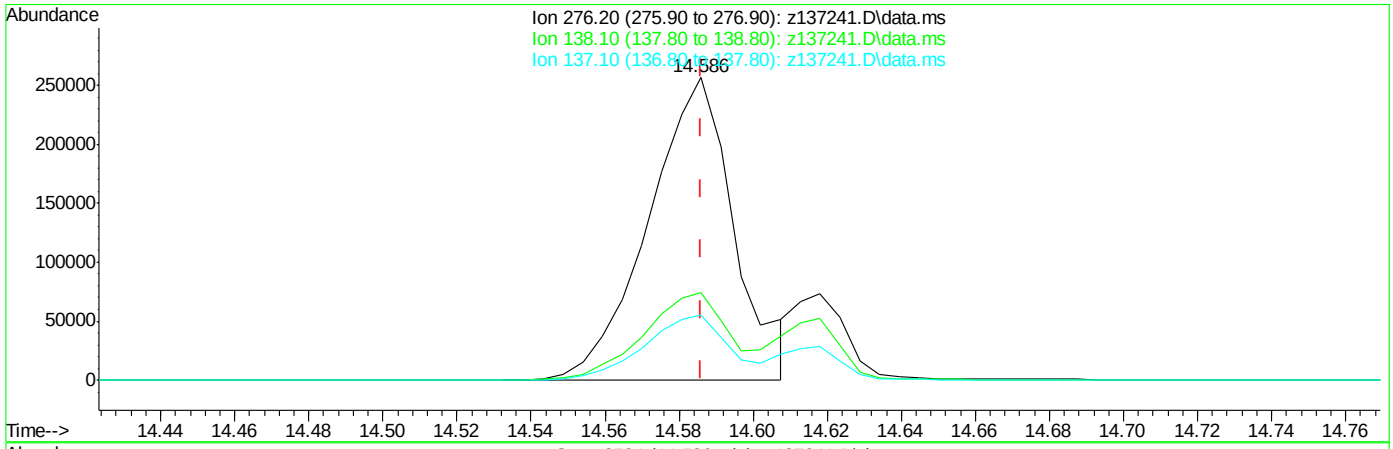
Sample Number: EZ6761-ICC6761
Lab FileID: Z137241.D
Injection Time: 04/25/19 06:50
Method: SW846 8270D
Analyst approved: 04/25/19 12:03 Ying Li
Supervisor approved: 04/26/19 13:18 Kristi Schollenberger

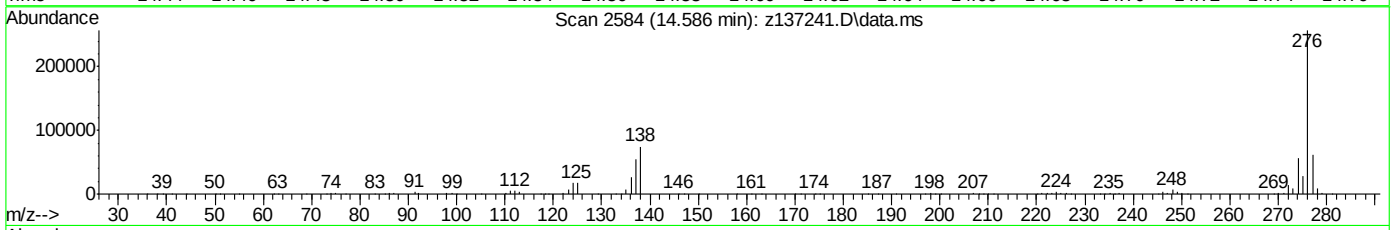
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.59	Poor instrument integration

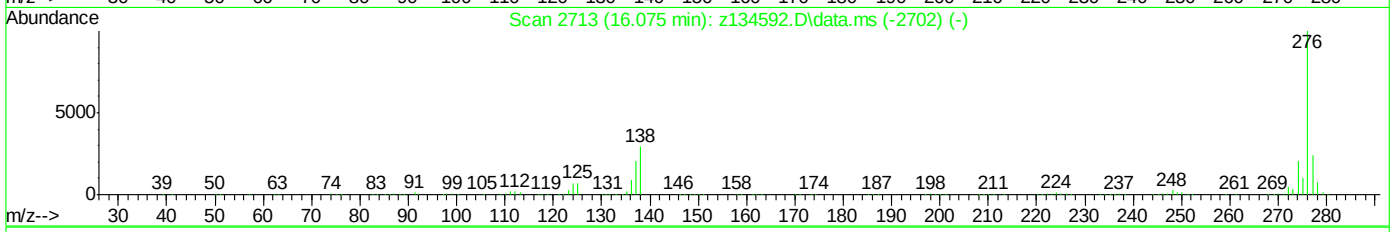
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:36:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration







TIC: z137241.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

14.586min (0.000) 50.00ppm

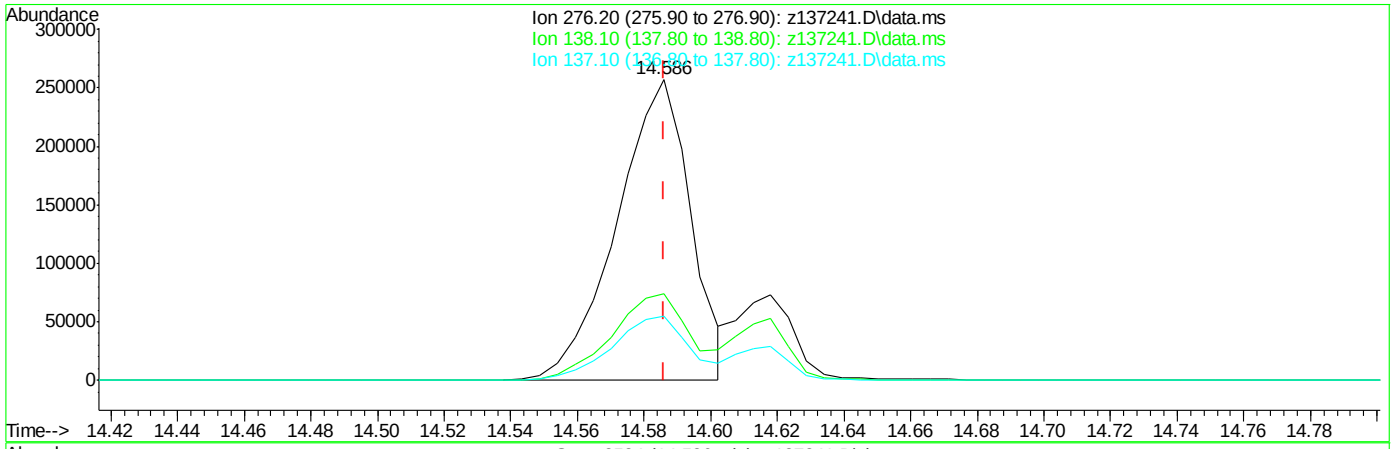
response 411684

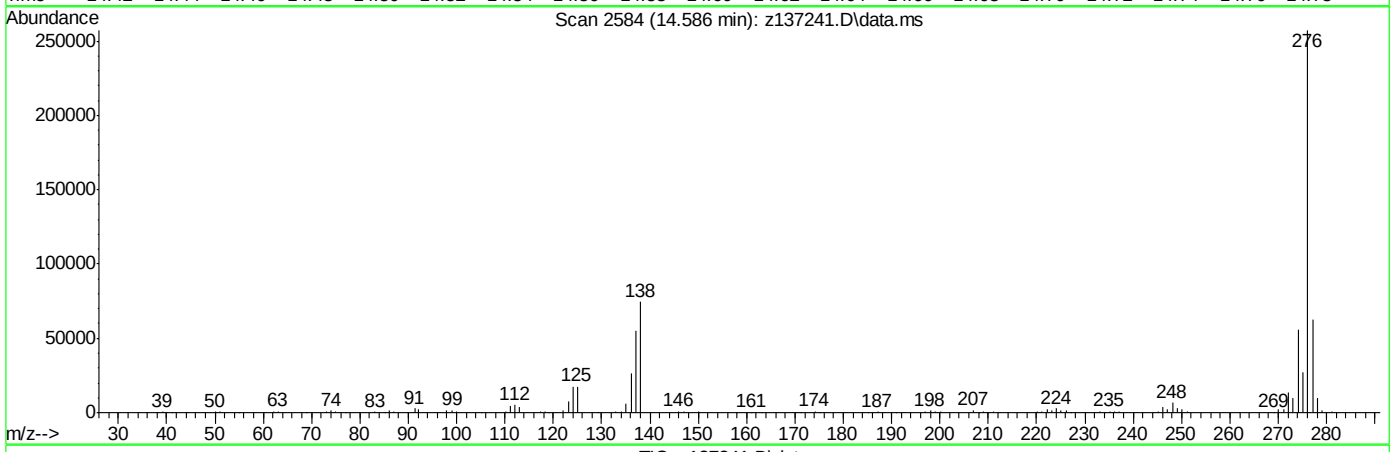
Ion	Exp%	Act%
276.20	100	100
138.10	24.10	24.12
137.10	19.00	18.95
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137241.D
Acq On : 25 Apr 2019 6:50 am
Operator : chriss2
Sample : icc6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:36:00 2019
Response via : Initial Calibration





TIC: z137241.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

14.586min (0.000) 48.02ppm m

response 395348

Ion	Exp%	Act%
276.20	100	100
138.10	24.10	28.95
137.10	19.00	21.39
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137242.D
Acq On : 25 Apr 2019 7:17 am
Operator : chriss2
Sample : ic6761-25
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:55:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	90013	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	377573	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	217734	40.00	ppm	0.00
69) Phenanthrene-d10	7.646	188	394600	40.00	ppm	0.00
83) Chrysene-d12	11.247	240	380070	40.00	ppm	0.00
91) Perylene-d12	13.282	264	414119	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	90013	40.00	ppm	0.00
103) Phenanthrene-d10a	7.646	188	394600	40.00	ppm	0.00
107) Chrysene-d12a	11.247	240	380070	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	217734	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	377573	40.00	ppm	0.00
113) Phenanthrene-d10b	7.646	188	394600	40.00	ppm	0.00
115) Chrysene-d12b	11.247	240	380070	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.079	112	62809	23.69	ppm	0.00
Spiked Amount 50.000			Recovery = 47.38%			
8) Phenol-d5	3.853	99	89934	22.99	ppm	0.00
Spiked Amount 50.000			Recovery = 45.98%			
25) Nitrobenzene-d5	4.489	82	91020	24.31	ppm	0.00
Spiked Amount 50.000			Recovery = 48.62%			
51) 2-Fluorobiphenyl	5.771	172	186121	23.60	ppm	0.00
Spiked Amount 50.000			Recovery = 47.20%			
73) 2,4,6-Tribromophenol	6.936	330	24944	22.39	ppm	0.00
Spiked Amount 50.000			Recovery = 44.78%			
85) Terphenyl-d14	9.746	244	195812	23.25	ppm	0.00
Spiked Amount 50.000			Recovery = 46.50%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.455	88	18543	24.36	ppm	94
3) Pyridine	1.733	79	59251	24.12	ppm	99
4) N-Nitrosodimethylamine	1.711	74	34192	24.23	ppm	96
6) Indene	4.265	116	122108	23.74	ppm	99
7) Cumene	3.463	105	161085	23.77	ppm	99
9) Phenol	3.864	94	97519	23.16	ppm	96
10) Aniline	3.837	93	90804	24.91	ppm	99
11) bis(2-Chloroethyl)ether	3.896	93	69542	25.63	ppm	99
12) 2-Chlorophenol	3.928	128	79302	23.28	ppm	99
13) Decane	3.982	43	68185	23.75	ppm	98
14) 1,3-Dichlorobenzene	4.035	146	86048	24.14	ppm	99
15) 1,4-Dichlorobenzene	4.088	146	89542	24.33	ppm	97
16) Benzyl alcohol	4.201	108	47294	22.71	ppm	97
17) 1,2-Dichlorobenzene	4.201	146	85804	23.69	ppm	98
18) Acetophenone	4.382	105	112441	23.74	ppm	95
19) 2-Methylphenol	4.302	108	75311	24.49	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137242.D
Acq On : 25 Apr 2019 7:17 am
Operator : chriss2
Sample : ic6761-25
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:55:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	20611	23.75	ppm		94
21) 3&4-Methylphenol	4.414	108	76783	23.68	ppm		99
22) n-Nitroso-di-n-propyla...	4.393	70	62021	24.06	ppm		96
23) Hexachloroethane	4.446	201	28710	23.81	ppm		97
26) Nitrobenzene	4.505	77	93536	24.60	ppm		93
27) Quinoline	5.258	129	177293	25.03	ppm		99
28) Isophorone	4.681	82	157871	25.05	ppm		97
29) 2-Nitrophenol	4.735	139	46893	23.05	ppm		76
30) 2,4-Dimethylphenol	4.794	107	74256	22.25	ppm		96
31) Benzoic Acid	4.906	105	30099	16.24	ppm		99
32) bis(2-Chloroethoxy)met...	4.847	93	93371	24.77	ppm		99
33) 2,4-Dichlorophenol	4.922	162	70562	23.90	ppm		96
34) 2,6-Dichlorophenol	5.071	162	70829	24.01	ppm		95
35) 1,3,5-Trichlorobenzene	4.740	180	75351	23.70	ppm		97
36) 1,2,4-Trichlorobenzene	4.965	180	72252	24.26	ppm		99
37) 1,2,3-Trichlorobenzene	5.125	180	73136	23.99	ppm		100
38) Naphthalene	5.018	128	242186	23.86	ppm		100
39) 4-Chloroaniline	5.066	127	103964	24.46	ppm		95
40) 2,3-Dichloroaniline	5.713	161	91868	24.19	ppm		98
41) Caprolactam	5.328	55	40138	24.94	ppm		98
42) Hexachlorobutadiene	5.114	225	38866	23.92	ppm		97
43) 4-Chloro-3-methylphenol	5.435	107	75755	24.46	ppm		82
44) 2-Methylnaphthalene	5.510	141	139628	24.43	ppm		99
45) 1-Methylnaphthalene	5.574	141	155841	24.15	ppm		97
46) Dimethylnaphthalene	5.948	156	154164	24.46	ppm		97
48) Hexachlorocyclopentadiene	5.622	237	53965	40.63	ppm		99
49) 2,4,6-Trichlorophenol	5.718	196	50311	23.44	ppm		98
50) 2,4,5-Trichlorophenol	5.755	196	54133	23.31	ppm		98
52) 2-Chloronaphthalene	5.846	162	159428	23.63	ppm		94
53) Biphenyl	5.835	154	211593	23.32	ppm		99
54) 2-Nitroaniline	5.932	65	56158	24.61	ppm		90
55) Dimethylphthalate	6.065	163	185387	23.68	ppm		99
56) Acenaphthylene	6.145	152	260367	23.64	ppm		100
57) 2,6-Dinitrotoluene	6.108	165	42272	23.91	ppm		82
58) 3-Nitroaniline	6.236	138	50494	23.14	ppm		89
59) Acenaphthene	6.279	153	173290	23.35	ppm		99
60) 2,4-Dinitrophenol	6.327	184	45241	44.45	ppm		88
61) 4-Nitrophenol	6.407	109	29026	22.96	ppm	#	87
62) Dibenzofuran	6.418	168	227329	23.31	ppm		96
63) 2,4-Dinitrotoluene	6.428	165	59639	23.78	ppm		86
64) 2,3,4,6-Tetrachlorophenol	6.535	232	42322	22.96	ppm		95
65) Diethylphthalate	6.631	149	197068	23.81	ppm		100
66) Fluorene	6.712	166	191574	23.13	ppm		99
67) 4-Chlorophenyl-phenyle...	6.717	204	81867	23.46	ppm		97
68) 4-Nitroaniline	6.749	138	52697	24.34	ppm		98
70) 4,6-Dinitro-2-methylph...	6.786	198	33062	22.49	ppm	#	96
71) n-Nitrosodiphenylamine	6.829	169	132801	22.79	ppm		98
72) 1,2-Diphenylhydrazine	6.861	77	206464	23.36	ppm		97
74) 4-Bromophenyl-phenylether	7.176	248	48378	22.71	ppm		93
75) Hexachlorobenzene	7.246	284	53385	22.87	ppm		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137242.D
Acq On : 25 Apr 2019 7:17 am
Operator : chriss2
Sample : ic6761-25
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:55:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

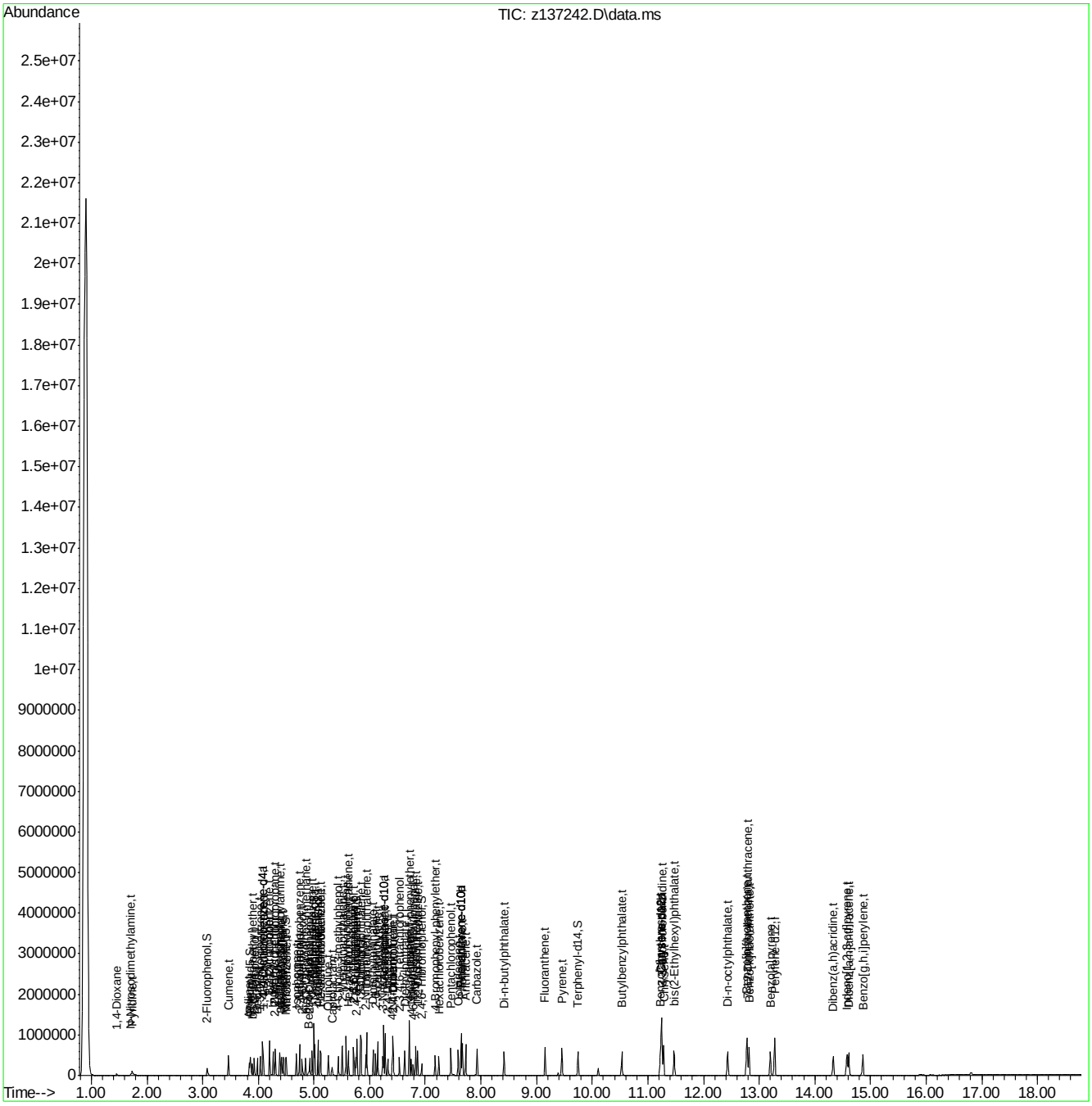
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.465	266	65102	45.07	ppm	97
77) Phenanthrene	7.668	178	276652	23.21	ppm	99
78) Anthracene	7.727	178	278063	23.52	ppm	100
79) Carbazole	7.930	167	279399	23.22	ppm	99
80) Di-n-butylphthalate	8.421	149	361364	22.71	ppm	100
81) Fluoranthene	9.153	202	305540	23.00	ppm	100
82) Octadecane	7.593	57	110906	23.87	ppm	99
84) Pyrene	9.457	202	323714	24.46	ppm	95
86) Butylbenzylphthalate	10.531	149	173607	24.56	ppm	100
87) Benzo[a]anthracene	11.226	228	292996	24.34	ppm	99
88) 3,3'-Dichlorobenzidine	11.252	252	121401	24.65	ppm	99
89) Chrysene	11.284	228	300108	25.37	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.471	149	247096	25.48	ppm	99
92) Di-n-octylphthalate	12.433	149	439365	22.83	ppm	99
93) Benzo[b]fluoranthene	12.780	252	319264	21.71	ppm	97
94) Benzo[k]fluoranthene	12.818	252	300155	24.20	ppm	97
95) Benzo[a]pyrene	13.197	252	274854	23.62	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.575	276	259914	23.02	ppm	98
97) Dibenz(a,h)acridine	14.330	279	241341	22.72	ppm	98
98) Dibenz[a,h]anthracene	14.613	278	272658	22.99	ppm	97
99) 7,12-Dimethylbenz(a)an...	12.786	256	121116	20.94	ppm	98
100) Benzo[g,h,i]perylene	14.864	276	247253	23.95	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137242.D
Acq On : 25 Apr 2019 7:17 am
Operator : chriss2
Sample : ic6761-25
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:55:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137243.D
Acq On : 25 Apr 2019 7:45 am
Operator : chriss2
Sample : ic6761-10
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:58:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	91010	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	405392	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	230187	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	421612	40.00	ppm	0.00
83) Chrysene-d12	11.242	240	402831	40.00	ppm	0.00
91) Perylene-d12	13.283	264	443465	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	91010	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	421612	40.00	ppm	0.00
107) Chrysene-d12a	11.242	240	402831	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	230187	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	405392	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	421612	40.00	ppm	0.00
115) Chrysene-d12b	11.242	240	402831	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.084	112	23844	8.90	ppm	0.00
Spiked Amount 50.000			Recovery = 17.80%			
8) Phenol-d5	3.854	99	36863	9.32	ppm	0.00
Spiked Amount 50.000			Recovery = 18.64%			
25) Nitrobenzene-d5	4.489	82	36827	9.16	ppm	0.00
Spiked Amount 50.000			Recovery = 18.32%			
51) 2-Fluorobiphenyl	5.766	172	74828	8.97	ppm	0.00
Spiked Amount 50.000			Recovery = 17.94%			
73) 2,4,6-Tribromophenol	6.931	330	10210	8.58	ppm	0.00
Spiked Amount 50.000			Recovery = 17.16%			
85) Terphenyl-d14	9.741	244	83611	9.37	ppm	-0.01
Spiked Amount 50.000			Recovery = 18.74%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.455	88	7708	10.02	ppm	93
3) Pyridine	1.738	79	24220	9.75	ppm	99
4) N-Nitrosodimethylamine	1.717	74	14217	9.96	ppm	90
6) Indene	4.265	116	48291	9.29	ppm	98
7) Cumene	3.464	105	67521	9.86	ppm	98
9) Phenol	3.859	94	39658	9.31	ppm	99
10) Aniline	3.838	93	41853	11.36	ppm	98
11) bis(2-Chloroethyl)ether	3.896	93	29499	10.75	ppm	95
12) 2-Chlorophenol	3.928	128	30806	8.94	ppm	98
13) Decane	3.976	43	28068	9.67	ppm	95
14) 1,3-Dichlorobenzene	4.035	146	33861	9.39	ppm	98
15) 1,4-Dichlorobenzene	4.089	146	34987	9.40	ppm	97
16) Benzyl alcohol	4.201	108	17174	8.16	ppm	96
17) 1,2-Dichlorobenzene	4.201	146	33164	9.05	ppm	97
18) Acetophenone	4.382	105	46355	9.68	ppm	95
19) 2-Methylphenol	4.302	108	29733	9.56	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137243.D
Acq On : 25 Apr 2019 7:45 am
Operator : chriss2
Sample : ic6761-10
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:58:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	8393	9.56	ppm		99
21) 3&4-Methylphenol	4.415	108	29905	9.12	ppm		97
22) n-Nitroso-di-n-propyla...	4.388	70	25190	9.66	ppm		91
23) Hexachloroethane	4.447	201	11572	9.49	ppm		89
26) Nitrobenzene	4.500	77	36691	8.99	ppm		100
27) Quinoline	5.253	129	70524	9.27	ppm		97
28) Isophorone	4.676	82	64238	9.49	ppm		98
29) 2-Nitrophenol	4.735	139	18884	8.65	ppm		79
30) 2,4-Dimethylphenol	4.788	107	25484	7.11	ppm		94
31) Benzoic Acid	4.885	105	5907	2.97	ppm		93
32) bis(2-Chloroethoxy)met...	4.842	93	37182	9.19	ppm		98
33) 2,4-Dichlorophenol	4.922	162	28420	8.97	ppm		97
34) 2,6-Dichlorophenol	5.072	162	28763	9.08	ppm		98
35) 1,3,5-Trichlorobenzene	4.740	180	28926	8.47	ppm		97
36) 1,2,4-Trichlorobenzene	4.965	180	29043	9.08	ppm		98
37) 1,2,3-Trichlorobenzene	5.120	180	29434	8.99	ppm		94
38) Naphthalene	5.013	128	101190	9.29	ppm		100
39) 4-Chloroaniline	5.066	127	42886	9.40	ppm		96
40) 2,3-Dichloroaniline	5.707	161	36541	8.96	ppm		96
41) Caprolactam	5.312	55	16475	9.53	ppm		96
42) Hexachlorobutadiene	5.114	225	15797	9.06	ppm		98
43) 4-Chloro-3-methylphenol	5.435	107	31155	9.37	ppm		79
44) 2-Methylnaphthalene	5.504	141	57135	9.31	ppm		98
45) 1-Methylnaphthalene	5.574	141	63021	9.09	ppm		98
46) Dimethylnaphthalene	5.948	156	60242	8.90	ppm		97
48) Hexachlorocyclopentadiene	5.622	237	15599	11.11	ppm		97
49) 2,4,6-Trichlorophenol	5.718	196	19977	8.81	ppm		97
50) 2,4,5-Trichlorophenol	5.750	196	21308	8.68	ppm		98
52) 2-Chloronaphthalene	5.846	162	63873	8.95	ppm		98
53) Biphenyl	5.836	154	85435	8.91	ppm		99
54) 2-Nitroaniline	5.926	65	22960	9.52	ppm		96
55) Dimethylphthalate	6.060	163	74471	9.00	ppm		100
56) Acenaphthylene	6.140	152	105743	9.08	ppm		99
57) 2,6-Dinitrotoluene	6.103	165	16977	9.08	ppm		72
58) 3-Nitroaniline	6.231	138	21056	9.13	ppm		87
59) Acenaphthene	6.279	153	70315	8.96	ppm		97
60) 2,4-Dinitrophenol	6.322	184	15501	14.41	ppm		85
61) 4-Nitrophenol	6.407	109	11115	8.32	ppm	#	62
62) Dibenzofuran	6.418	168	93536	9.07	ppm		96
63) 2,4-Dinitrotoluene	6.423	165	24765	9.34	ppm		99
64) 2,3,4,6-Tetrachlorophenol	6.535	232	18100	9.29	ppm		95
65) Diethylphthalate	6.626	149	83485	9.54	ppm		99
66) Fluorene	6.706	166	78701	8.99	ppm		97
67) 4-Chlorophenyl-phenyle...	6.712	204	33151	8.99	ppm		93
68) 4-Nitroaniline	6.744	138	21628	9.45	ppm		94
70) 4,6-Dinitro-2-methylph...	6.781	198	12948	8.25	ppm	#	100
71) n-Nitrosodiphenylamine	6.824	169	56031	9.00	ppm		99
72) 1,2-Diphenylhydrazine	6.856	77	87977	9.32	ppm		98
74) 4-Bromophenyl-phenylether	7.176	248	20085	8.83	ppm		97
75) Hexachlorobenzene	7.241	284	23220	9.31	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137243.D
Acq On : 25 Apr 2019 7:45 am
Operator : chriss2
Sample : ic6761-10
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:58:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.460	266	22570	14.63	ppm	95
77) Phenanthrene	7.668	178	117351	9.21	ppm	98
78) Anthracene	7.721	178	117603	9.31	ppm	98
79) Carbazole	7.930	167	117249	9.12	ppm	99
80) Di-n-butylphthalate	8.416	149	150585	8.86	ppm	100
81) Fluoranthene	9.148	202	124479	8.77	ppm	99
82) Octadecane	7.588	57	46003	9.27	ppm	97
84) Pyrene	9.452	202	130000	9.27	ppm	94
86) Butylbenzylphthalate	10.526	149	70778	9.45	ppm	99
87) Benzo[a]anthracene	11.226	228	121647	9.53	ppm	99
88) 3,3'-Dichlorobenzidine	11.247	252	49516	9.48	ppm	99
89) Chrysene	11.274	228	117735	9.39	ppm	98
90) bis(2-Ethylhexyl)phtha...	11.472	149	97223	9.46	ppm	100
92) Di-n-octylphthalate	12.428	149	173001	8.39	ppm	99
93) Benzo[b]fluoranthene	12.770	252	129496	8.22	ppm	96
94) Benzo[k]fluoranthene	12.802	252	125655	9.46	ppm	98
95) Benzo[a]pyrene	13.192	252	112879	9.06	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.565	276	116077	9.60	ppm	95
97) Dibenz(a,h)acridine	14.319	279	99219	8.72	ppm	98
98) Dibenz[a,h]anthracene	14.602	278	119115	9.38	ppm	100
99) 7,12-Dimethylbenz(a)an...	12.775	256	39510	6.38	ppm	98
100) Benzo[g,h,i]perylene	14.853	276	115159	10.42	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

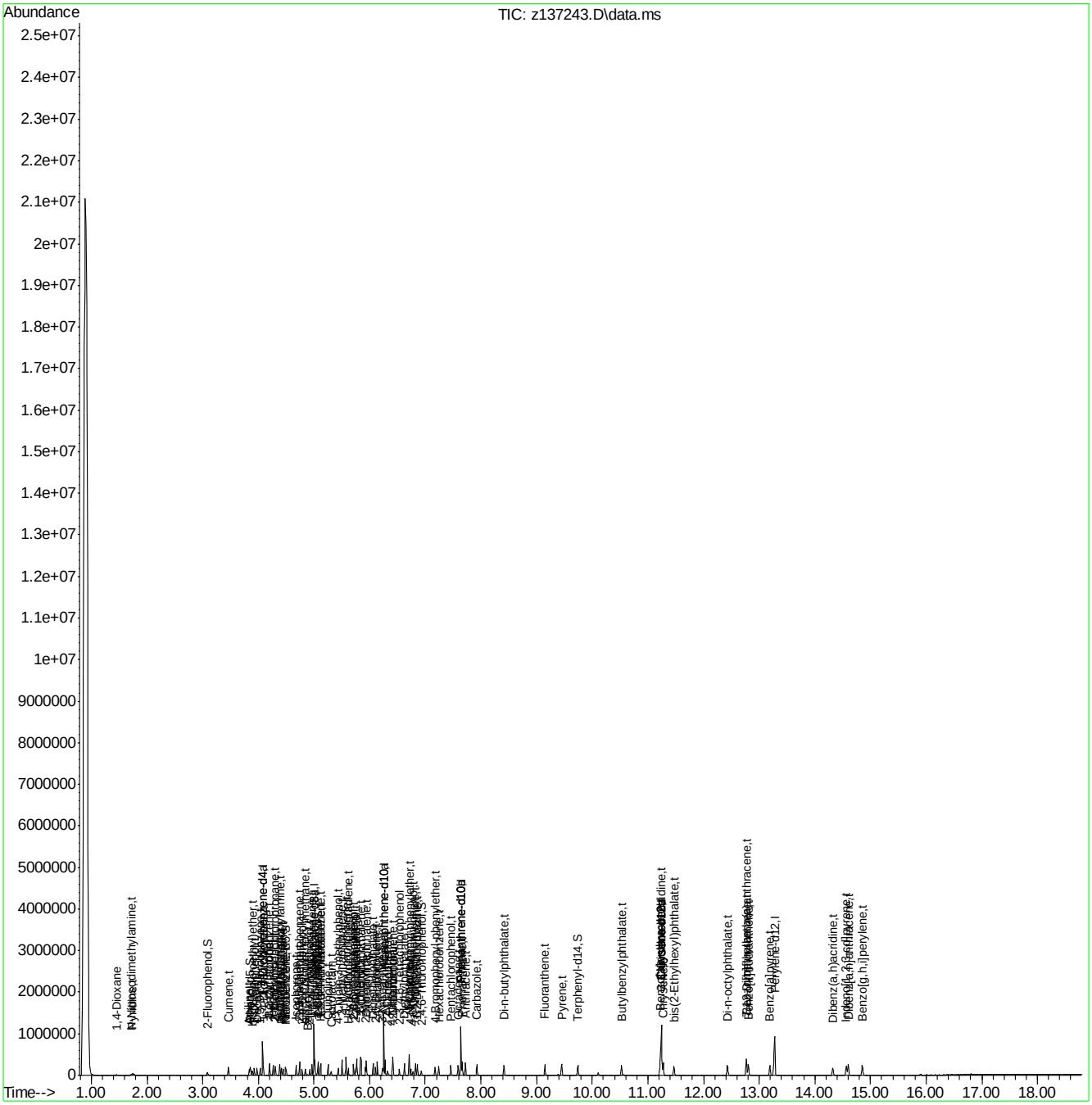
9.6.61

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137243.D
Acq On : 25 Apr 2019 7:45 am
Operator : chriss2
Sample : ic6761-10
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:58:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137244.D
Acq On : 25 Apr 2019 8:13 am
Operator : chriss2
Sample : ic6761-5
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 10:00:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	92499	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	405179	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	238806	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	428372	40.00	ppm	0.00
83) Chrysene-d12	11.242	240	389485	40.00	ppm	0.00
91) Perylene-d12	13.277	264	446557	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	92499	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	428372	40.00	ppm	0.00
107) Chrysene-d12a	11.242	240	389485	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	238806	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	405179	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	428372	40.00	ppm	0.00
115) Chrysene-d12b	11.242	240	389485	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.084	112	12051	4.42	ppm	0.00
Spiked Amount 50.000			Recovery =	8.84%		
8) Phenol-d5	3.854	99	18217	4.53	ppm	0.00
Spiked Amount 50.000			Recovery =	9.06%		
25) Nitrobenzene-d5	4.489	82	18005	4.48	ppm	0.00
Spiked Amount 50.000			Recovery =	8.96%		
51) 2-Fluorobiphenyl	5.766	172	38081	4.40	ppm	0.00
Spiked Amount 50.000			Recovery =	8.80%		
73) 2,4,6-Tribromophenol	6.931	330	4559	3.77	ppm	0.00
Spiked Amount 50.000			Recovery =	7.54%		
85) Terphenyl-d14	9.741	244	40933	4.74	ppm	-0.01
Spiked Amount 50.000			Recovery =	9.48%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.455	88	3788	4.84	ppm	98
3) Pyridine	1.743	79	11467	4.54	ppm	96
4) N-Nitrosodimethylamine	1.722	74	7477	5.16	ppm	81
6) Indene	4.265	116	24196	4.58	ppm	99
7) Cumene	3.464	105	33229	4.77	ppm	97
9) Phenol	3.864	94	19630	4.54	ppm	97
10) Aniline	3.838	93	21810	5.82	ppm	99
11) bis(2-Chloroethyl)ether	3.896	93	15247	5.47	ppm	93
12) 2-Chlorophenol	3.928	128	15445	4.41	ppm	97
13) Decane	3.976	43	14148	4.80	ppm	95
14) 1,3-Dichlorobenzene	4.035	146	17955	4.90	ppm	98
15) 1,4-Dichlorobenzene	4.089	146	17973	4.75	ppm	98
16) Benzyl alcohol	4.201	108	7447	3.48	ppm	97
17) 1,2-Dichlorobenzene	4.201	146	17780	4.78	ppm	94
18) Acetophenone	4.382	105	22929	4.71	ppm	96
19) 2-Methylphenol	4.302	108	15371	4.86	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137244.D
Acq On : 25 Apr 2019 8:13 am
Operator : chriss2
Sample : ic6761-5
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 10:00:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	4024	4.51	ppm	#	84
21) 3&4-Methylphenol	4.415	108	14282	4.29	ppm		98
22) n-Nitroso-di-n-propyla...	4.388	70	12067	4.56	ppm		94
23) Hexachloroethane	4.447	201	5862	4.73	ppm		89
26) Nitrobenzene	4.505	77	19095	4.68	ppm		90
27) Quinoline	5.253	129	35614	4.69	ppm		99
28) Isophorone	4.676	82	32044	4.74	ppm		99
29) 2-Nitrophenol	4.735	139	9054	4.15	ppm		85
30) 2,4-Dimethylphenol	4.789	107	9854	2.75	ppm		98
32) bis(2-Chloroethoxy)met...	4.842	93	18941	4.68	ppm		97
33) 2,4-Dichlorophenol	4.922	162	13618	4.30	ppm		95
34) 2,6-Dichlorophenol	5.072	162	14014	4.43	ppm		99
35) 1,3,5-Trichlorobenzene	4.740	180	14872	4.36	ppm		99
36) 1,2,4-Trichlorobenzene	4.965	180	14559	4.56	ppm		97
37) 1,2,3-Trichlorobenzene	5.120	180	14890	4.55	ppm		96
38) Naphthalene	5.013	128	48629	4.47	ppm		99
39) 4-Chloroaniline	5.066	127	21299	4.67	ppm		95
40) 2,3-Dichloroaniline	5.707	161	19002	4.66	ppm		97
41) Caprolactam	5.301	55	7886	4.57	ppm		91
42) Hexachlorobutadiene	5.109	225	7917	4.54	ppm		96
43) 4-Chloro-3-methylphenol	5.435	107	14704	4.42	ppm		99
44) 2-Methylnaphthalene	5.504	141	27449	4.48	ppm		96
45) 1-Methylnaphthalene	5.574	141	31346	4.53	ppm		97
46) Dimethylnaphthalene	5.942	156	30620	4.53	ppm		98
48) Hexachlorocyclopentadiene	5.622	237	5282	3.63	ppm		97
49) 2,4,6-Trichlorophenol	5.718	196	9692	4.12	ppm		98
50) 2,4,5-Trichlorophenol	5.750	196	10506	4.12	ppm		95
52) 2-Chloronaphthalene	5.846	162	32732	4.42	ppm		97
53) Biphenyl	5.836	154	42479	4.27	ppm		98
54) 2-Nitroaniline	5.926	65	10763	4.30	ppm		95
55) Dimethylphthalate	6.060	163	37733	4.39	ppm		99
56) Acenaphthylene	6.140	152	53601	4.44	ppm		100
57) 2,6-Dinitrotoluene	6.103	165	8152	4.20	ppm		79
58) 3-Nitroaniline	6.231	138	10295	4.30	ppm		82
59) Acenaphthene	6.274	153	35647	4.38	ppm		97
60) 2,4-Dinitrophenol	6.327	184	4451	3.99	ppm		81
61) 4-Nitrophenol	6.407	109	4741	3.42	ppm	#	11
62) Dibenzofuran	6.413	168	46574	4.35	ppm		97
63) 2,4-Dinitrotoluene	6.423	165	12363	4.49	ppm		98
64) 2,3,4,6-Tetrachlorophenol	6.535	232	7508	3.71	ppm		96
65) Diethylphthalate	6.626	149	41002	4.52	ppm		98
66) Fluorene	6.706	166	37998	4.18	ppm		100
67) 4-Chlorophenyl-phenyle...	6.712	204	16824	4.40	ppm		95
68) 4-Nitroaniline	6.738	138	10038	4.23	ppm		96
70) 4,6-Dinitro-2-methylph...	6.781	198	5314	3.33	ppm	#	85
71) n-Nitrosodiphenylamine	6.824	169	26675	4.22	ppm		98
72) 1,2-Diphenylhydrazine	6.856	77	42802	4.46	ppm		97
74) 4-Bromophenyl-phenylether	7.176	248	9610	4.16	ppm		97
75) Hexachlorobenzene	7.241	284	11007	4.34	ppm		94
76) Pentachlorophenol	7.460	266	9906	6.32	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137244.D
Acq On : 25 Apr 2019 8:13 am
Operator : chriss2
Sample : ic6761-5
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 10:00:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Phenanthrene	7.663	178	56924	4.40	ppm	99
78) Anthracene	7.721	178	57466	4.48	ppm	98
79) Carbazole	7.924	167	55665	4.26	ppm	99
80) Di-n-butylphthalate	8.416	149	74521	4.31	ppm	100
81) Fluoranthene	9.148	202	62815	4.36	ppm	98
82) Octadecane	7.588	57	22596	4.48	ppm	97
84) Pyrene	9.447	202	66343	4.89	ppm	97
86) Butylbenzylphthalate	10.526	149	34415	4.75	ppm	94
87) Benzo[a]anthracene	11.221	228	60078	4.87	ppm	98
88) 3,3'-Dichlorobenzidine	11.247	252	23147	4.59	ppm	93
89) Chrysene	11.269	228	58013	4.79	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.466	149	47054	4.73	ppm	99
92) Di-n-octylphthalate	12.428	149	83133	4.01	ppm	99
93) Benzo[b]fluoranthene	12.764	252	60157	3.79	ppm	97
94) Benzo[k]fluoranthene	12.802	252	60573	4.53	ppm	97
95) Benzo[a]pyrene	13.187	252	54072	4.31	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.565	276	51693	4.25	ppm	91
97) Dibenz(a,h)acridine	14.319	279	46157	4.03	ppm	97
98) Dibenz[a,h]anthracene	14.597	278	53942	4.22	ppm	98
99) 7,12-Dimethylbenz(a)an...	12.770	256	14522	2.33	ppm	97
100) Benzo[g,h,i]perylene	14.848	276	49144	4.41	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

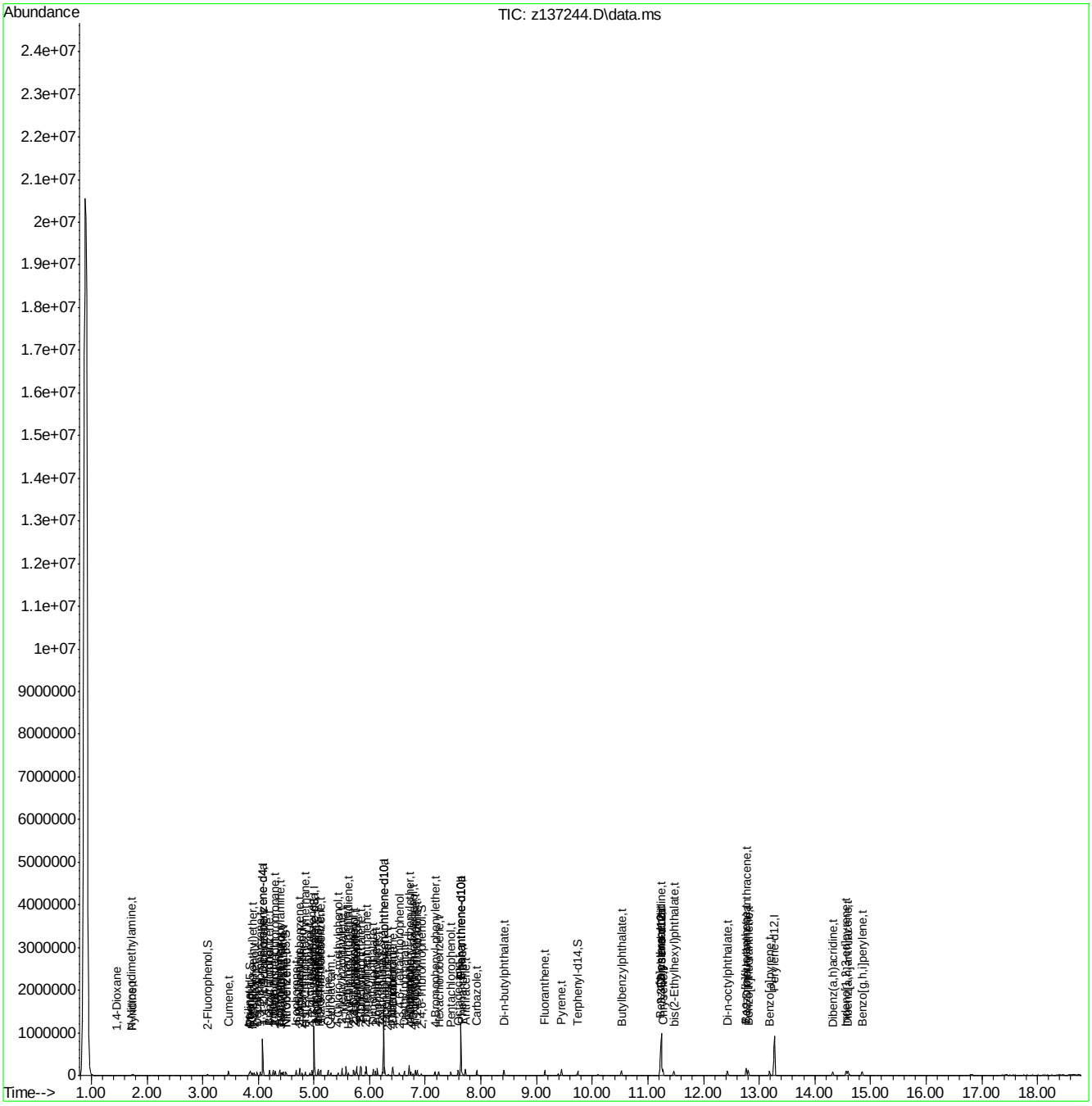
9.6.62

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137244.D
Acq On : 25 Apr 2019 8:13 am
Operator : chriss2
Sample : ic6761-5
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 10:00:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Z137245.D

Manual Integrations APPROVED (compounds with "m" flag)

Kristi Schollenberger 04/26/19 13:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 10:06:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	76439	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	328800	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	198952	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	378479	40.00	ppm	0.00
83) Chrysene-d12	11.236	240	347753	40.00	ppm	-0.01
91) Perylene-d12	13.277	264	410218	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	76439	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	378479	40.00	ppm	0.00
107) Chrysene-d12a	11.236	240	347753	40.00	ppm	-0.01
109) Acenaphthene-d10a	6.252	164	198952	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	328800	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	378479	40.00	ppm	0.00
115) Chrysene-d12b	11.236	240	347753	40.00	ppb	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.090	112	2670	1.19	ppm	0.01
Spiked Amount 50.000			Recovery = 2.38%			
8) Phenol-d5	3.859	99	5399	1.63	ppm	0.00
Spiked Amount 50.000			Recovery = 3.26%			
25) Nitrobenzene-d5	4.489	82	5553	1.70	ppm	0.00
Spiked Amount 50.000			Recovery = 3.40%			
51) 2-Fluorobiphenyl	5.766	172	12668	1.76	ppm	0.00
Spiked Amount 50.000			Recovery = 3.52%			
73) 2,4,6-Tribromophenol	6.931	330	1422	1.33	ppm	0.00
Spiked Amount 50.000			Recovery = 2.66%			
85) Terphenyl-d14	9.741	244	13472	1.75	ppm	-0.01
Spiked Amount 50.000			Recovery = 3.50%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.455	88	1137	1.76	ppm #	86
3) Pyridine	1.765	79	2775	1.33	ppm	97
4) N-Nitrosodimethylamine	1.733	74	1538	1.28	ppm	85
6) Indene	4.265	116	7368	1.69	ppm	93
7) Cumene	3.464	105	10614	1.84	ppm	94
9) Phenol	3.864	94	6327	1.77	ppm	91
10) Aniline	3.843	93	6961	2.25	ppm	92
11) bis(2-Chloroethyl)ether	3.896	93	4942	2.15	ppm	85
12) 2-Chlorophenol	3.934	128	4681	1.62	ppm	94
13) Decane	3.976	43	4530	1.86	ppm	98
14) 1,3-Dichlorobenzene	4.035	146	5482	1.81	ppm	97
15) 1,4-Dichlorobenzene	4.089	146	5523	1.77	ppm	95
16) Benzyl alcohol	4.211	108	1943m	1.10	ppm	
17) 1,2-Dichlorobenzene	4.206	146	5403	1.76	ppm	95
18) Acetophenone	4.382	105	7071	1.76	ppm	95
19) 2-Methylphenol	4.302	108	4435	1.70	ppm	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 10:06:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	1146	1.55	ppm		89
21) 3&4-Methylphenol	4.420	108	4433	1.61	ppm		93
22) n-Nitroso-di-n-propyla...	4.393	70	3938	1.80	ppm		96
23) Hexachloroethane	4.447	201	1944	1.90	ppm		89
26) Nitrobenzene	4.505	77	6194	1.87	ppm		97
27) Quinoline	5.253	129	10945	1.77	ppm		98
28) Isophorone	4.676	82	10024	1.83	ppm		92
29) 2-Nitrophenol	4.740	139	2651	1.50	ppm	#	61
30) 2,4-Dimethylphenol	4.794	107	2482	0.85	ppm		99
32) bis(2-Chloroethoxy)met...	4.842	93	5871	1.79	ppm		100
33) 2,4-Dichlorophenol	4.927	162	3994	1.55	ppm		97
34) 2,6-Dichlorophenol	5.072	162	4458	1.74	ppm		96
35) 1,3,5-Trichlorobenzene	4.740	180	4632	1.67	ppm		96
36) 1,2,4-Trichlorobenzene	4.965	180	4660	1.80	ppm		98
37) 1,2,3-Trichlorobenzene	5.120	180	4814	1.81	ppm		94
38) Naphthalene	5.013	128	16624	1.88	ppm		99
39) 4-Chloroaniline	5.072	127	7066	1.91	ppm		98
40) 2,3-Dichloroaniline	5.707	161	5748	1.74	ppm		99
41) Caprolactam	5.296	55	2402	1.71	ppm		90
42) Hexachlorobutadiene	5.114	225	2544	1.80	ppm		94
43) 4-Chloro-3-methylphenol	5.435	107	4241	1.57	ppm		98
44) 2-Methylnaphthalene	5.504	141	8775	1.76	ppm		94
45) 1-Methylnaphthalene	5.574	141	10810	1.92	ppm		96
46) Dimethylnaphthalene	5.942	156	9662	1.76	ppm		94
49) 2,4,6-Trichlorophenol	5.718	196	3072	1.57	ppm		93
50) 2,4,5-Trichlorophenol	5.755	196	2947	1.39	ppm		97
52) 2-Chloronaphthalene	5.846	162	10396	1.69	ppm		96
53) Biphenyl	5.835	154	13958	1.68	ppm		99
54) 2-Nitroaniline	5.932	65	3194	1.53	ppm		87
55) Dimethylphthalate	6.060	163	12915	1.81	ppm		97
56) Acenaphthylene	6.140	152	17213	1.71	ppm		97
57) 2,6-Dinitrotoluene	6.103	165	2634	1.63	ppm		77
58) 3-Nitroaniline	6.236	138	3149	1.58	ppm		96
59) Acenaphthene	6.274	153	12160	1.79	ppm		98
62) Dibenzofuran	6.412	168	14894	1.67	ppm		97
63) 2,4-Dinitrotoluene	6.423	165	3453	1.51	ppm		65
64) 2,3,4,6-Tetrachlorophenol	6.535	232	2314	1.37	ppm		94
65) Diethylphthalate	6.621	149	13500	1.78	ppm		99
66) Fluorene	6.706	166	12428	1.64	ppm		94
67) 4-Chlorophenyl-phenyle...	6.712	204	5432	1.70	ppm		96
68) 4-Nitroaniline	6.744	138	3184	1.61	ppm		94
71) n-Nitrosodiphenylamine	6.824	169	9016	1.61	ppm		98
72) 1,2-Diphenylhydrazine	6.856	77	14206	1.68	ppm		97
74) 4-Bromophenyl-phenylether	7.176	248	3139	1.54	ppm		87
75) Hexachlorobenzene	7.235	284	3579	1.60	ppm		82
76) Pentachlorophenol	7.465	266	2952	2.13	ppm		89
77) Phenanthrene	7.663	178	20008	1.75	ppm		96
78) Anthracene	7.721	178	20278	1.79	ppm		97
79) Carbazole	7.930	167	19771	1.71	ppm		98
80) Di-n-butylphthalate	8.416	149	24826	1.63	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 10:06:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
81) Fluoranthene	9.148	202	20094	1.58	ppm	96
82) Octadecane	7.588	57	7639	1.71	ppm	96
84) Pyrene	9.447	202	21687	1.79	ppm	100
86) Butylbenzylphthalate	10.526	149	11360	1.76	ppm	92
87) Benzo[a]anthracene	11.220	228	21812	1.98	ppm	97
88) 3,3'-Dichlorobenzidine	11.247	252	7654	1.70	ppm	95
89) Chrysene	11.269	228	20315	1.88	ppm	95
90) bis(2-Ethylhexyl)phtha...	11.466	149	14957	1.69	ppm	98
92) Di-n-octylphthalate	12.422	149	27434	1.44	ppm	98
93) Benzo[b]fluoranthene	12.764	252	21702	1.49	ppm	95
94) Benzo[k]fluoranthene	12.802	252	21218	1.73	ppm	98
95) Benzo[a]pyrene	13.186	252	18726	1.62	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.565	276	17896	1.60	ppm	89
97) Dibenz(a,h)acridine	14.319	279	16559	1.57	ppm	93
98) Dibenz[a,h]anthracene	14.597	278	18515	1.58	ppm	93
99) 7,12-Dimethylbenz(a)an...	12.764	256	4939	0.86	ppm	99
100) Benzo[g,h,i]perylene	14.848	276	17811	1.74	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

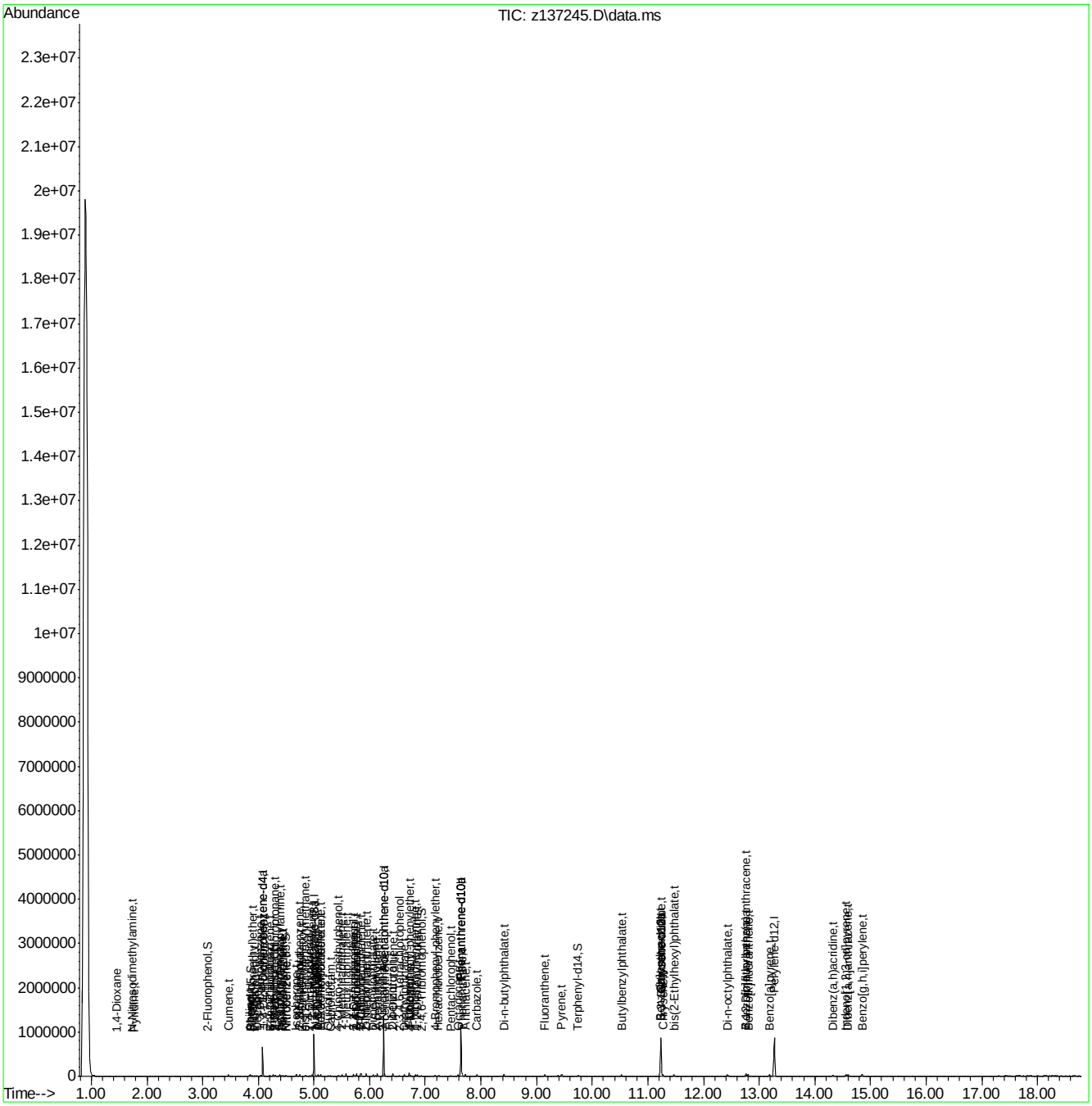
9.6.93

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 10:06:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Manual Integration Approval Summary

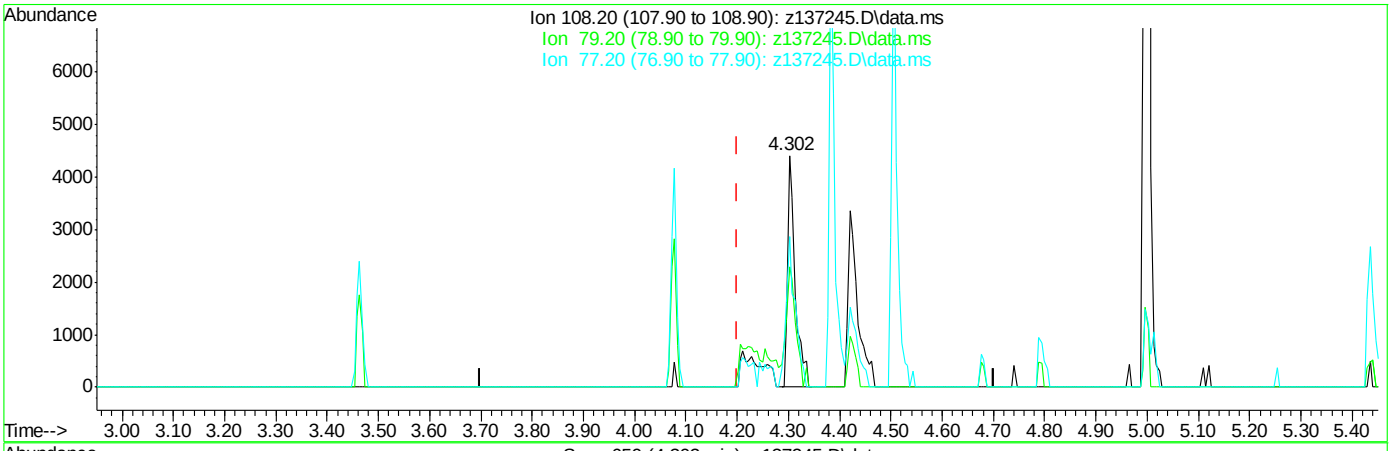
Sample Number: EZ6761-IC6761
Lab FileID: Z137245.D
Injection Time: 04/25/19 08:41
Method: SW846 8270D
Analyst approved: 04/26/19 10:22 Ying Li
Supervisor approved: 04/26/19 13:18 Kristi Schollenberger

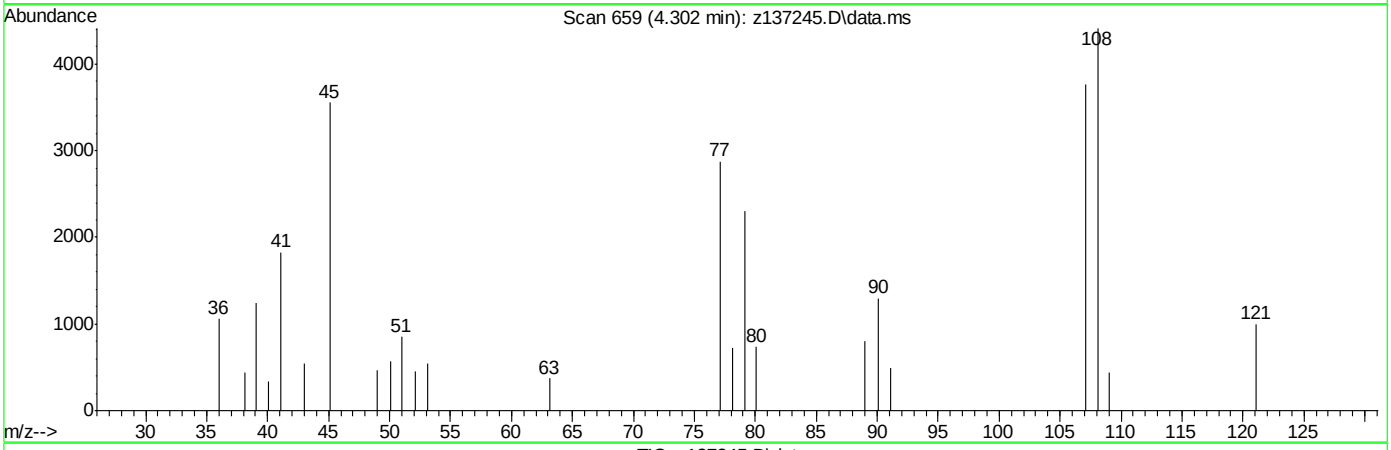
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzyl Alcohol	100-51-6		4.21	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 10:11:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137245.D\data.ms

(16) Benzyl alcohol (t)

4.302min (+0.102) 2.51ppm

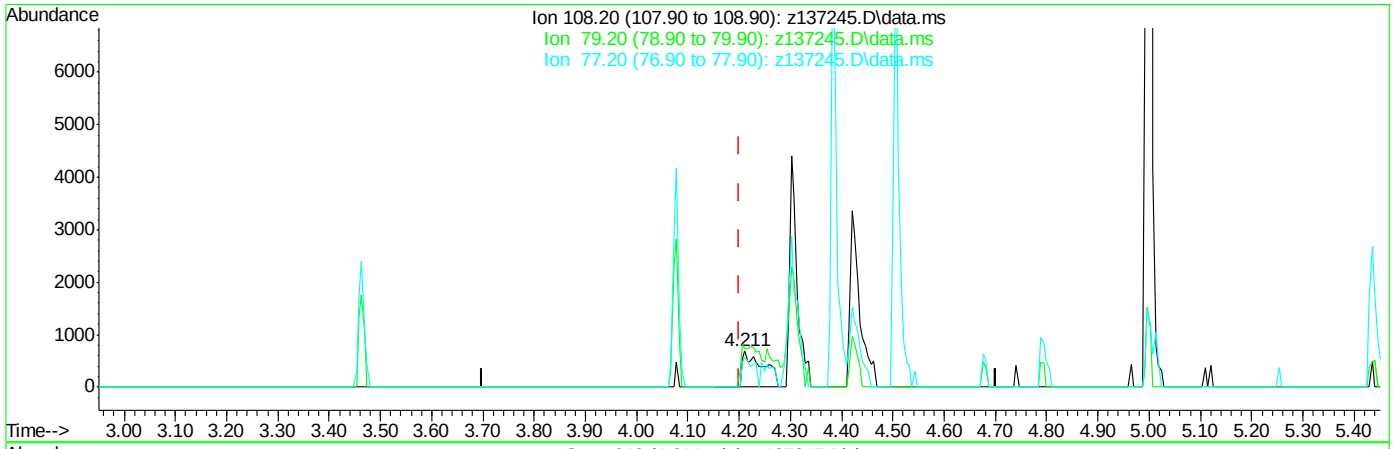
response 4435

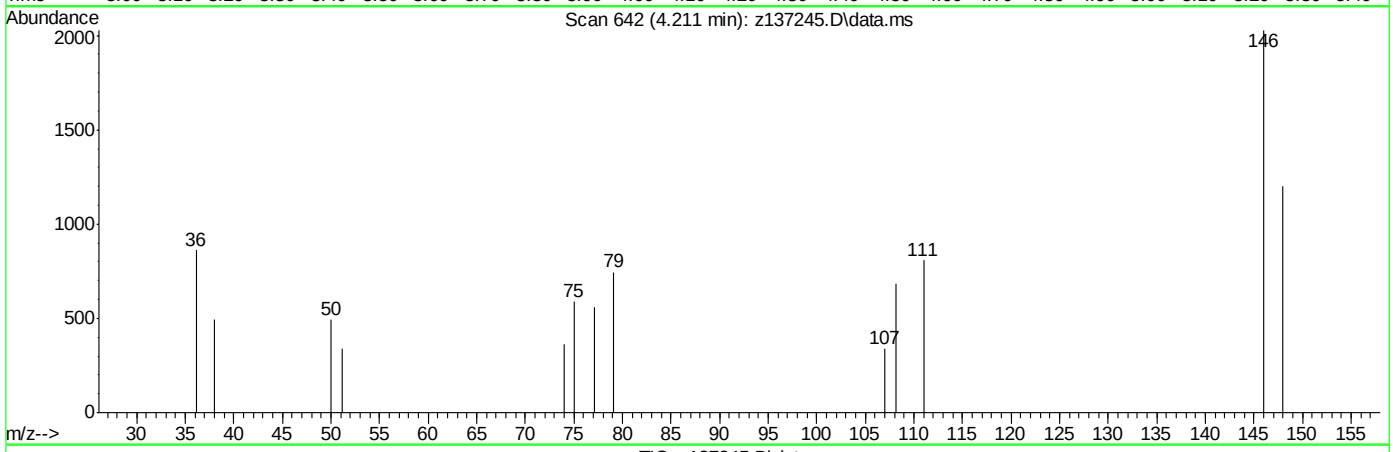
Ion	Exp%	Act%
108.20	100	100
79.20	133.20	47.21#
77.20	85.20	61.27
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137245.D
Acq On : 25 Apr 2019 8:41 am
Operator : chriss2
Sample : ic6761-2
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 10:11:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137245.D\data.ms

(16) Benzyl alcohol (t)

4.211min (+0.011) 1.10ppm m

response 1943

Ion	Exp%	Act%
108.20	100	100
79.20	133.20	108.45
77.20	85.20	81.78
0.00	0.00	0.00

9.6.63.3

9

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/26/19 13:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 10:06:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	73961	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	333269	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	196323	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	365696	40.00	ppm	0.00
83) Chrysene-d12	11.236	240	341732	40.00	ppm	-0.01
91) Perylene-d12	13.277	264	394168	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	73961	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	365696	40.00	ppm	0.00
107) Chrysene-d12a	11.236	240	341732	40.00	ppm	-0.01
109) Acenaphthene-d10a	6.252	164	196323	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	333269	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	365696	40.00	ppm	0.00
115) Chrysene-d12b	11.236	240	341732	40.00	ppb	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.100	112	1036	0.48	ppm	0.02
Spiked Amount 50.000			Recovery = 0.96%			
8) Phenol-d5	3.859	99	2343	0.73	ppm	0.00
Spiked Amount 50.000			Recovery = 1.46%			
25) Nitrobenzene-d5	4.495	82	2706	0.82	ppm	0.00
Spiked Amount 50.000			Recovery = 1.64%			
51) 2-Fluorobiphenyl	5.766	172	6076	0.85	ppm	0.00
Spiked Amount 50.000			Recovery = 1.70%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	9.741	244	6446	0.85	ppm	-0.01
Spiked Amount 50.000			Recovery = 1.70%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
6) Indene	4.265	116	3926	0.93	ppm	93
7) Cumene	3.463	105	5461	0.98	ppm	98
9) Phenol	3.870	94	2466	0.71	ppm	89
10) Aniline	3.843	93	3604	1.20	ppm	95
11) bis(2-Chloroethyl)ether	3.902	93	2199	0.99	ppm	80
12) 2-Chlorophenol	3.934	128	2131	0.76	ppm	98
13) Decane	3.976	43	2255	0.96	ppm	97
14) 1,3-Dichlorobenzene	4.035	146	2668	0.91	ppm	94
15) 1,4-Dichlorobenzene	4.089	146	2716	0.90	ppm	95
17) 1,2-Dichlorobenzene	4.206	146	2665	0.90	ppm	93
18) Acetophenone	4.388	105	3171	0.81	ppm	90
19) 2-Methylphenol	4.308	108	1989	0.79	ppm	96
21) 3&4-Methylphenol	4.425	108	1562	0.59	ppm	89
22) n-Nitroso-di-n-propyla...	4.393	70	1697	0.80	ppm	94
23) Hexachloroethane	4.446	201	945m	0.95	ppm	
26) Nitrobenzene	4.511	77	2806	0.84	ppm	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 10:06:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
27) Quinoline	5.258	129	5273	0.84	ppm		95
28) Isophorone	4.676	82	4977	0.89	ppm		100
29) 2-Nitrophenol	4.740	139	1204	0.67	ppm		75
30) 2,4-Dimethylphenol	4.794	107	1116	0.38	ppm		94
32) bis(2-Chloroethoxy)met...	4.847	93	2708	0.81	ppm		94
33) 2,4-Dichlorophenol	4.933	162	1547	0.59	ppm		92
34) 2,6-Dichlorophenol	5.077	162	1964	0.75	ppm		95
35) 1,3,5-Trichlorobenzene	4.740	180	2380	0.85	ppm		97
36) 1,2,4-Trichlorobenzene	4.965	180	2400	0.91	ppm		89
37) 1,2,3-Trichlorobenzene	5.120	180	2483	0.92	ppm		96
38) Naphthalene	5.013	128	8361	0.93	ppm		96
39) 4-Chloroaniline	5.072	127	3036	0.81	ppm		96
40) 2,3-Dichloroaniline	5.707	161	2858	0.85	ppm		96
42) Hexachlorobutadiene	5.114	225	1287	0.90	ppm		83
43) 4-Chloro-3-methylphenol	5.435	107	1875	0.69	ppm		79
44) 2-Methylnaphthalene	5.504	141	4310	0.85	ppm		98
45) 1-Methylnaphthalene	5.574	141	5134	0.90	ppm		98
46) Dimethylnaphthalene	5.942	156	5069	0.91	ppm		93
49) 2,4,6-Trichlorophenol	5.718	196	1285	0.66	ppm		98
50) 2,4,5-Trichlorophenol	5.755	196	1421m	0.68	ppm		
52) 2-Chloronaphthalene	5.846	162	5149	0.85	ppm		90
53) Biphenyl	5.835	154	7013	0.86	ppm		93
54) 2-Nitroaniline	5.932	65	1436	0.70	ppm		95
55) Dimethylphthalate	6.060	163	6415	0.91	ppm		97
56) Acenaphthylene	6.140	152	8328	0.84	ppm		98
57) 2,6-Dinitrotoluene	6.103	165	1269	0.80	ppm		83
59) Acenaphthene	6.274	153	5996	0.90	ppm		96
62) Dibenzofuran	6.418	168	7667	0.87	ppm		91
63) 2,4-Dinitrotoluene	6.423	165	1484	0.66	ppm	#	55
65) Diethylphthalate	6.621	149	6678	0.89	ppm		98
66) Fluorene	6.706	166	6331	0.85	ppm		99
67) 4-Chlorophenyl-phenyle...	6.712	204	2807	0.89	ppm		99
68) 4-Nitroaniline	6.744	138	1166	0.60	ppm		92
71) n-Nitrosodiphenylamine	6.824	169	4415	0.82	ppm		94
72) 1,2-Diphenylhydrazine	6.856	77	7010	0.86	ppm		100
74) 4-Bromophenyl-phenylether	7.176	248	1644	0.83	ppm		86
75) Hexachlorobenzene	7.240	284	1887	0.87	ppm		85
77) Phenanthrene	7.662	178	9664	0.87	ppm		95
78) Anthracene	7.721	178	9130	0.83	ppm		99
79) Carbazole	7.930	167	9327	0.84	ppm		99
80) Di-n-butylphthalate	8.416	149	11371	0.77	ppm		97
81) Fluoranthene	9.148	202	10248	0.83	ppm		94
82) Octadecane	7.588	57	3460	0.80	ppm		97
84) Pyrene	9.447	202	10802	0.91	ppm		96
86) Butylbenzylphthalate	10.521	149	5184	0.82	ppm		95
87) Benzo[a]anthracene	11.220	228	10745	0.99	ppm		92
88) 3,3'-Dichlorobenzidine	11.247	252	3300	0.75	ppm		94
89) Chrysene	11.269	228	10191	0.96	ppm		97
90) bis(2-Ethylhexyl)phtha...	11.466	149	6950	0.80	ppm		91
92) Di-n-octylphthalate	12.428	149	12009	0.66	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 10:06:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) Benzo[b]fluoranthene	12.764	252	10202m	0.73	ppm	
94) Benzo[k]fluoranthene	12.796	252	9848	0.83	ppm	100
95) Benzo[a]pyrene	13.186	252	8624	0.78	ppm	95
96) Indeno[1,2,3-cd]pyrene	14.565	276	8310	0.77	ppm	94
97) Dibenz(a,h)acridine	14.319	279	7620	0.75	ppm	89
98) Dibenz[a,h]anthracene	14.597	278	8411	0.75	ppm	93
99) 7,12-Dimethylbenz(a)an...	12.764	256	2008	0.36	ppm	84
100) Benzo[g,h,i]perylene	14.848	276	8754	0.89	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

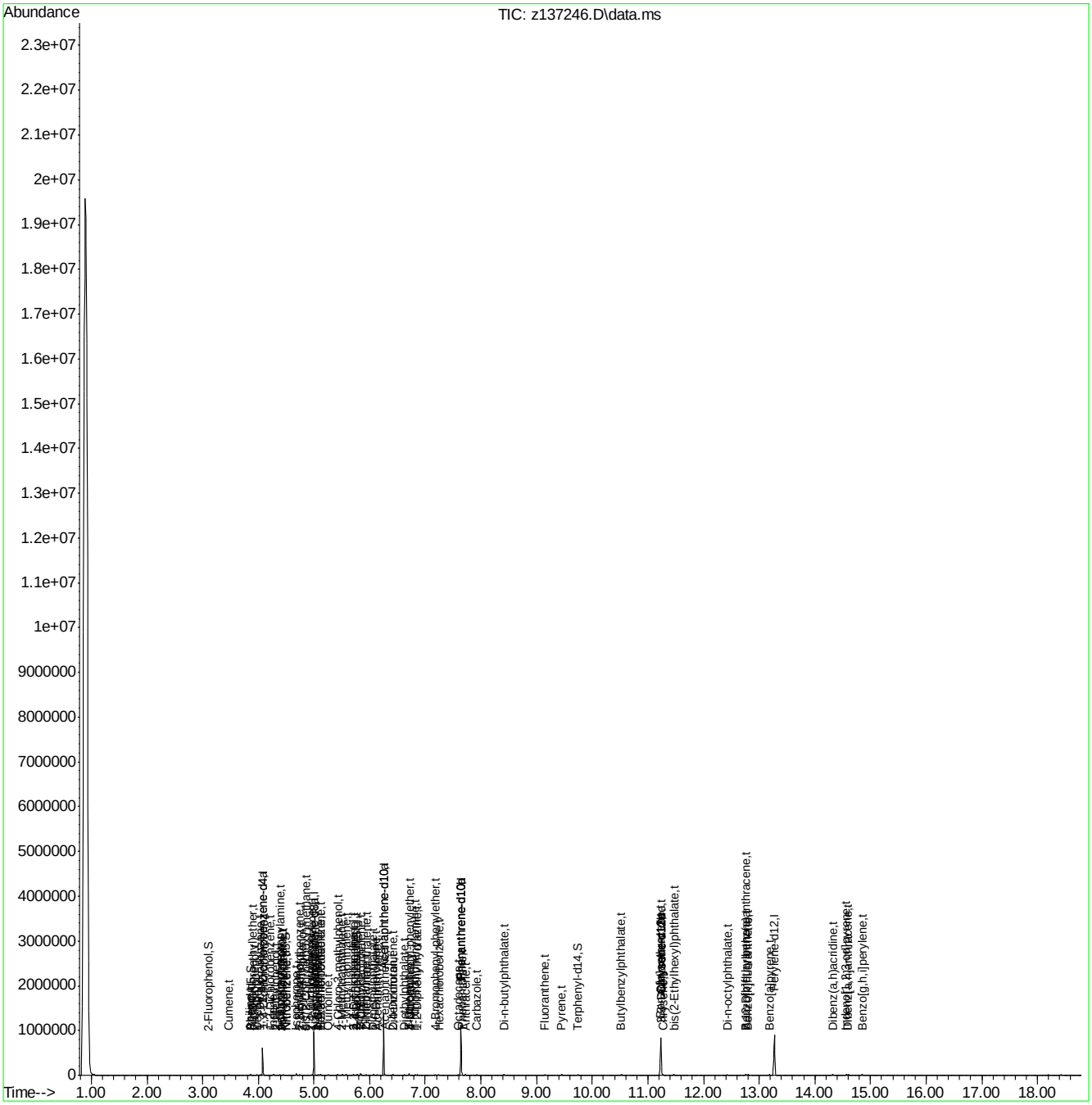
9.6.64

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 10:06:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration



Manual Integration Approval Summary

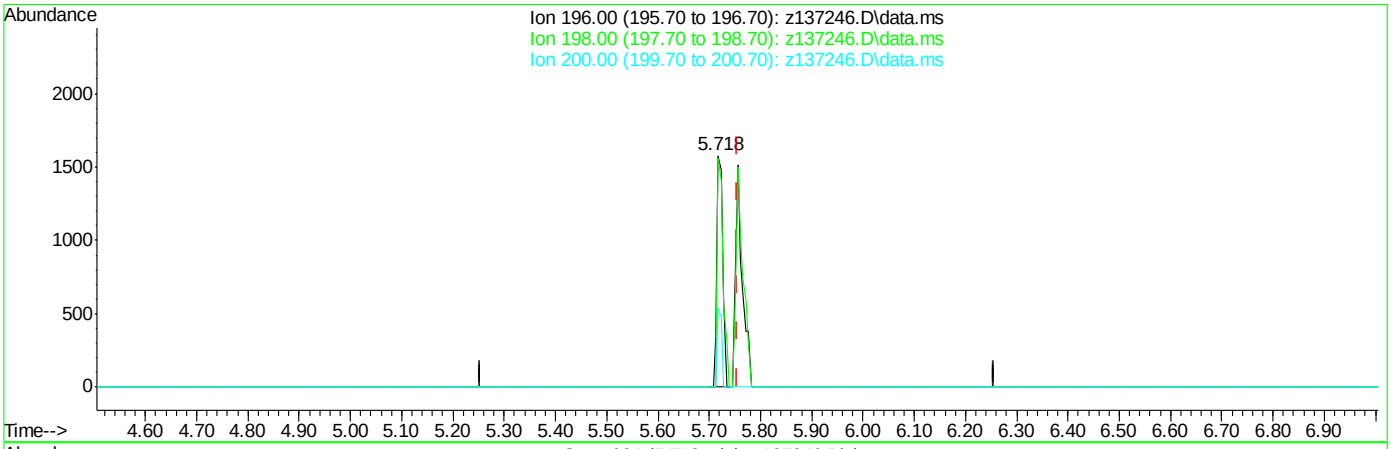
Sample Number: EZ6761-IC6761
Lab FileID: Z137246.D
Injection Time: 04/25/19 09:09
Method: SW846 8270D
Analyst approved: 04/26/19 10:22 Ying Li
Supervisor approved: 04/26/19 13:18 Kristi Schollenberger

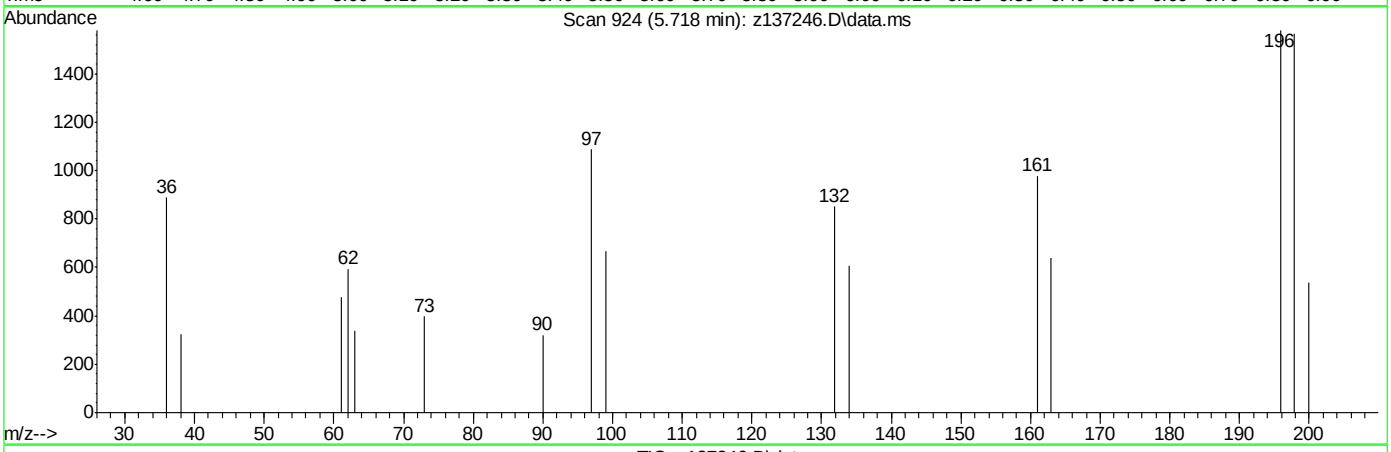
Parameter	CAS	Sig#	R.T. (min.)	Reason
Hexachloroethane	67-72-1		4.45	Missed peak
2,4,5-Trichlorophenol	95-95-4		5.76	Missed peak
Benzo(b)fluoranthene	205-99-2		12.76	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 10:11:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(50) 2,4,5-Trichlorophenol (t)

5.718min (-0.037) 0.61ppm

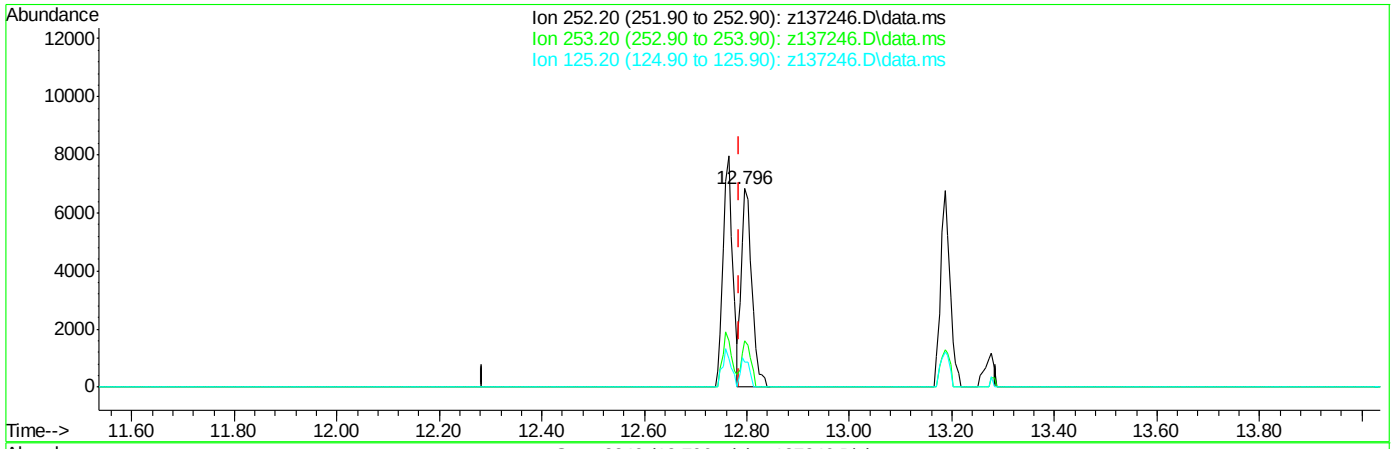
response 1285

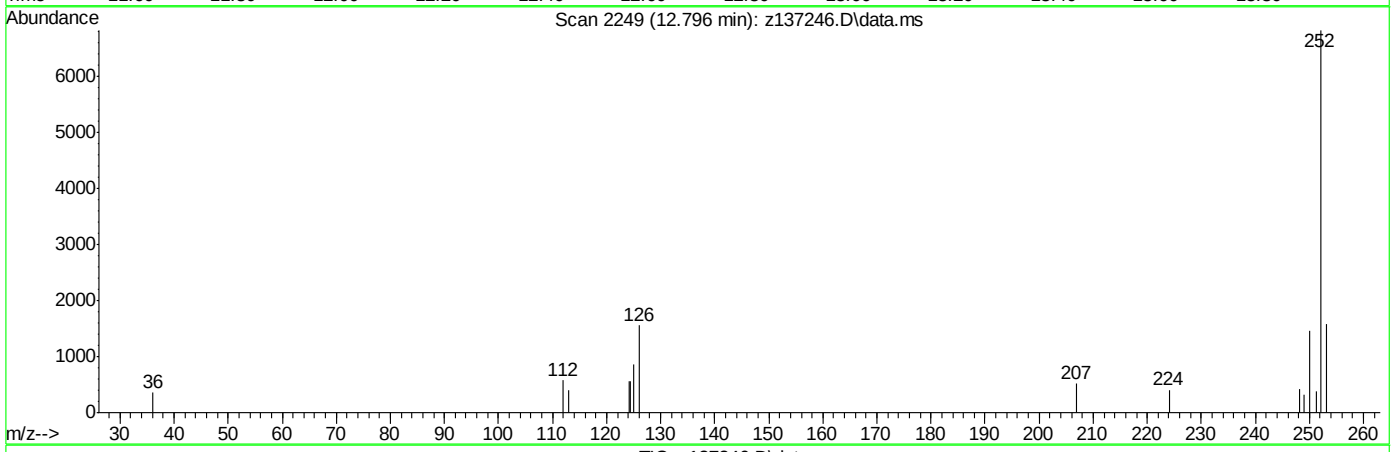
Ion	Exp%	Act%
196.00	100	100
198.00	97.90	98.99
200.00	31.60	33.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 10:11:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.796min (+0.011) 0.70ppm

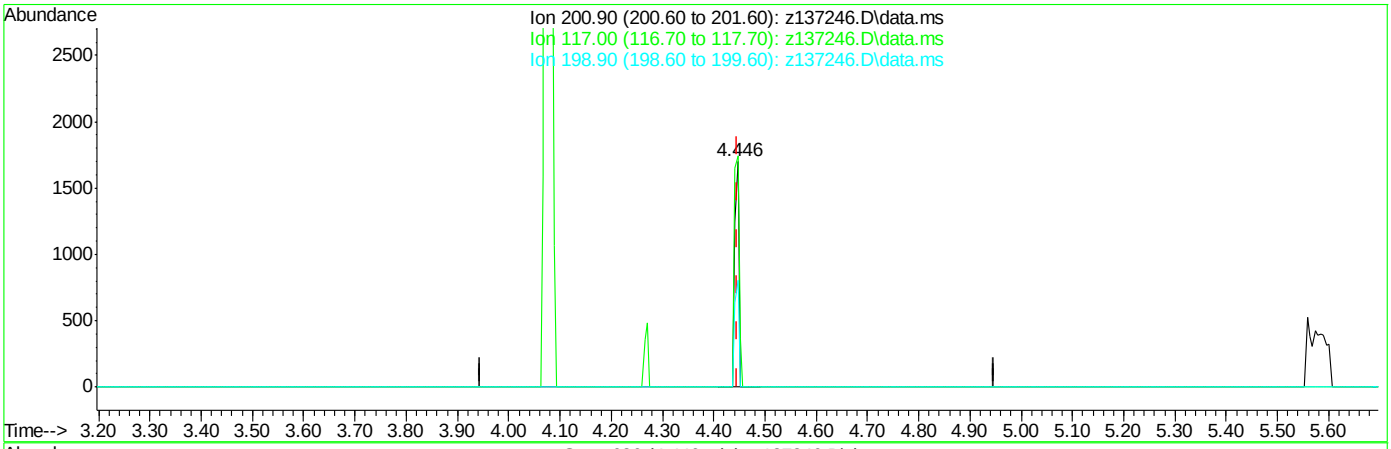
response 9848

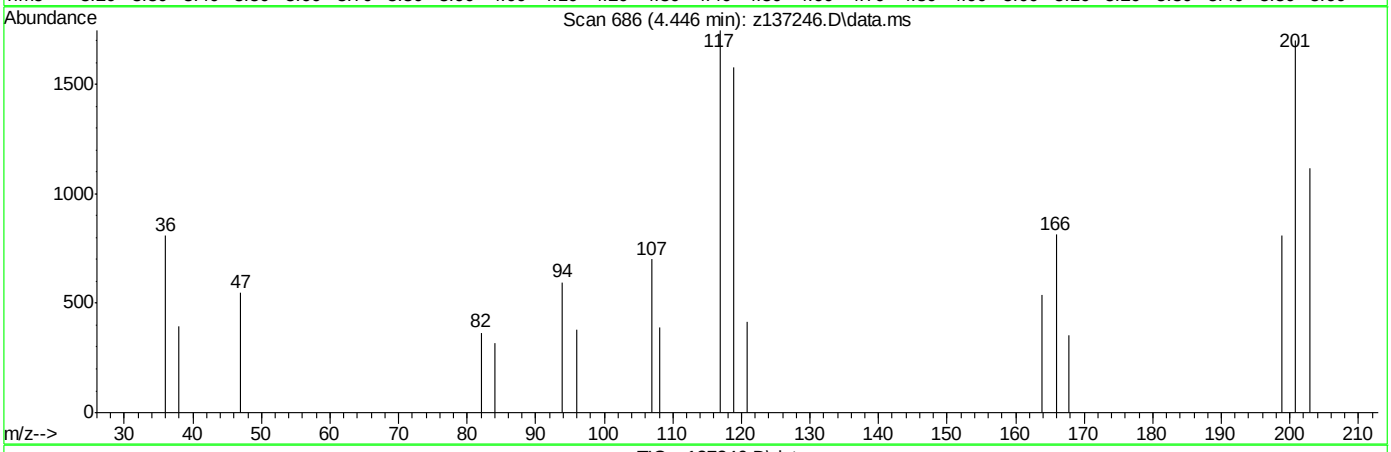
Ion	Exp%	Act%
252.20	100	100
253.20	24.80	22.54
125.20	19.40	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 10:41:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(23) Hexachloroethane (t)

4.446min (+0.000) 0.95ppm m

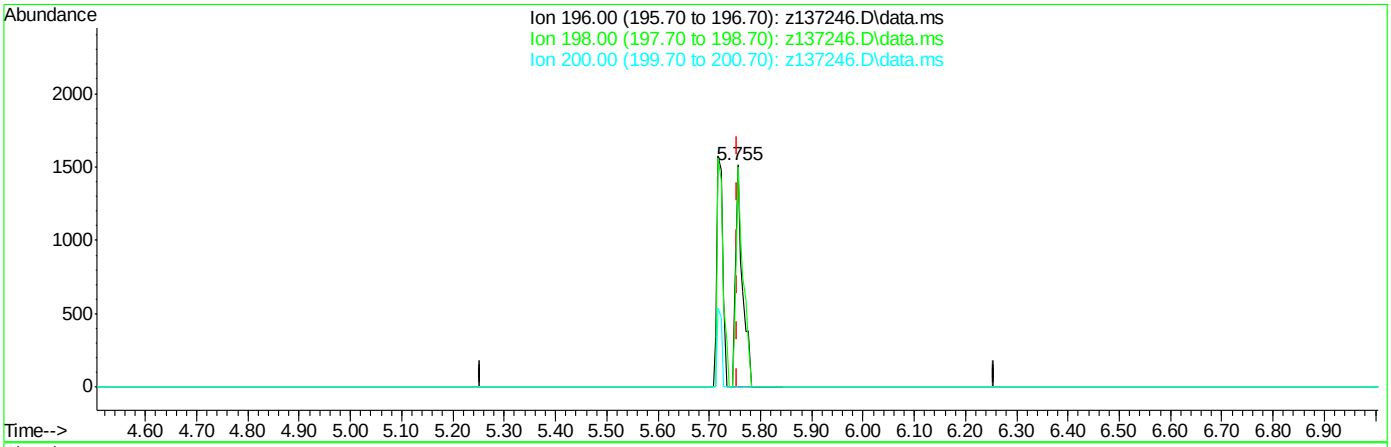
response 945

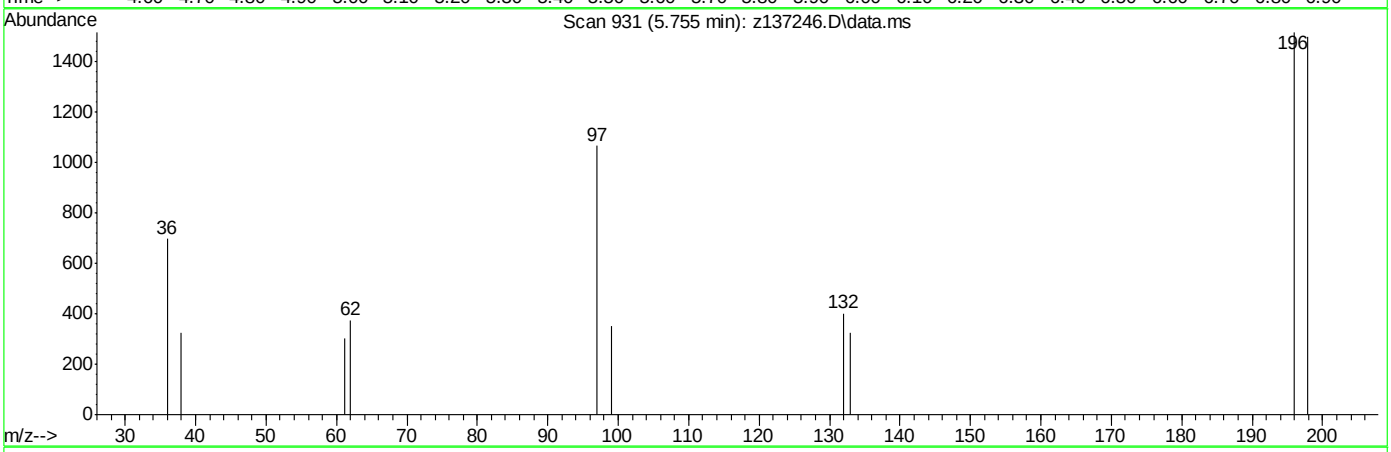
Ion	Exp%	Act%
200.90	100	100
117.00	124.30	102.65
198.90	62.50	47.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 10:41:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(50) 2,4,5-Trichlorophenol (t)

5.755min (+0.000) 0.68ppm m

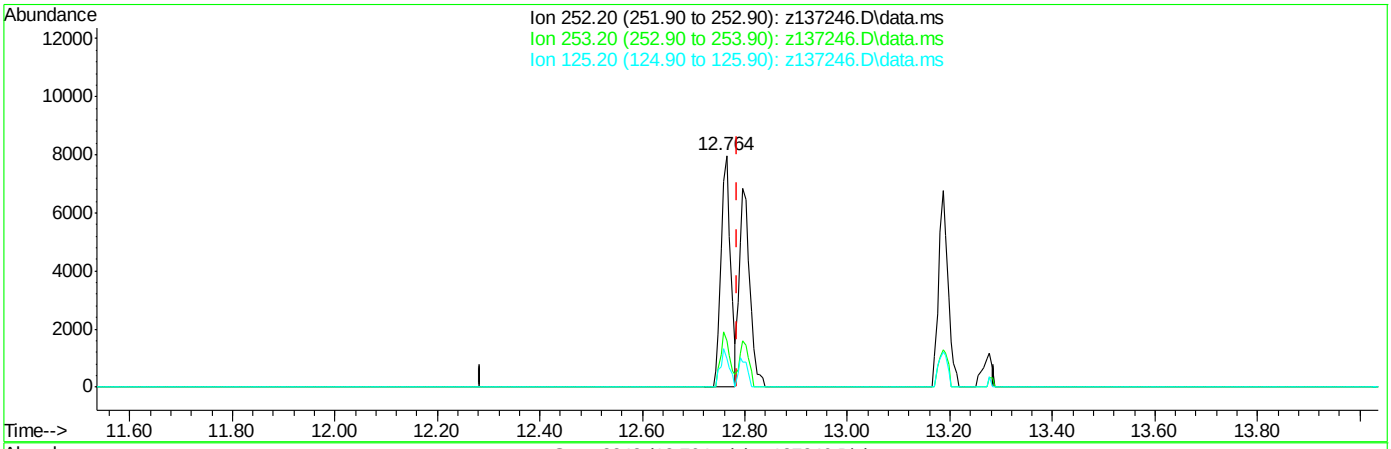
response 1421

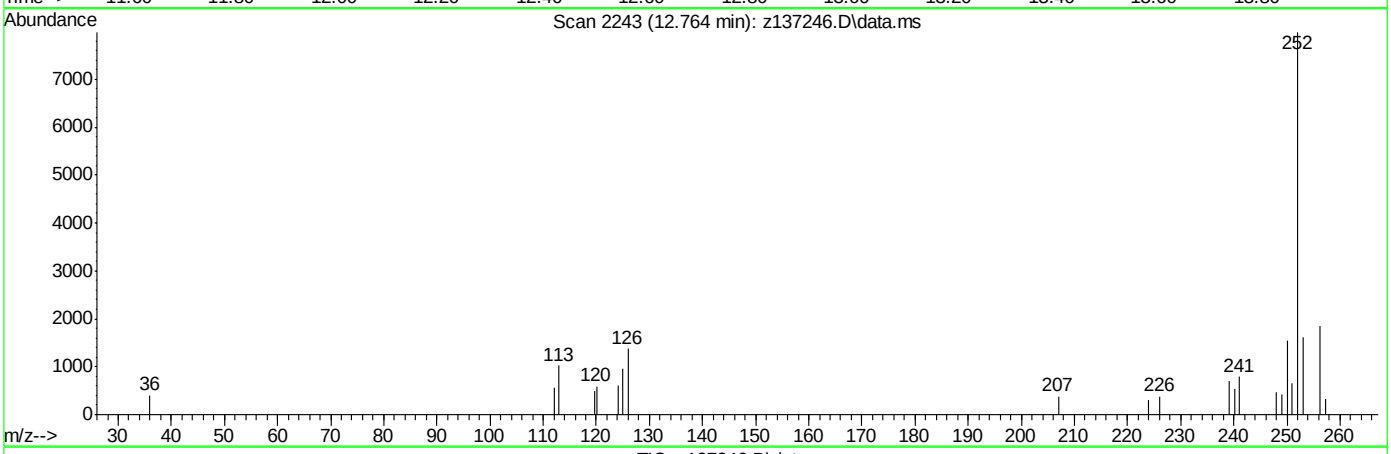
Ion	Exp%	Act%
196.00	100	100
198.00	97.90	98.94
200.00	31.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 10:41:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 09:47:02 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.764min (-0.021) 0.73ppm m

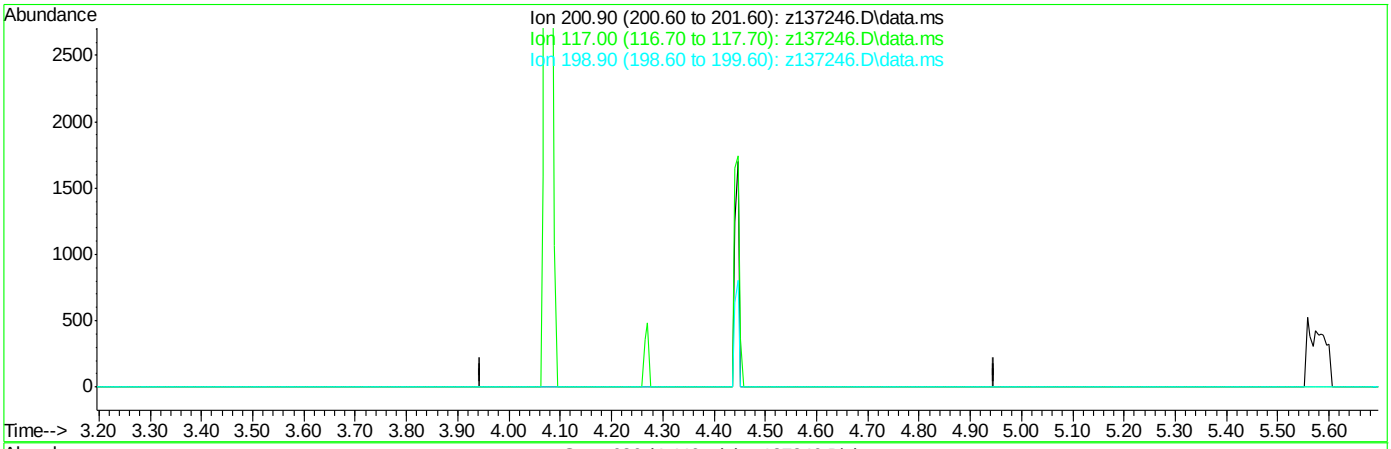
response 10202

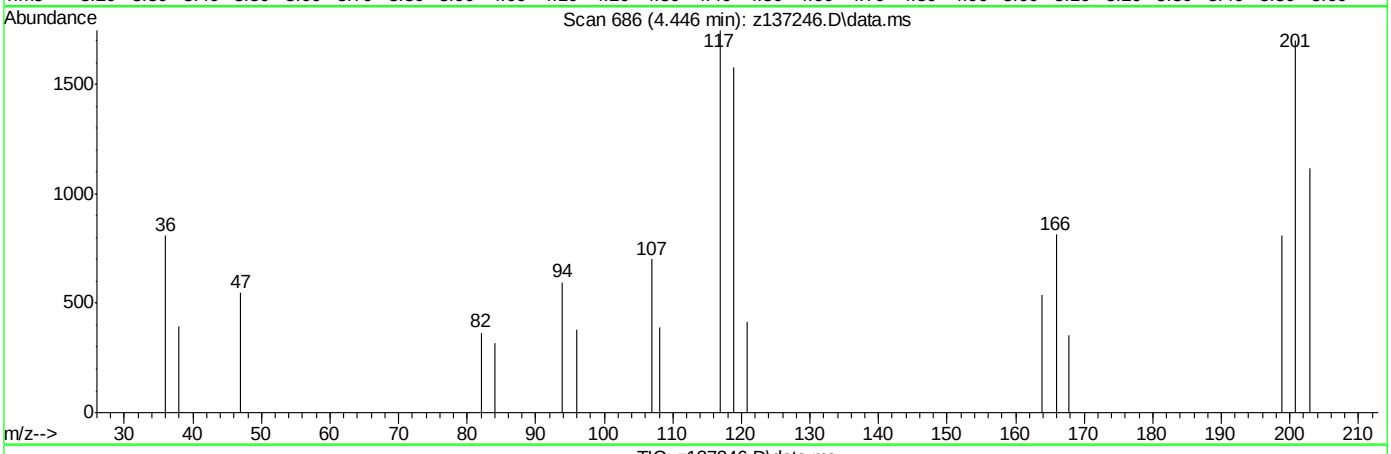
Ion	Exp%	Act%
252.20	100	100
253.20	24.80	20.19
125.20	19.40	12.07
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\initial raw\
Data File : z137246.D
Acq On : 25 Apr 2019 9:09 am
Operator : chriss2
Sample : ic6761-1
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 11:34:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration





TIC: z137246.D\data.ms

(23) Hexachloroethane (t)

4.446min (-4.446) 0.00ppm

response 0

Ion	Exp%	Act%
200.90	100	0.00
117.00	124.30	0.00#
198.90	62.50	0.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137247.D
Acq On : 25 Apr 2019 9:37 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 11:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	71113	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	287471	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	170017	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	303735	40.00	ppm	0.00
83) Chrysene-d12	11.242	240	274831	40.00	ppm	0.00
91) Perylene-d12	13.277	264	272895	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	71113	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	303735	40.00	ppm	0.00
107) Chrysene-d12a	11.242	240	274831	40.00	ppm	0.00
109) Acenaphthene-d10a	6.252	164	170017	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	287471	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	303735	40.00	ppm	0.00
115) Chrysene-d12b	11.242	240	274831	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	1.717	74	54025	50.58	ppm	86
11) bis(2-Chloroethyl)ether	3.896	93	108543	48.73	ppm	95
14) 1,3-Dichlorobenzene	4.035	146	137056	50.11	ppm	98
15) 1,4-Dichlorobenzene	4.089	146	145620	51.73	ppm	96
17) 1,2-Dichlorobenzene	4.201	146	133064	48.62	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.297	121	37373	58.10	ppm	98
22) n-Nitroso-di-n-propyla...	4.393	70	93221	48.69	ppm	97
23) Hexachloroethane	4.446	201	44909	48.37	ppm	92
26) Nitrobenzene	4.505	77	135568	49.19	ppm	89
28) Isophorone	4.676	82	240377	52.72	ppm	98
32) bis(2-Chloroethoxy)met...	4.847	93	142782	52.53	ppm	99
36) 1,2,4-Trichlorobenzene	4.965	180	108907	49.72	ppm	98
38) Naphthalene	5.018	128	390196	52.05	ppm	100
42) Hexachlorobutadiene	5.114	225	60215	51.02	ppm	99
52) 2-Chloronaphthalene	5.846	162	243504	49.52	ppm	98
55) Dimethylphthalate	6.065	163	282433	49.23	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137247.D
Acq On : 25 Apr 2019 9:37 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 11:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

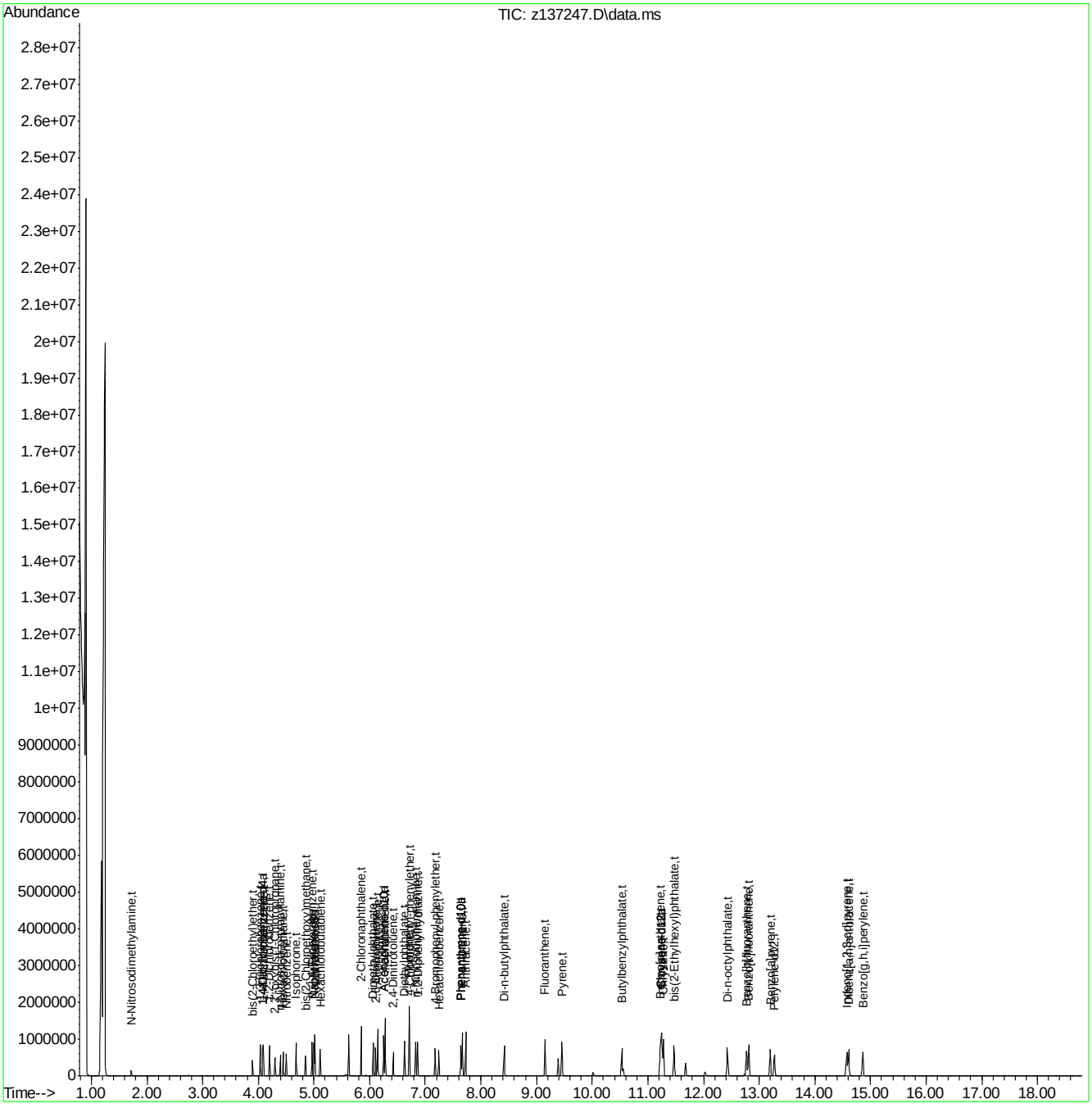
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
56) Acenaphthylene	6.145	152	410648	51.09	ppm	99
57) 2,6-Dinitrotoluene	6.108	165	62259	49.30	ppm	87
59) Acenaphthene	6.279	153	257551	47.36	ppm	95
63) 2,4-Dinitrotoluene	6.423	165	84155	47.49	ppm	94
65) Diethylphthalate	6.626	149	295167	48.25	ppm	100
66) Fluorene	6.706	166	301696	51.12	ppm	99
67) 4-Chlorophenyl-phenyle...	6.717	204	128681	50.57	ppm	97
71) n-Nitrosodiphenylamine	6.829	169	203490	49.69	ppm	96
72) 1,2-Diphenylhydrazine	6.861	77	320743	50.46	ppm	94
74) 4-Bromophenyl-phenylether	7.176	248	76745	51.47	ppm	96
75) Hexachlorobenzene	7.246	284	81533	48.73	ppm	91
77) Phenanthrene	7.668	178	417707	48.45	ppm	99
78) Anthracene	7.727	178	429206	49.94	ppm	99
80) Di-n-butylphthalate	8.421	149	517610	46.84	ppm	100
81) Fluoranthene	9.153	202	449625	47.93	ppm	99
84) Pyrene	9.457	202	462353	50.36	ppm	94
86) Butylbenzylphthalate	10.531	149	239763	50.00	ppm	96
87) Benzo[a]anthracene	11.226	228	411494	48.09	ppm	99
89) Chrysene	11.279	228	405281	48.62	ppm	98
90) bis(2-Ethylhexyl)phtha...	11.472	149	333833	50.79	ppm	98
92) Di-n-octylphthalate	12.428	149	564155	48.67	ppm	100
93) Benzo[b]fluoranthene	12.775	252	380840	43.96	ppm	90
94) Benzo[k]fluoranthene	12.812	252	390226	50.73	ppm	98
95) Benzo[a]pyrene	13.197	252	352459	49.75	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.575	276	348375	52.50	ppm	96
98) Dibenz[a,h]anthracene	14.607	278	335789	48.69	ppm	100
100) Benzo[g,h,i]perylene	14.864	276	328414	52.58	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137247.D
Acq On : 25 Apr 2019 9:37 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 11:44:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137248.D
Acq On : 25 Apr 2019 10:05 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 11:20:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	73822	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	301893	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	174567	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	311341	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	261233	40.00	ppm	-0.02
91) Perylene-d12	13.272	264	272369	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.078	152	73822	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	311341	40.00	ppm	0.00
107) Chrysene-d12a	11.231	240	261233	40.00	ppm	-0.02
109) Acenaphthene-d10a	6.252	164	174567	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	301893	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	311341	40.00	ppm	0.00
115) Chrysene-d12b	11.231	240	261233	40.00	ppb	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.465	88	29914	49.17	ppm	94
6) Indene	4.265	116	211205	52.59	ppm	98
7) Cumene	3.463	105	271729	50.10	ppm	98
13) Decane	3.982	43	100269	44.92	ppm	94
18) Acetophenone	4.382	105	174205	47.30	ppm	96
27) Quinoline	5.253	129	275713	50.69	ppm	99
40) 2,3-Dichloroaniline	5.713	161	135163	46.39	ppm	99
41) Caprolactam	5.306	55	54798	44.24	ppm	98
45) 1-Methylnaphthalene	5.574	141	232441	46.22	ppm	99
46) Dimethylnaphthalene	5.948	156	239015	49.01	ppm	98
48) Hexachlorocyclopentadiene	5.622	237	40730	44.53	ppm	97
53) Biphenyl	5.835	154	328130	48.92	ppm	99
82) Octadecane	7.588	57	163737	48.62	ppm	98
99) 7,12-Dimethylbenz(a)an...	12.770	256	131817	36.90	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137248.D
Acq On : 25 Apr 2019 10:05 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 11:20:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

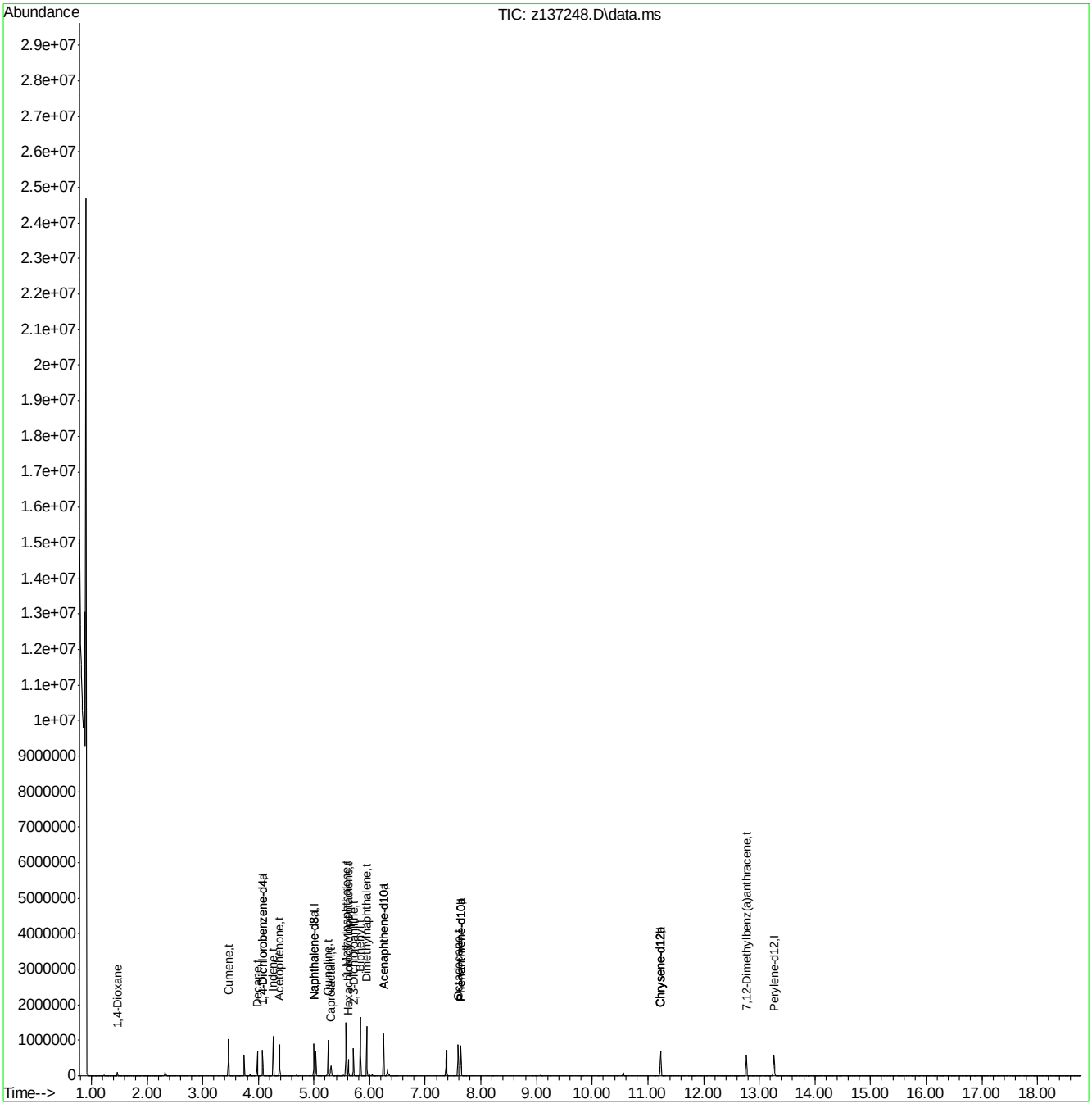
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137248.D
Acq On : 25 Apr 2019 10:05 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 11:20:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration



JC86406

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137249.D
Acq On : 25 Apr 2019 10:33 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 10:12:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

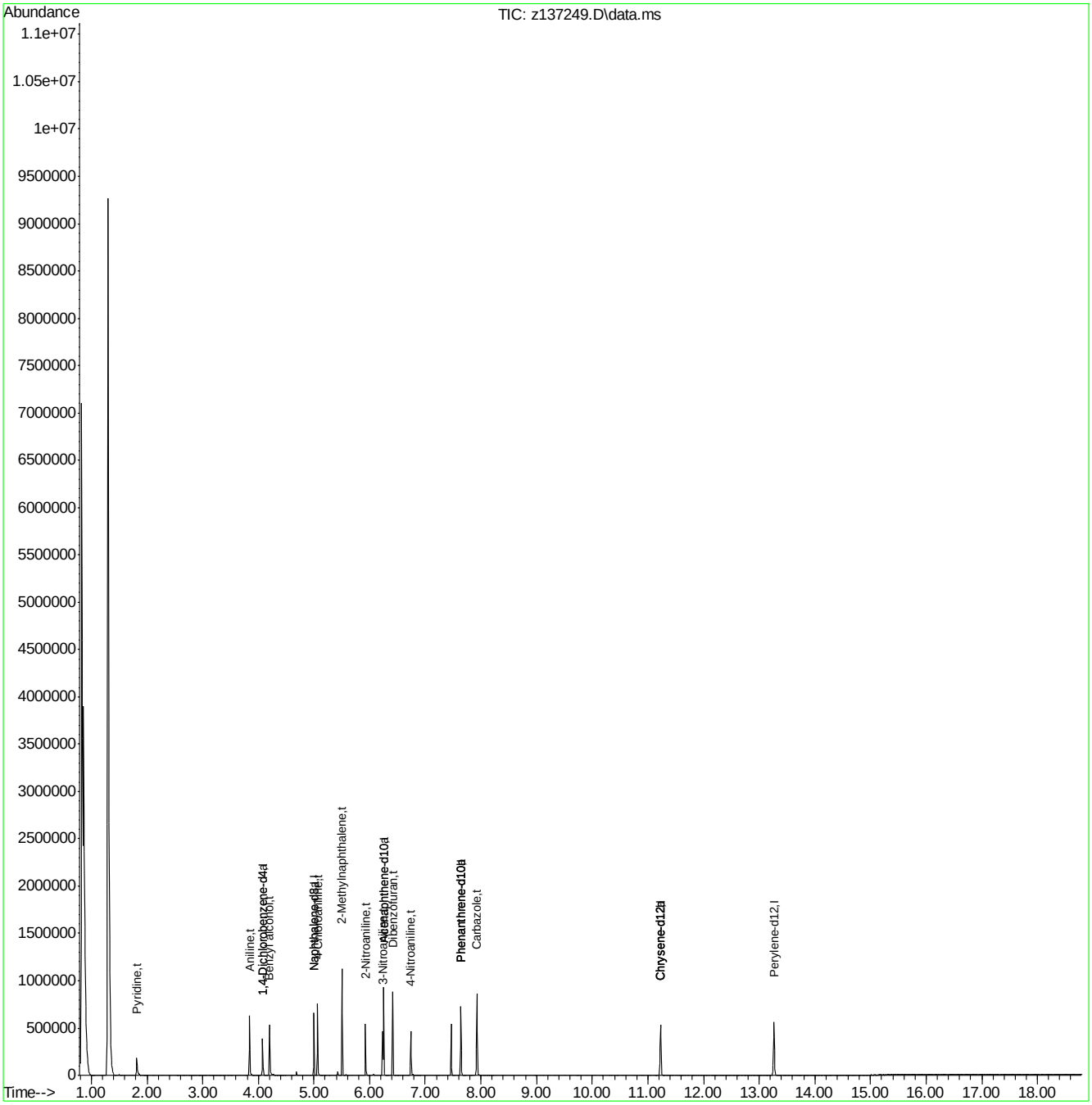
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.083	152	50483	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	238361	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	138189	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	263971	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	222194	40.00	ppm	-0.02
91) Perylene-d12	13.266	264	256863	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.083	152	50483	40.00	ppm	0.02
103) Phenanthrene-d10a	7.641	188	263971	40.00	ppm	0.03
107) Chrysene-d12a	11.231	240	222194	40.00	ppm	0.04
109) Acenaphthene-d10a	6.252	164	138189	40.00	ppm	0.02
111) Naphthalene-d8a	5.002	136	238361	40.00	ppm	0.02
113) Phenanthrene-d10b	7.641	188	263971	40.00	ppm	0.03
115) Chrysene-d12b	11.231	240	222194	40.00	ppb	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
3) Pyridine	1.813	79	74559	57.29	ppm	99
10) Aniline	3.843	93	157772	70.87	ppm	100
16) Benzyl alcohol	4.201	108	66378	56.35	ppm	93
39) 4-Chloroaniline	5.066	127	140871	54.14	ppm	99
44) 2-Methylnaphthalene	5.504	141	178033	51.49	ppm	99
54) 2-Nitroaniline	5.926	65	66437	51.11	ppm	99
58) 3-Nitroaniline	6.236	138	65009	51.03	ppm	95
62) Dibenzofuran	6.418	168	294643	51.15	ppm	91
68) 4-Nitroaniline	6.744	138	66153	54.27	ppm	98
79) Carbazole	7.930	167	354319	47.47	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137249.D
Acq On : 25 Apr 2019 10:33 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 10:12:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137250.D
Acq On : 25 Apr 2019 11:01 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 11:24:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	69798	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	286436	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	162862	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	294534	40.00	ppm	0.00
83) Chrysene-d12	11.231	240	242829	40.00	ppm	-0.02
91) Perylene-d12	13.267	264	261890	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.078	152	69798	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	294534	40.00	ppm	0.00
107) Chrysene-d12a	11.231	240	242829	40.00	ppm	-0.02
109) Acenaphthene-d10a	6.252	164	162862	40.00	ppm	0.00
111) Naphthalene-d8a	5.002	136	286436	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	294534	40.00	ppm	0.00
115) Chrysene-d12b	11.231	240	242829	40.00	ppb	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
9) Phenol	3.859	94	162031	52.25	ppm	92
12) 2-Chlorophenol	3.928	128	138075	56.70	ppm	95
19) 2-Methylphenol	4.297	108	123711	54.10	ppm	99
21) 3&4-Methylphenol	4.415	108	133907	58.58	ppm	99
29) 2-Nitrophenol	4.735	139	71375	51.63	ppm	69
30) 2,4-Dimethylphenol	4.789	107	132845	51.39	ppm	98
31) Benzoic Acid	4.917	105	41354	36.13	ppm	98
33) 2,4-Dichlorophenol	4.917	162	118167	58.09	ppm	97
34) 2,6-Dichlorophenol	5.072	162	117377	55.45	ppm	100
43) 4-Chloro-3-methylphenol	5.430	107	126278	58.06	ppm #	48
49) 2,4,6-Trichlorophenol	5.718	196	84915	59.13	ppm	100
50) 2,4,5-Trichlorophenol	5.745	196	88301	57.73	ppm	99
60) 2,4-Dinitrophenol	6.322	184	28235	43.00	ppm	91
61) 4-Nitrophenol	6.397	109	39383	46.73	ppm	92
64) 2,3,4,6-Tetrachlorophenol	6.530	232	66567	53.15	ppm	97
70) 4,6-Dinitro-2-methylph...	6.776	198	49143	48.91	ppm #	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137250.D
Acq On : 25 Apr 2019 11:01 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 11:24:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.460	266	45896	47.77	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

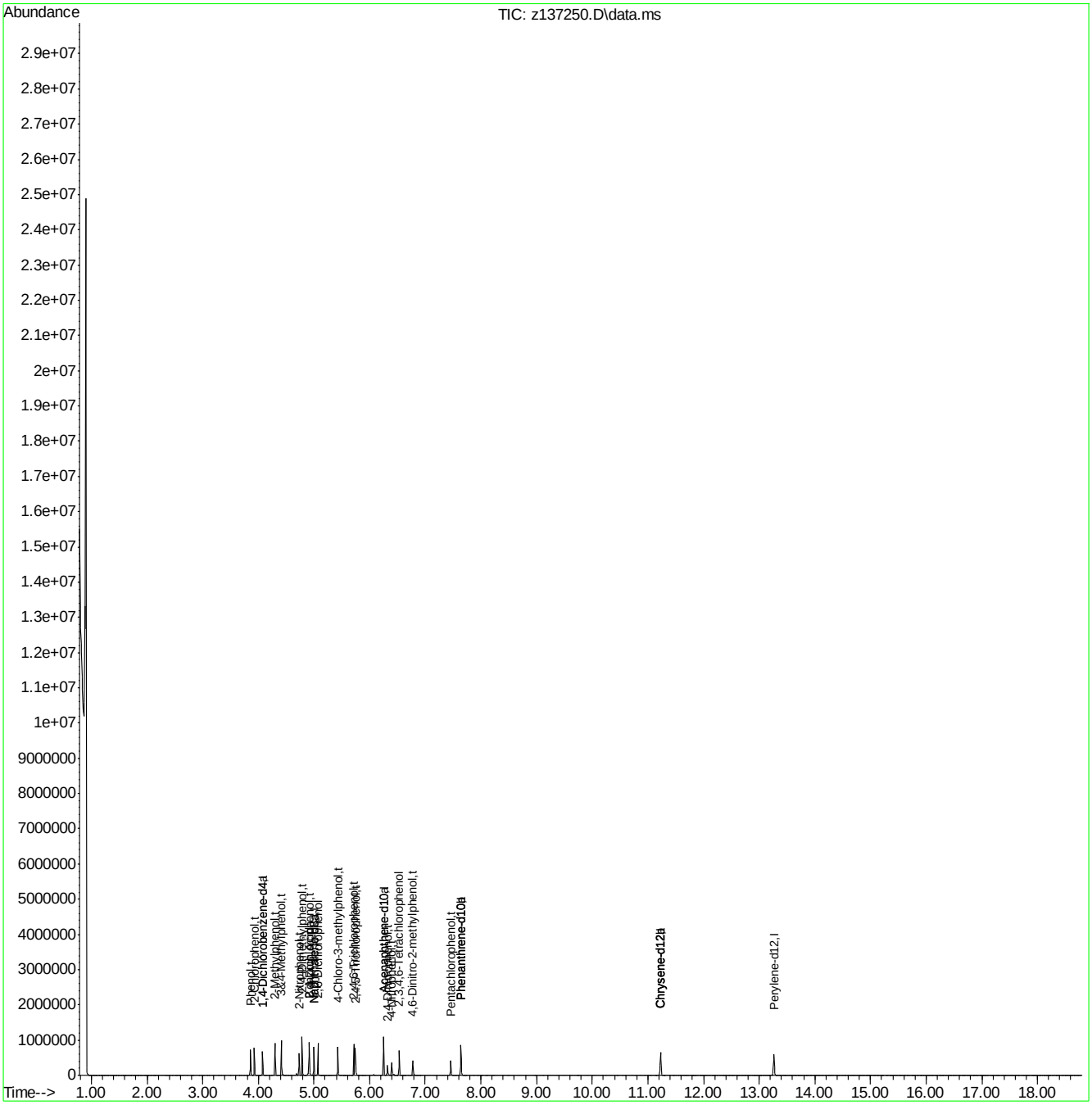
9.6.68

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137250.D
Acq On : 25 Apr 2019 11:01 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 25 11:24:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137251.D
Acq On : 25 Apr 2019 11:29 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 11:58:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

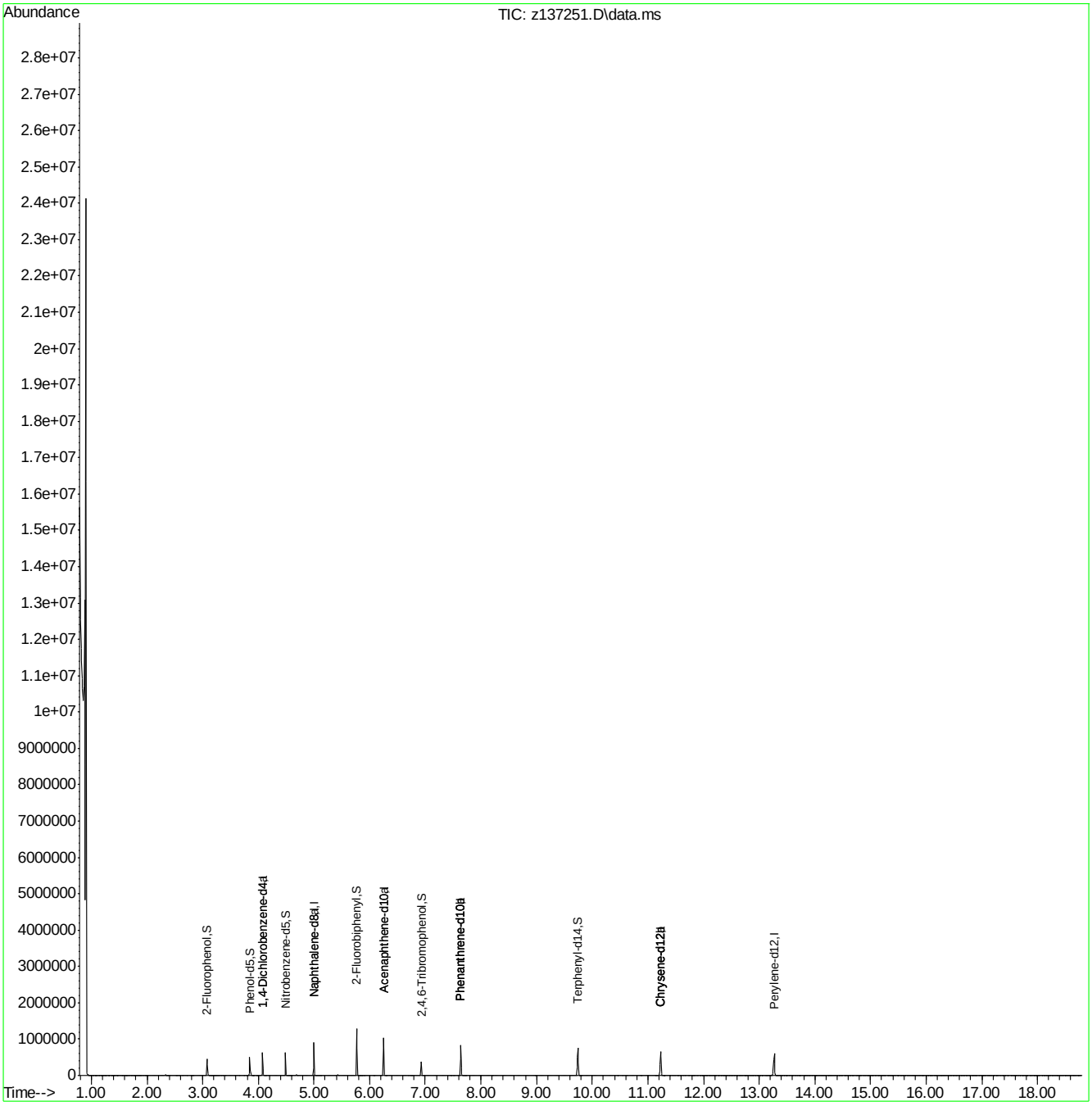
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	67253	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	276083	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	160783	40.00	ppm	0.00
69) Phenanthrene-d10	7.636	188	291503	40.00	ppm	-0.01
83) Chrysene-d12	11.231	240	264227	40.00	ppm	-0.02
91) Perylene-d12	13.272	264	290042	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.078	152	67253	40.00	ppm	0.00
103) Phenanthrene-d10a	7.636	188	291503	40.00	ppm	-0.01
107) Chrysene-d12a	11.231	240	264227	40.00	ppm	-0.02
109) Acenaphthene-d10a	6.252	164	160783	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	276083	40.00	ppm	0.00
113) Phenanthrene-d10b	7.636	188	291503	40.00	ppm	-0.01
115) Chrysene-d12b	11.231	240	264227	40.00	ppb	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.079	112	101400	52.33	ppm	0.00
Spiked Amount 50.000			Recovery = 104.66%			
8) Phenol-d5	3.848	99	137582	50.35	ppm	0.00
Spiked Amount 50.000			Recovery = 100.70%			
25) Nitrobenzene-d5	4.489	82	128836	50.40	ppm	0.00
Spiked Amount 50.000			Recovery = 100.80%			
51) 2-Fluorobiphenyl	5.766	172	265423	48.80	ppm	0.00
Spiked Amount 50.000			Recovery = 97.60%			
73) 2,4,6-Tribromophenol	6.931	330	35040	45.26	ppm	0.00
Spiked Amount 50.000			Recovery = 90.52%			
85) Terphenyl-d14	9.746	244	311831	56.82	ppm	0.00
Spiked Amount 50.000			Recovery = 113.64%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137251.D
Acq On : 25 Apr 2019 11:29 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 11:58:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137252.D
Acq On : 25 Apr 2019 11:57 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 13:29:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration

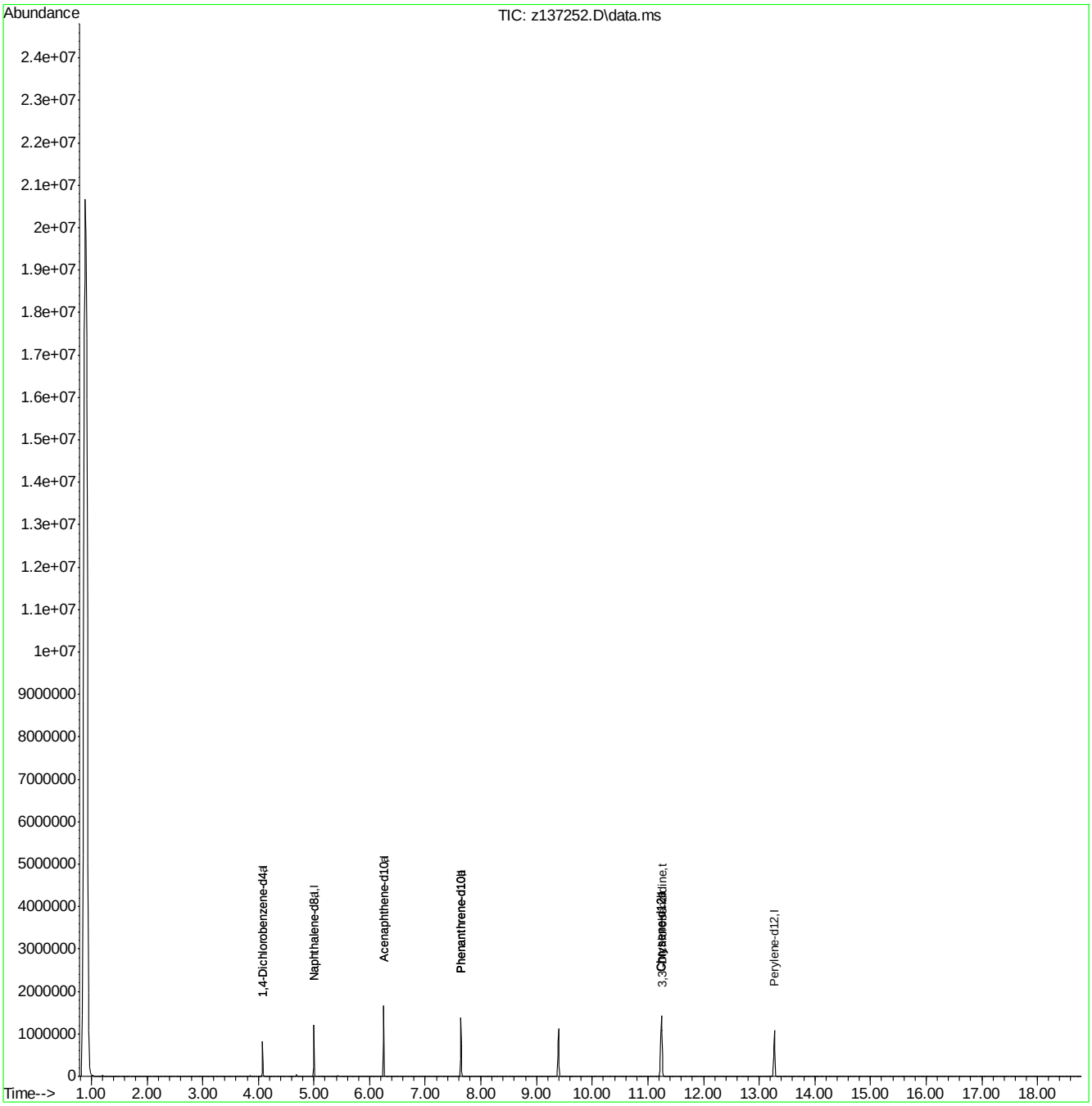
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	95907	40.00	ppm	0.00
24) Naphthalene-d8	4.997	136	413092	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	242192	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	474453	40.00	ppm	0.00
83) Chrysene-d12	11.236	240	482691	40.00	ppm	-0.01
91) Perylene-d12	13.277	264	496437	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.078	152	95907	40.00	ppm	0.00
103) Phenanthrene-d10a	7.641	188	474453	40.00	ppm	0.00
107) Chrysene-d12a	11.236	240	482691	40.00	ppm	-0.01
109) Acenaphthene-d10a	6.252	164	242192	40.00	ppm	0.00
111) Naphthalene-d8a	4.997	136	413092	40.00	ppm	0.00
113) Phenanthrene-d10b	7.641	188	474453	40.00	ppm	0.00
115) Chrysene-d12b	11.236	240	482691	40.00	ppb	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	11.258	252	303697	52.21	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6761\
Data File : z137252.D
Acq On : 25 Apr 2019 11:57 am
Operator : chriss2
Sample : icv6761-50
Misc : op17006,ez6761,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 13:29:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Thu Apr 25 10:41:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6762\
Data File : z137254.D
Acq On : 25 Apr 2019 3:00 pm
Operator : angelar
Sample : cc6761-50
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 10:33:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.078	152	52681	40.00	ppm	0.00
24) Naphthalene-d8	5.002	136	213962	40.00	ppm	0.00
47) Acenaphthene-d10	6.252	164	126514	40.00	ppm	0.00
69) Phenanthrene-d10	7.641	188	232188	40.00	ppm	0.00
83) Chrysene-d12	11.236	240	226748	40.00	ppm	-0.01
91) Perylene-d12	13.272	264	231962	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.078	152	52681	40.00	ppm	0.02
103) Phenanthrene-d10a	7.641	188	232188	40.00	ppm	0.03
107) Chrysene-d12a	11.236	240	226748	40.00	ppm	0.04
109) Acenaphthene-d10a	6.252	164	126514	40.00	ppm	0.02
111) Naphthalene-d8a	5.002	136	213962	40.00	ppm	0.02
113) Phenanthrene-d10b	7.641	188	232188	40.00	ppm	0.03
115) Chrysene-d12b	11.236	240	226748	40.00	ppb	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.073	112	74523	49.10	ppm	0.00
Spiked Amount 50.000			Recovery = 98.20%			
8) Phenol-d5	3.848	99	117656	54.97	ppm	0.00
Spiked Amount 50.000			Recovery = 109.94%			
25) Nitrobenzene-d5	4.489	82	107672	54.35	ppm	0.00
Spiked Amount 50.000			Recovery = 108.70%			
51) 2-Fluorobiphenyl	5.771	172	231081	53.99	ppm	0.00
Spiked Amount 50.000			Recovery = 107.98%			
73) 2,4,6-Tribromophenol	6.936	330	30707	49.80	ppm	0.00
Spiked Amount 50.000			Recovery = 99.60%			
85) Terphenyl-d14	9.746	244	259945	55.19	ppm	0.00
Spiked Amount 50.000			Recovery = 110.38%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.449	88	21159	48.74	ppm	96
3) Pyridine	1.727	79	72866	53.65	ppm	99
4) N-Nitrosodimethylamine	1.706	74	41024	51.85	ppm	93
6) Indene	4.265	116	147464	51.45	ppm	99
7) Cumene	3.463	105	200761	51.87	ppm	99
9) Phenol	3.859	94	133341	56.97	ppm	93
10) Aniline	3.837	93	126574	54.49	ppm	97
11) bis(2-Chloroethyl)ether	3.896	93	81252	49.24	ppm	97
12) 2-Chlorophenol	3.928	128	96428	52.47	ppm	96
13) Decane	3.976	43	80976	50.83	ppm	99
14) 1,3-Dichlorobenzene	4.035	146	105370	52.01	ppm	98
15) 1,4-Dichlorobenzene	4.088	146	106014	50.84	ppm	98
16) Benzyl alcohol	4.201	108	59331	48.88	ppm	95
17) 1,2-Dichlorobenzene	4.201	146	103657	51.12	ppm	100
18) Acetophenone	4.382	105	136693	52.01	ppm	94
19) 2-Methylphenol	4.302	108	89131	51.64	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6762\
Data File : z137254.D
Acq On : 25 Apr 2019 3:00 pm
Operator : angelar
Sample : cc6761-50
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 10:33:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.297	121	23908	50.17	ppm		93
21) 3&4-Methylphenol	4.414	108	93220	54.03	ppm		99
22) n-Nitroso-di-n-propyla...	4.393	70	72190	50.90	ppm		93
23) Hexachloroethane	4.446	201	34231	49.77	ppm		96
26) Nitrobenzene	4.505	77	111317	54.26	ppm		93
27) Quinoline	5.258	129	213841	55.48	ppm		99
28) Isophorone	4.681	82	186835	55.06	ppm		97
29) 2-Nitrophenol	4.735	139	57685	55.86	ppm		78
30) 2,4-Dimethylphenol	4.788	107	97647	50.64	ppm		96
31) Benzoic Acid	4.911	105	37026	42.01	ppm		95
32) bis(2-Chloroethoxy)met...	4.847	93	109181	53.97	ppm		100
33) 2,4-Dichlorophenol	4.917	162	84206	55.42	ppm		95
34) 2,6-Dichlorophenol	5.071	162	87814	55.53	ppm		96
35) 1,3,5-Trichlorobenzene	4.740	180	90242	53.79	ppm		97
36) 1,2,4-Trichlorobenzene	4.965	180	85595	52.50	ppm		99
37) 1,2,3-Trichlorobenzene	5.120	180	88858	53.11	ppm		96
38) Naphthalene	5.013	128	286729	51.39	ppm		99
39) 4-Chloroaniline	5.066	127	126503	54.16	ppm		96
40) 2,3-Dichloroaniline	5.707	161	113804	55.11	ppm		95
41) Caprolactam	5.328	55	47212	53.78	ppm		98
42) Hexachlorobutadiene	5.114	225	47926	54.55	ppm		98
43) 4-Chloro-3-methylphenol	5.435	107	94016	57.87	ppm	#	57
44) 2-Methylnaphthalene	5.504	141	167422	53.94	ppm		98
45) 1-Methylnaphthalene	5.574	141	189397	53.14	ppm		97
46) Dimethylnaphthalene	5.948	156	187592	54.27	ppm		98
48) Hexachlorocyclopentadiene	5.622	237	77183	97.94	ppm		98
49) 2,4,6-Trichlorophenol	5.718	196	61817	55.41	ppm		99
50) 2,4,5-Trichlorophenol	5.750	196	65972	55.52	ppm		98
52) 2-Chloronaphthalene	5.846	162	198413	54.23	ppm		97
53) Biphenyl	5.835	154	258990	53.27	ppm		99
54) 2-Nitroaniline	5.932	65	83650	70.29	ppm		92
55) Dimethylphthalate	6.065	163	227243	53.23	ppm		100
56) Acenaphthylene	6.145	152	319511	53.42	ppm		100
57) 2,6-Dinitrotoluene	6.108	165	50156	53.38	ppm		86
58) 3-Nitroaniline	6.236	138	62005	53.16	ppm		86
59) Acenaphthene	6.279	153	216407	53.48	ppm		98
60) 2,4-Dinitrophenol	6.327	184	57918	113.54	ppm		82
61) 4-Nitrophenol	6.402	109	37642	57.50	ppm		97
62) Dibenzofuran	6.418	168	284254	53.90	ppm		94
63) 2,4-Dinitrotoluene	6.423	165	76370	57.91	ppm		97
64) 2,3,4,6-Tetrachlorophenol	6.535	232	54508	56.03	ppm		92
65) Diethylphthalate	6.631	149	240963	52.93	ppm		98
66) Fluorene	6.706	166	237853	54.16	ppm		99
67) 4-Chlorophenyl-phenyle...	6.712	204	101678	53.70	ppm		94
68) 4-Nitroaniline	6.749	138	64201	57.53	ppm		99
70) 4,6-Dinitro-2-methylph...	6.786	198	41661	52.59	ppm		94
71) n-Nitrosodiphenylamine	6.829	169	164119	52.43	ppm		98
72) 1,2-Diphenylhydrazine	6.861	77	251382	51.74	ppm		96
74) 4-Bromophenyl-phenylether	7.176	248	60023	52.65	ppm		93
75) Hexachlorobenzene	7.240	284	71102	55.59	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6762\
Data File : z137254.D
Acq On : 25 Apr 2019 3:00 pm
Operator : angelar
Sample : cc6761-50
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 10:33:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

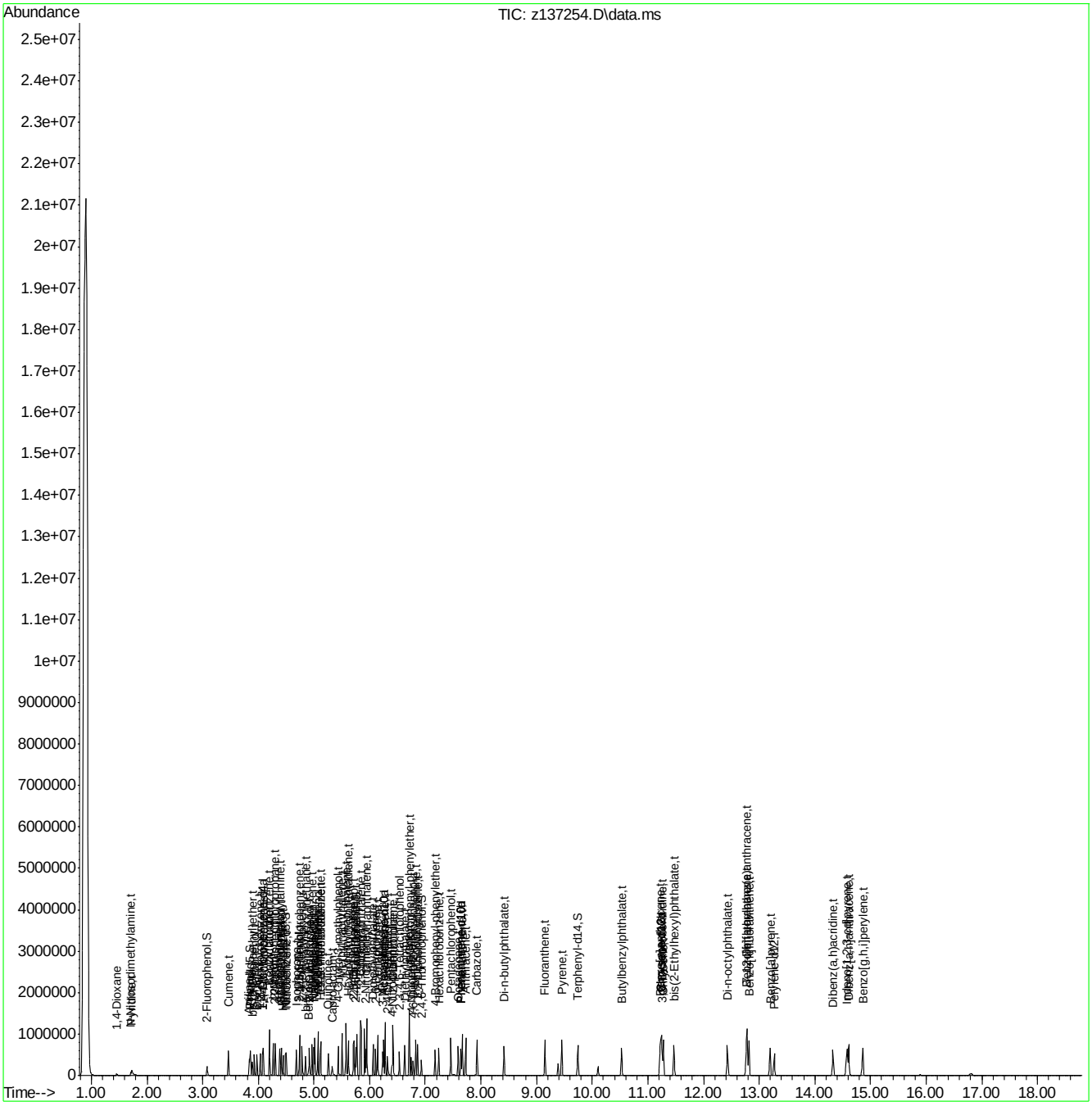
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.459	266	87176	102.66	ppm	99
77) Phenanthrene	7.668	178	345949	52.50	ppm	99
78) Anthracene	7.727	178	348162	52.99	ppm	100
79) Carbazole	7.930	167	339263	51.68	ppm	100
80) Di-n-butylphthalate	8.416	149	438964	51.96	ppm	99
81) Fluoranthene	9.153	202	384581	53.63	ppm	99
82) Octadecane	7.593	57	130238	51.85	ppm	98
84) Pyrene	9.452	202	397160	52.43	ppm	97
86) Butylbenzylphthalate	10.526	149	213990	54.08	ppm	99
87) Benzo[a]anthracene	11.226	228	362623	51.37	ppm	99
88) 3,3'-Dichlorobenzidine	11.252	252	150562	55.10	ppm	98
89) Chrysene	11.279	228	362664	52.73	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.466	149	289291	53.35	ppm	100
92) Di-n-octylphthalate	12.428	149	530377	53.82	ppm	100
93) Benzo[b]fluoranthene	12.775	252	407736	55.37	ppm	98
94) Benzo[k]fluoranthene	12.818	252	358534	54.83	ppm	98
95) Benzo[a]pyrene	13.197	252	336715	55.91	ppm	100
96) Indeno[1,2,3-cd]pyrene	14.575	276	360498	63.91	ppm	96
97) Dibenz(a,h)acridine	14.330	279	303174	58.98	ppm	99
98) Dibenz[a,h]anthracene	14.607	278	368195	62.80	ppm	99
99) 7,12-Dimethylbenz(a)an...	12.780	256	170673	52.81	ppm	98
100) Benzo[g,h,i]perylene	14.864	276	342194	64.45	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6762\
Data File : z137254.D
Acq On : 25 Apr 2019 3:00 pm
Operator : angelar
Sample : cc6761-50
Misc : op17006,ez6762,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 10:33:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137275.D
Acq On : 26 Apr 2019 3:34 am
Operator : chriss2
Sample : ic6763-100
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 08:18:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

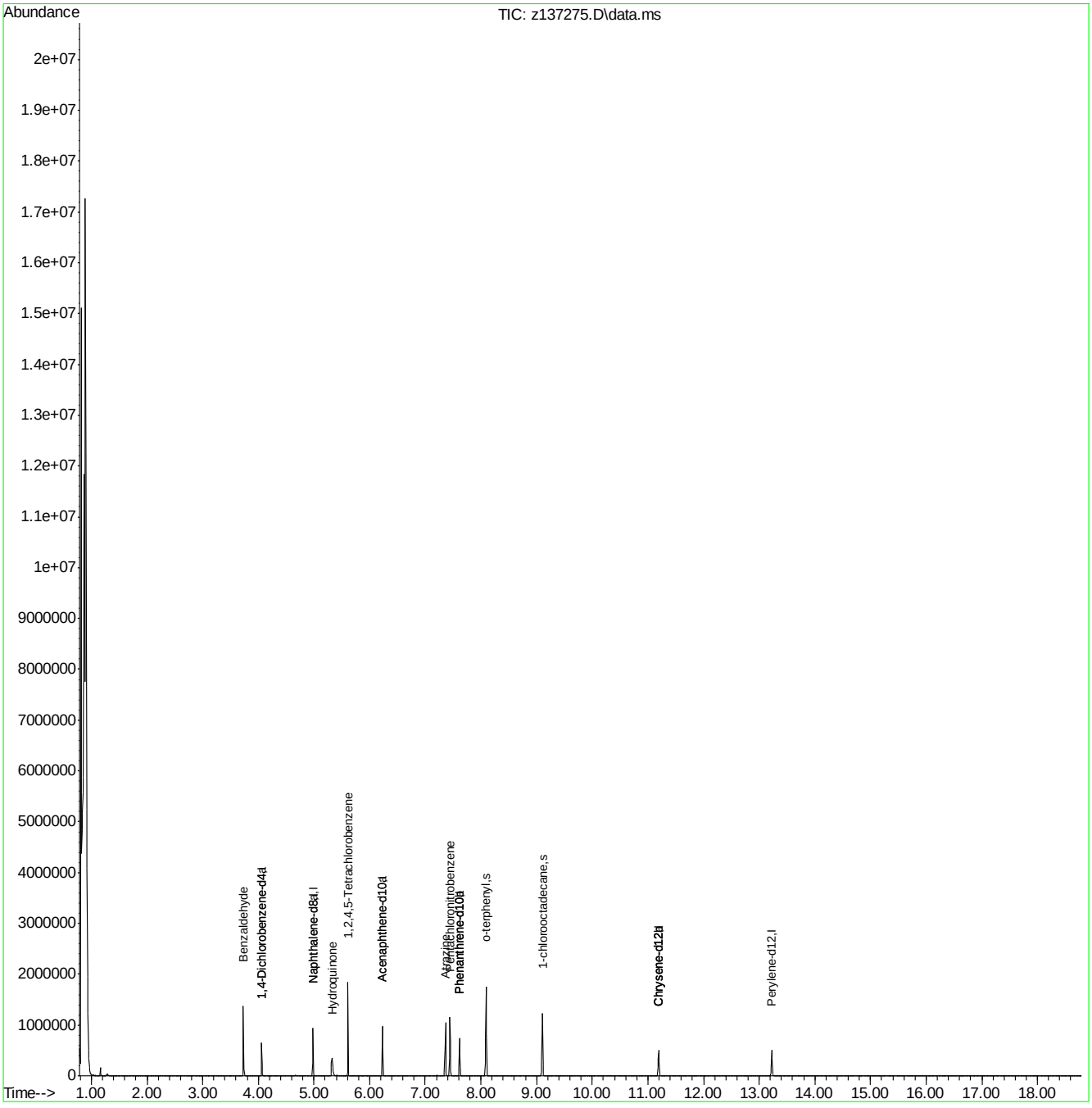
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	68167	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	275536	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	145150	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	247983	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	209347	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	225472	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	68167	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	247983	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	209347	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	145150	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	275536	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	247983	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	209347	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.105	57	190125	94.58	ppm	0.00
Spiked Amount 50.000			Recovery = 189.16%			
105) o-terphenyl	8.095	230	334287	99.36	ppm	0.00
Spiked Amount 50.000			Recovery = 198.72%			
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	193201	106.03	ppm	97
106) Atrazine	7.363	215	65938	105.21	ppm	91
110) 1,2,4,5-Tetrachloroben...	5.611	216	201356	97.04	ppm	99
112) Hydroquinone	5.328	110	242191	95.86	ppm	97
114) Pentachloronitrobenzene	7.444	295	29709	102.44	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137275.D
Acq On : 26 Apr 2019 3:34 am
Operator : chriss2
Sample : ic6763-100
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 08:18:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



MZ6761.M Fri Apr 26 08:18:42 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137276.D
Acq On : 26 Apr 2019 4:02 am
Operator : chriss2
Sample : ic6763-80
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 08:19:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

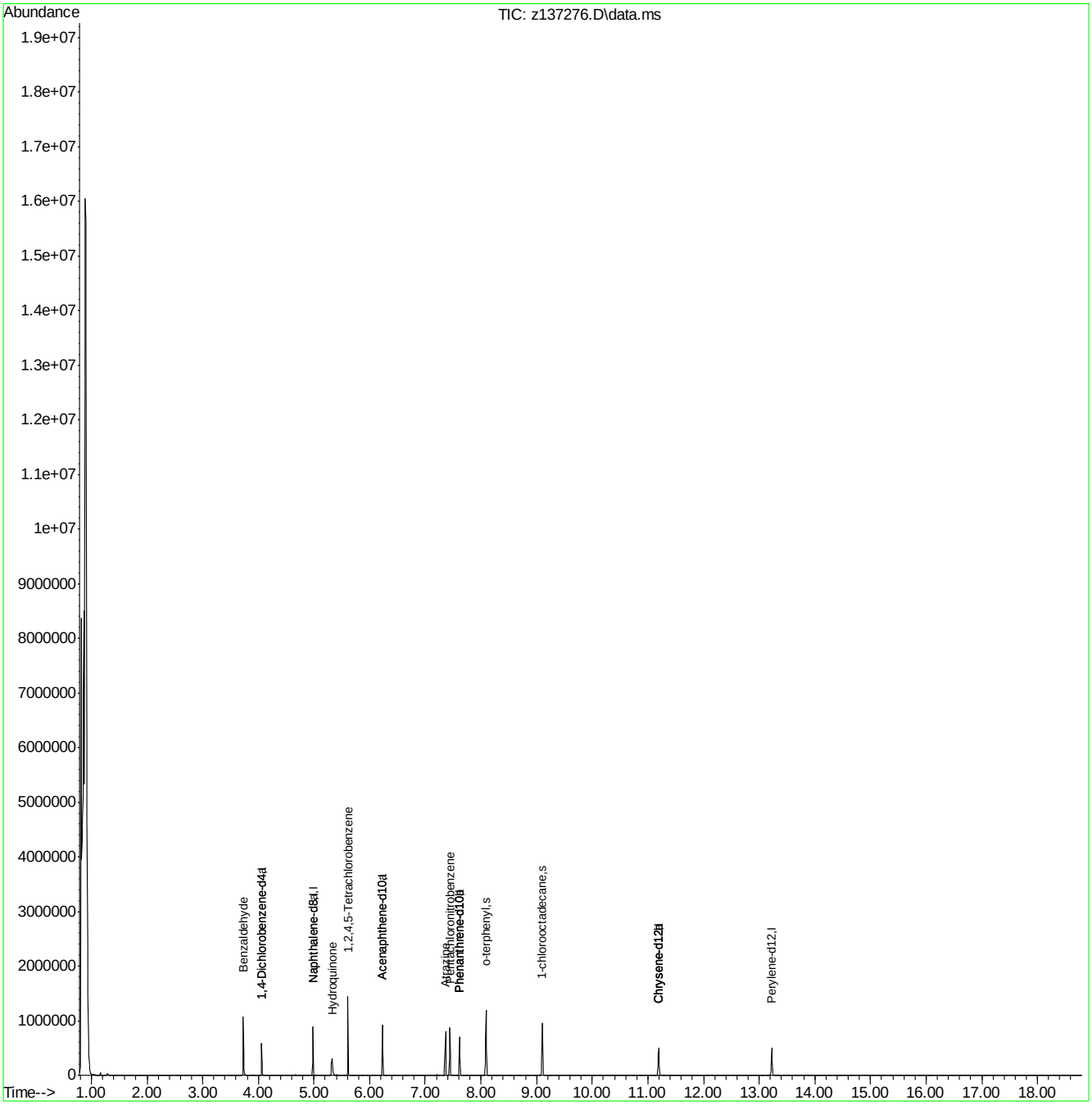
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	65143	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	257039	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	140294	40.00	ppm	-0.02
69) Phenanthrene-d10	7.615	188	236770	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	195749	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	219675	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	65143	40.00	ppm	0.00
103) Phenanthrene-d10a	7.615	188	236770	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	195749	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	140294	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	257039	40.00	ppm	0.00
113) Phenanthrene-d10b	7.615	188	236770	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	195749	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.100	57	143603	74.82	ppm	0.00
Spiked Amount 50.000			Recovery = 149.64%			
105) o-terphenyl	8.095	230	258920	80.60	ppm	0.00
Spiked Amount 50.000			Recovery = 161.20%			
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	146280	84.01	ppm	96
106) Atrazine	7.363	215	47387	79.19	ppm	92
110) 1,2,4,5-Tetrachloroben...	5.611	216	158515	79.03	ppm	99
112) Hydroquinone	5.328	110	182525	77.44	ppm	98
114) Pentachloronitrobenzene	7.444	295	22292	80.51	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137276.D
Acq On : 26 Apr 2019 4:02 am
Operator : chriss2
Sample : ic6763-80
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 08:19:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137277.D
Acq On : 26 Apr 2019 4:30 am
Operator : chriss2
Sample : icc6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:17:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

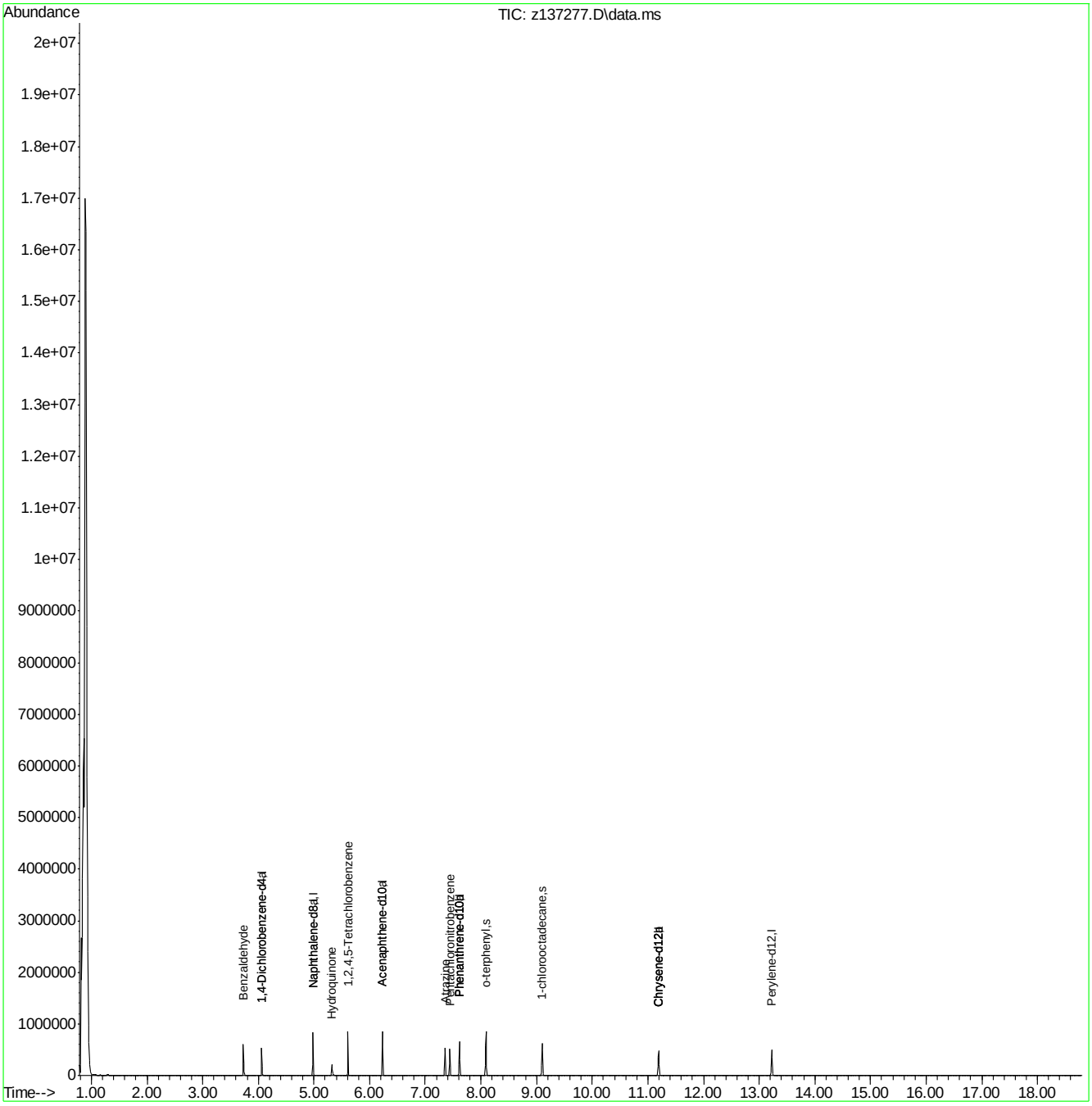
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	62602	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	250605	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	131505	40.00	ppm	-0.02
69) Phenanthrene-d10	7.615	188	225320	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	195331	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	222938	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	62602	40.00	ppm	0.00
103) Phenanthrene-d10a	7.615	188	225320	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	195331	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	131505	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	250605	40.00	ppm	0.00
113) Phenanthrene-d10b	7.615	188	225320	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	195331	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.100	57	91325	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
105) o-terphenyl	8.090	230	152850	50.00	ppm	0.00
Spiked Amount 50.000			Recovery = 100.00%			
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	83666	50.00	ppm	100
106) Atrazine	7.358	215	28473	50.00	ppm	100
110) 1,2,4,5-Tetrachloroben...	5.611	216	94000	50.00	ppm	100
112) Hydroquinone	5.317	110	114901	50.00	ppm	100
114) Pentachloronitrobenzene	7.444	295	13175	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137277.D
Acq On : 26 Apr 2019 4:30 am
Operator : chriss2
Sample : icc6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:17:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137278.D
Acq On : 26 Apr 2019 4:58 am
Operator : chriss2
Sample : ic6763-25
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:20:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

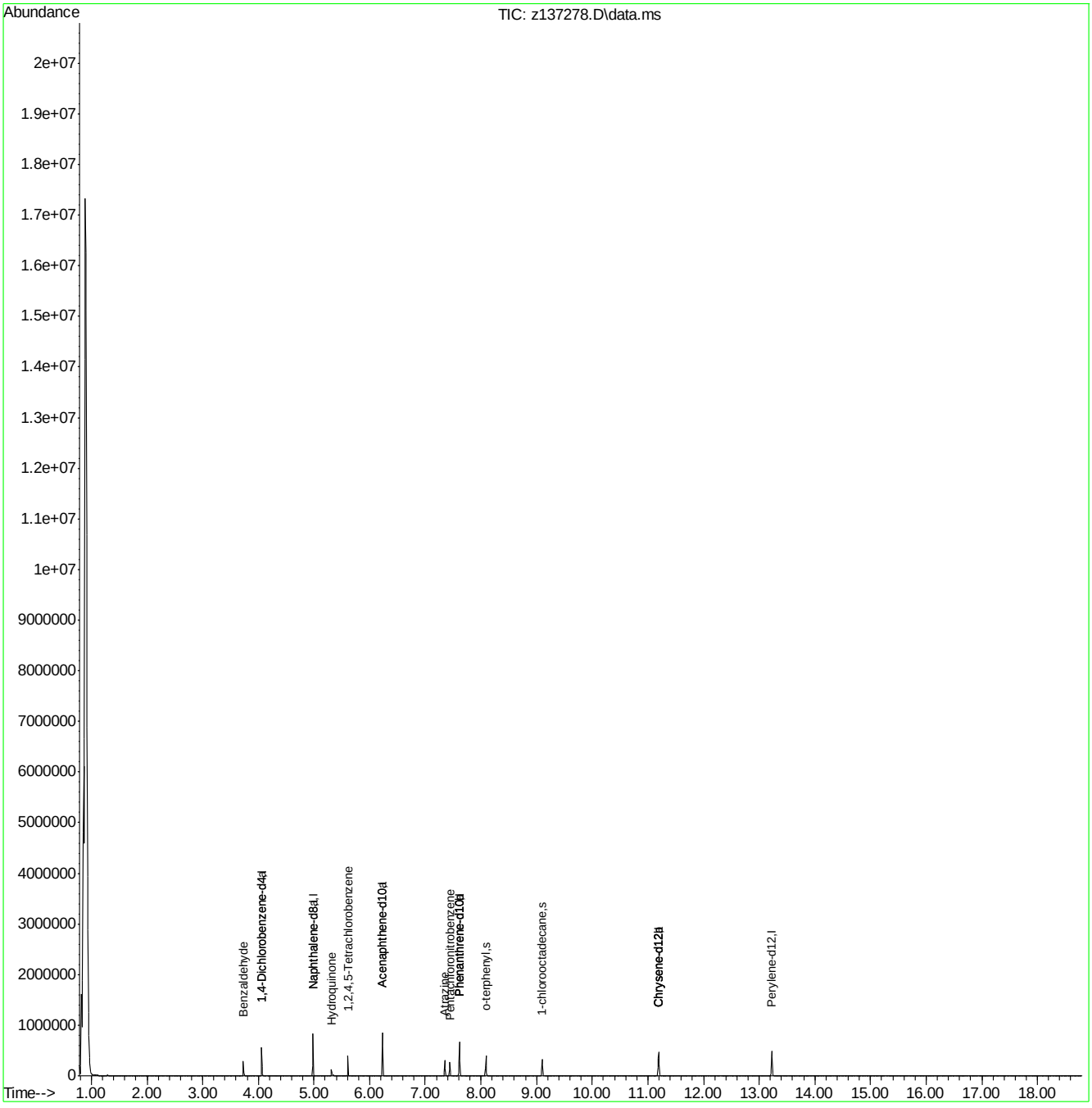
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	63688	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	250647	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	134200	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	231893	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	197099	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	211253	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	63688	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	231893	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	197099	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	134200	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	250647	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	231893	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	197099	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.100	57	45593	24.25	ppm	0.00
Spiked Amount 50.000			Recovery = 48.50%			
105) o-terphenyl	8.090	230	76170	24.21	ppm	0.00
Spiked Amount 50.000			Recovery = 48.42%			
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	43956	25.82	ppm	98
106) Atrazine	7.353	215	14177	24.19	ppm	98
110) 1,2,4,5-Tetrachloroben...	5.611	216	46435	24.20	ppm	98
112) Hydroquinone	5.312	110	56128	24.42	ppm	96
114) Pentachloronitrobenzene	7.443	295	6896	25.43	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137278.D
Acq On : 26 Apr 2019 4:58 am
Operator : chriss2
Sample : ic6763-25
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:20:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137279.D
Acq On : 26 Apr 2019 5:26 am
Operator : chriss2
Sample : ic6763-10
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:22:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

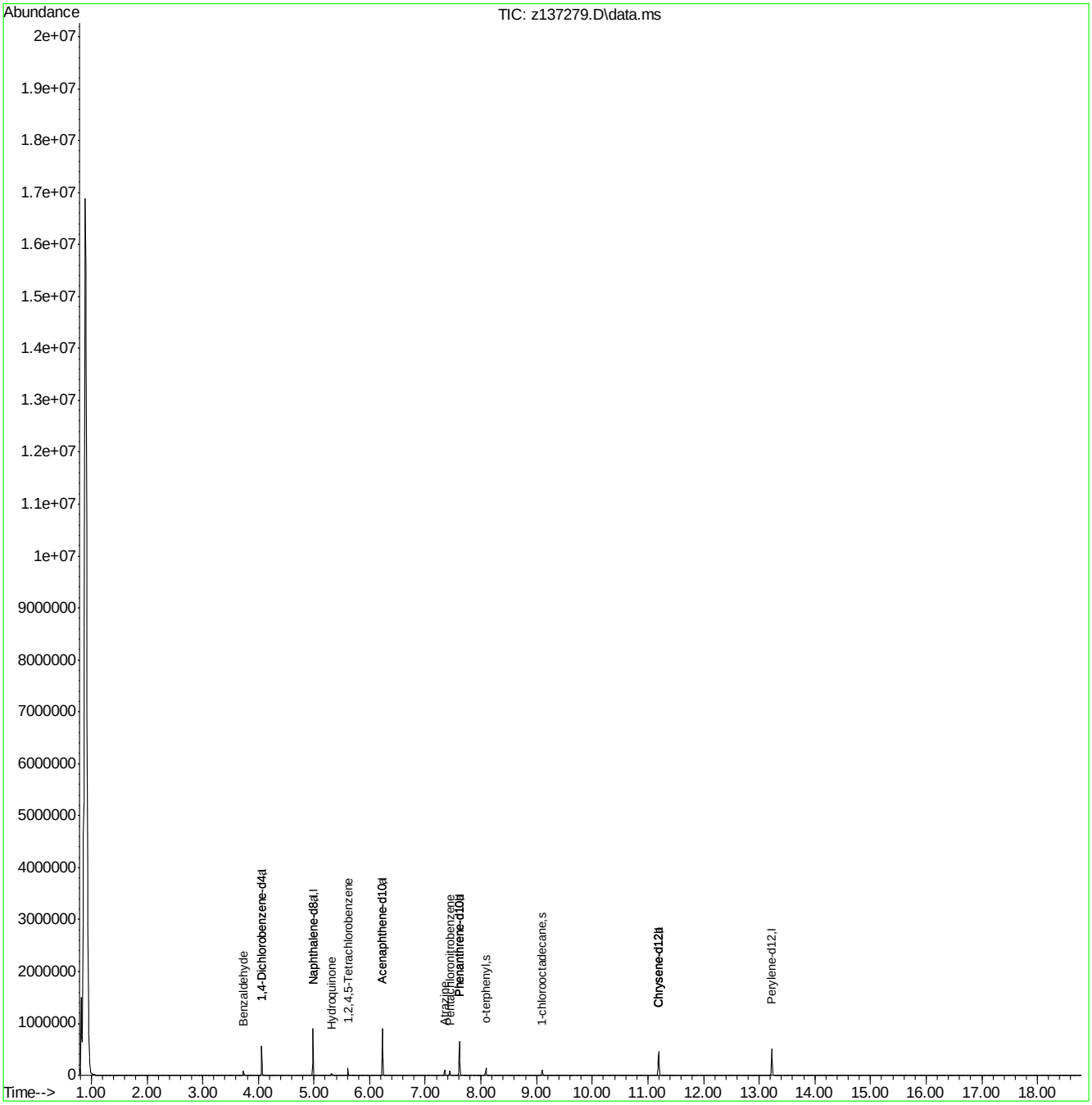
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	66321	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	262643	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	140524	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	243249	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	186081	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	205877	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	66321	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	243249	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	186081	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	140524	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	262643	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	243249	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	186081	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.100	57	16056	8.14	ppm	0.00
Spiked Amount 50.000			Recovery = 16.28%			
105) o-terphenyl	8.090	230	29667	8.99	ppm	0.00
Spiked Amount 50.000			Recovery = 17.98%			
Target Compounds						Qvalue
102) Benzaldehyde	3.736	105	15396	8.68	ppm	99
106) Atrazine	7.347	215	4906	7.98	ppm	96
110) 1,2,4,5-Tetrachloroben...	5.611	216	18781	9.35	ppm	99
112) Hydroquinone	5.312	110	20306	8.43	ppm	96
114) Pentachloronitrobenzene	7.438	295	2306	8.11	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137279.D
Acq On : 26 Apr 2019 5:26 am
Operator : chriss2
Sample : ic6763-10
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:22:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137280.D
Acq On : 26 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6763-5
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:23:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

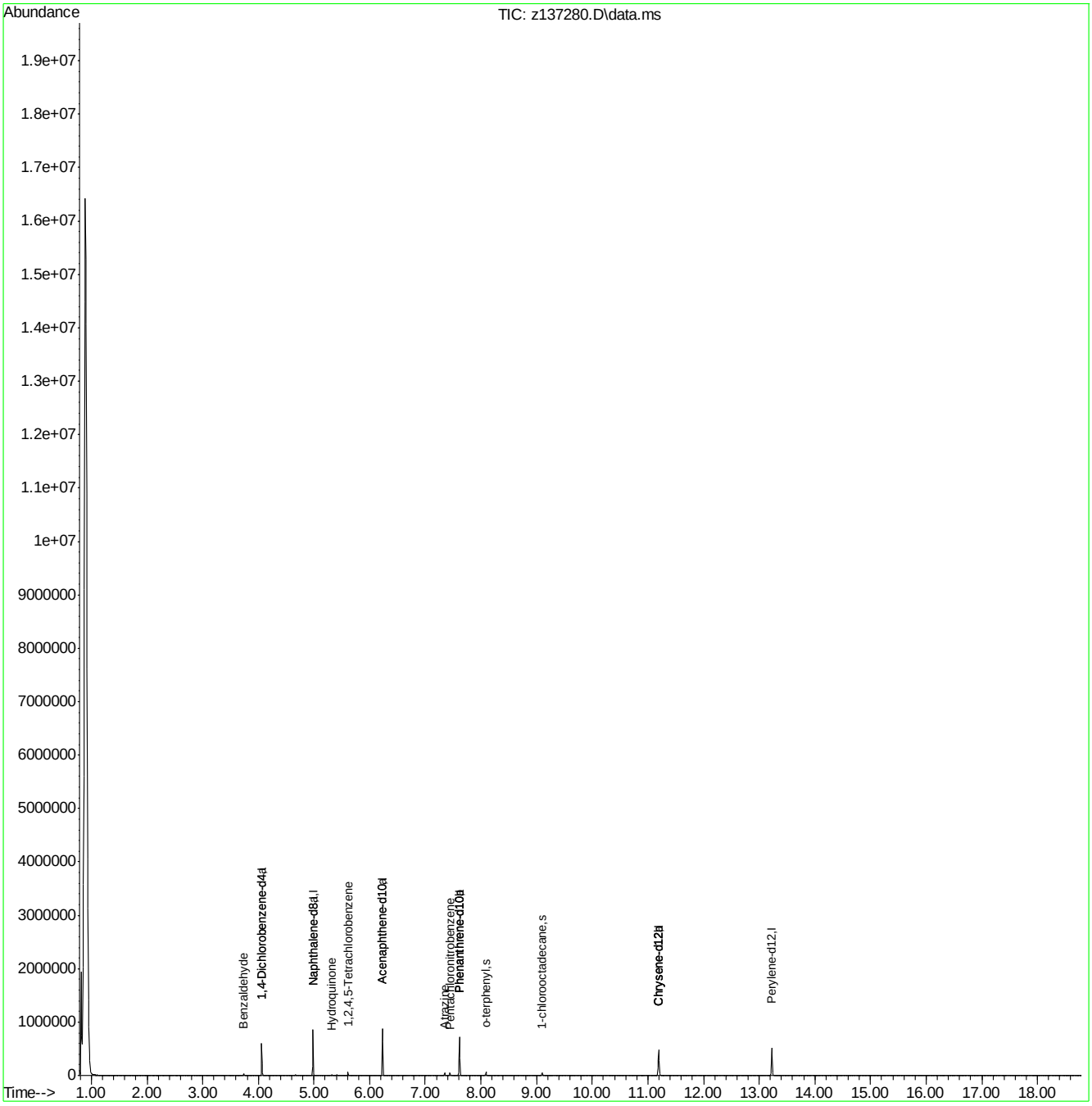
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	66316	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	262142	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	138181	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	246171	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	197982	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	219381	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	66316	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	246171	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	197982	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	138181	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	262142	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	246171	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	197982	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	9.099	57	7330	3.67	ppm	0.00
Spiked Amount 50.000			Recovery =	7.34%		
105) o-terphenyl	8.090	230	13908	4.16	ppm	0.00
Spiked Amount 50.000			Recovery =	8.32%		
Target Compounds						Qvalue
102) Benzaldehyde	3.736	105	7924	4.47	ppm	95
106) Atrazine	7.347	215	2391	3.84	ppm	93
110) 1,2,4,5-Tetrachloroben...	5.611	216	8777	4.44	ppm	97
112) Hydroquinone	5.323	110	9183	3.82	ppm	90
114) Pentachloronitrobenzene	7.443	295	1169	4.06	ppm #	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137280.D
Acq On : 26 Apr 2019 5:54 am
Operator : chriss2
Sample : ic6763-5
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:23:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Z137281.D

Manual Integrations APPROVED (compounds with "m" flag)

Kristi Schollenberger 04/26/19 10:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137281.D
Acq On : 26 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6763-2
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:29:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	66241	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	268653	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	144914	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	235256	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	191214	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	208460	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	66241	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	235256	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	191214	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	144914	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	268653	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	235256	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	191214	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.099	57	2426	1.27	ppm	0.00
Spiked Amount 50.000			Recovery = 2.54%			
105) o-terphenyl	8.090	230	5452	1.71	ppm	0.00
Spiked Amount 50.000			Recovery = 3.42%			
Target Compounds						Qvalue
102) Benzaldehyde	3.741	105	2454	1.39	ppm	95
106) Atrazine	7.347	215	652m	1.10	ppm	
110) 1,2,4,5-Tetrachloroben...	5.611	216	3398	1.64	ppm	95
112) Hydroquinone	5.344	110	2766	1.12	ppm	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

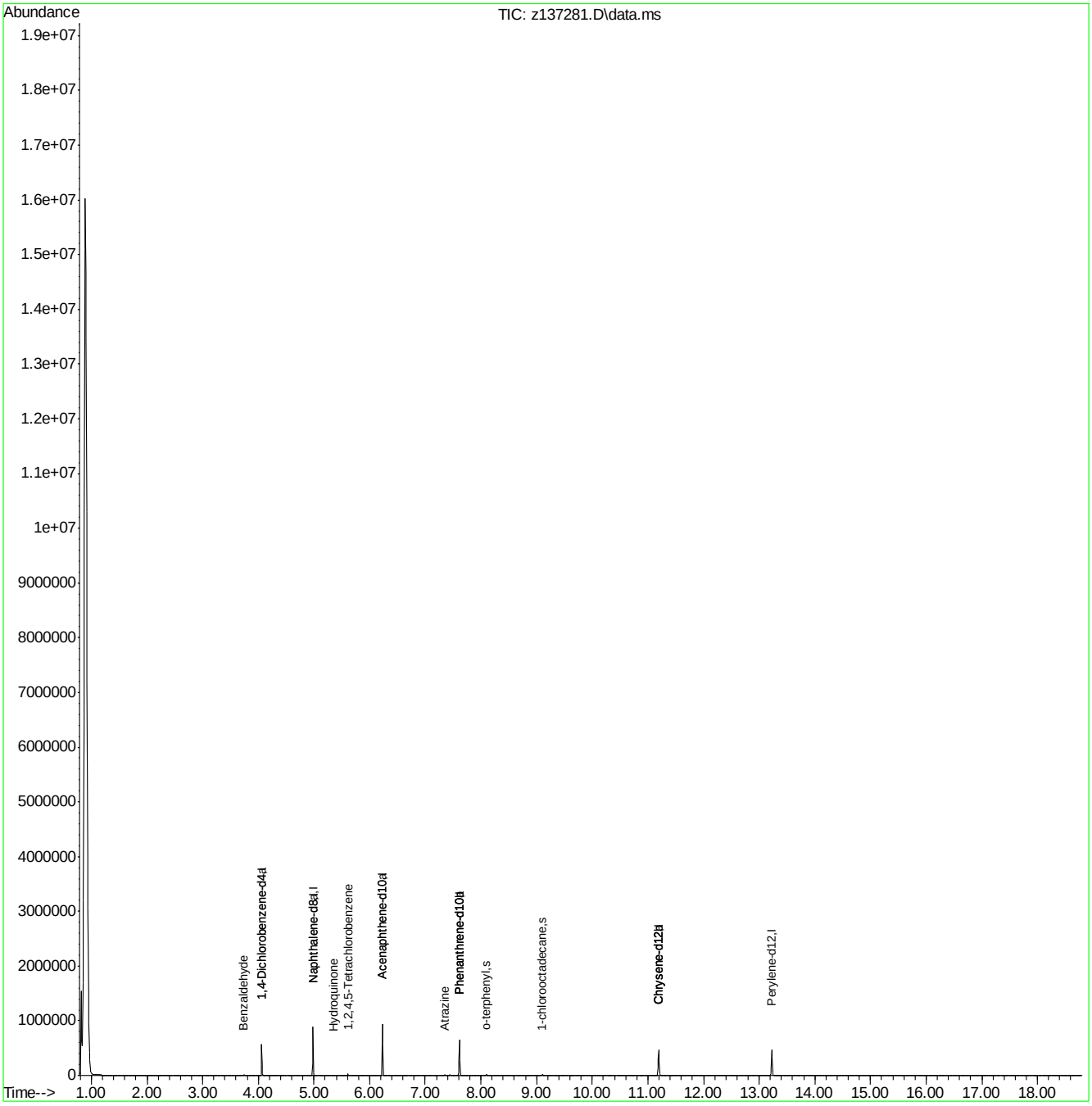
9.6.78

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137281.D
Acq On : 26 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6763-2
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:29:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Manual Integration Approval Summary

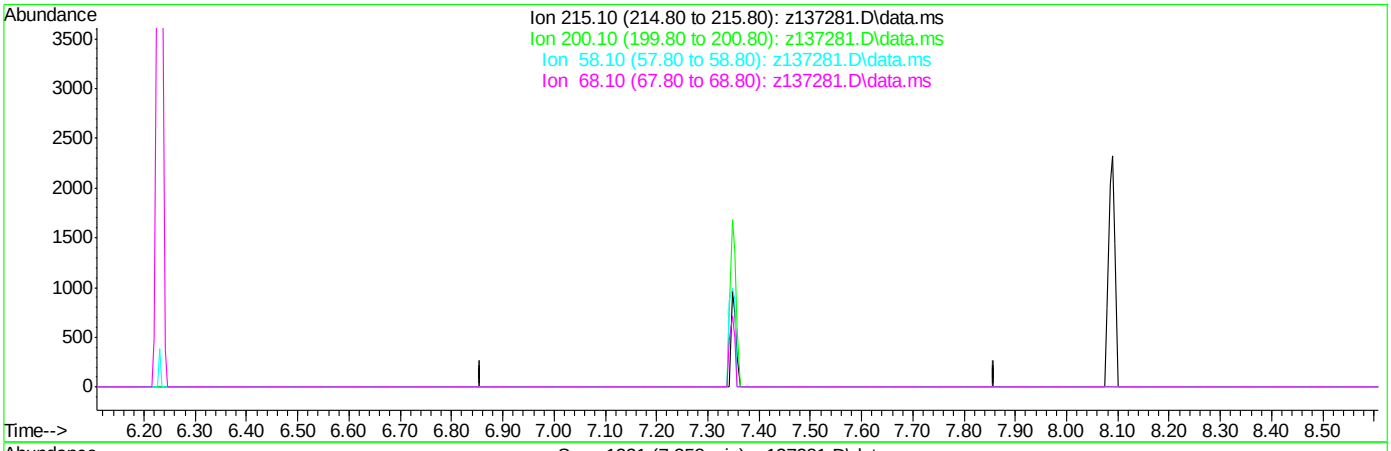
Sample Number: EZ6763-IC6763
Lab FileID: Z137281.D
Injection Time: 04/26/19 06:22
Method: SW846 8270D
Analyst approved: 04/26/19 08:53 Ying Li
Supervisor approved: 04/26/19 10:39 Kristi Schollenberger

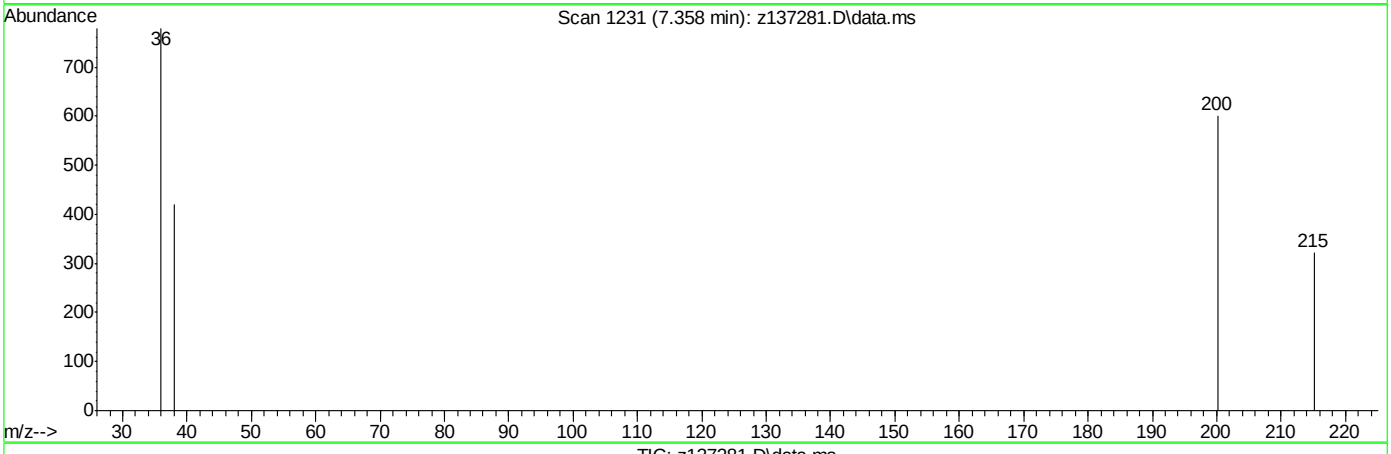
Parameter	CAS	Sig#	R.T. (min.)	Reason
Atrazine	1912-24-9		7.35	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137281.D
Acq On : 26 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6763-2
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:24:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration





TIC: z137281.D\data.ms

(106) Atrazine

7.358min (-7.358) 0.00ppm

response 0

Ion	Exp%	Act%
215.10	100	0.00
200.10	209.50	0.00#
58.10	106.30	0.00#
68.10	81.30	0.00#

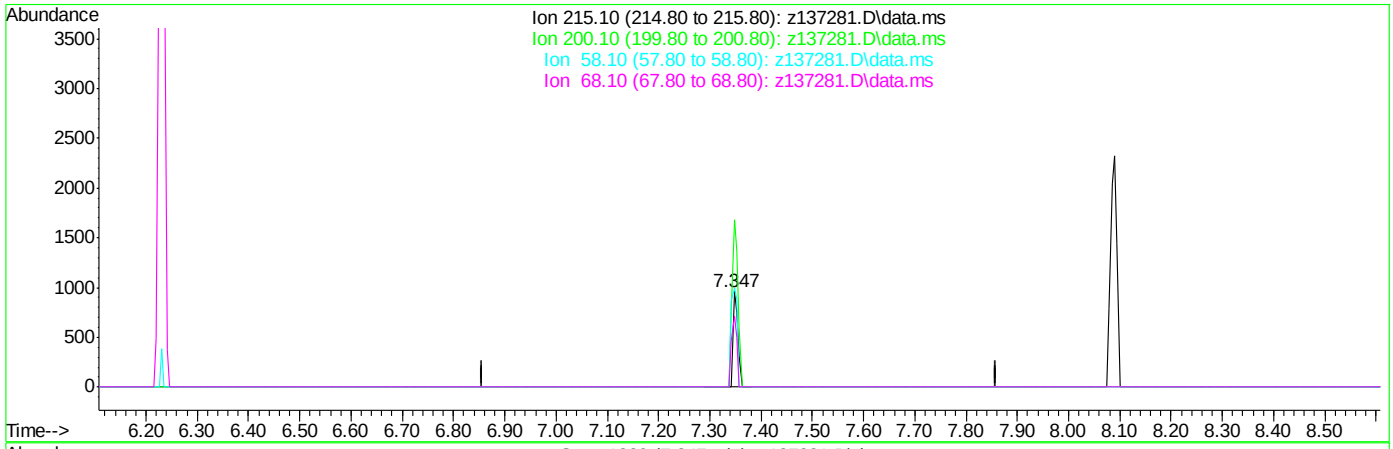
9.6.78.2

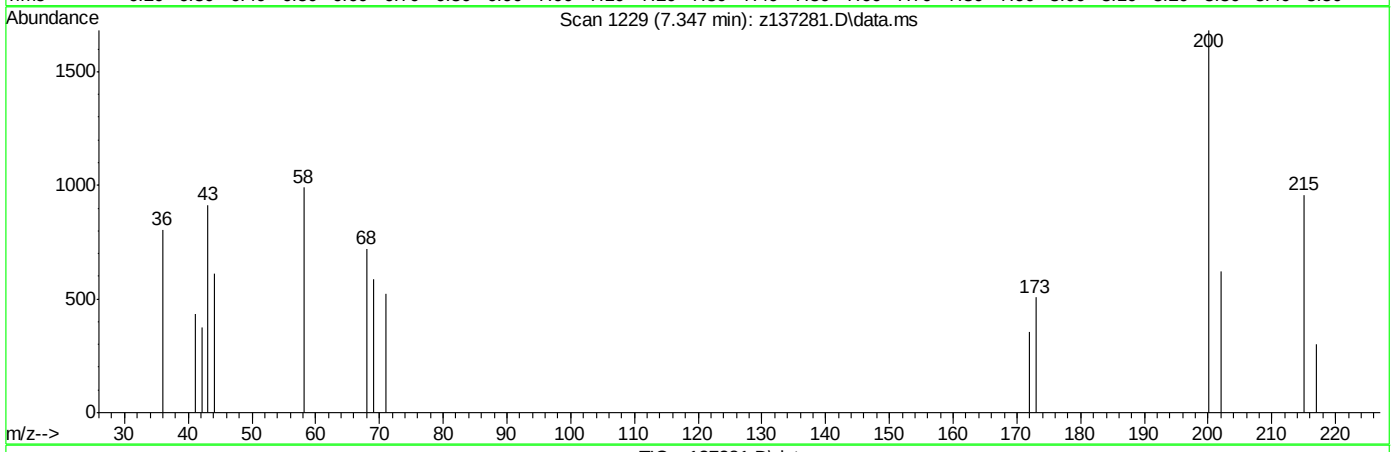
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137281.D
Acq On : 26 Apr 2019 6:22 am
Operator : chriss2
Sample : ic6763-2
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:24:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration





TIC: z137281.D\data.ms

(106) Atrazine

7.347min (-0.011) 1.10ppm m

response 652

Ion	Exp%	Act%
215.10	100	100
200.10	209.50	175.57#
58.10	106.30	103.44
68.10	81.30	74.95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137282.D
Acq On : 26 Apr 2019 6:51 am
Operator : chriss2
Sample : ic6763-1
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration

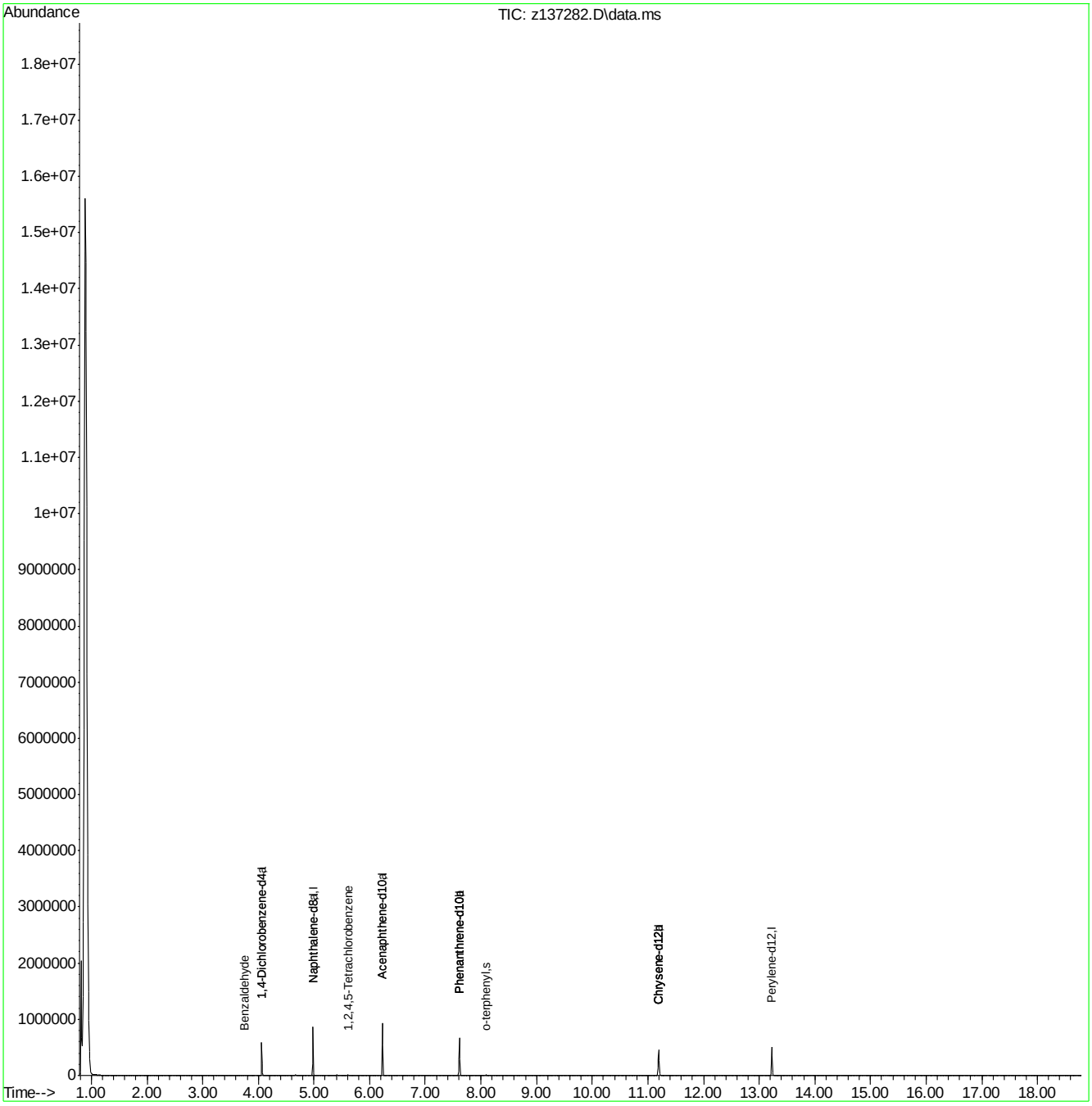
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	68588	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	262538	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	139146	40.00	ppm	-0.02
69) Phenanthrene-d10	7.615	188	245809	40.00	ppm	-0.03
83) Chrysene-d12	11.194	240	187670	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	200785	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	68588	40.00	ppm	0.00
103) Phenanthrene-d10a	7.615	188	245809	40.00	ppm	0.00
107) Chrysene-d12a	11.194	240	187670	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	139146	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	262538	40.00	ppm	0.00
113) Phenanthrene-d10b	7.615	188	245809	40.00	ppm	0.00
115) Chrysene-d12b	11.194	240	187670	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	8.085	230	2755	0.83	ppm	0.00
Spiked Amount 50.000			Recovery =	1.66%		
Target Compounds						Qvalue
102) Benzaldehyde	3.747	105	1014	0.55	ppm	94
110) 1,2,4,5-Tetrachloroben...	5.611	216	1912	0.96	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137282.D
Acq On : 26 Apr 2019 6:51 am
Operator : chriss2
Sample : ic6763-1
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:16:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137283.D
Acq On : 26 Apr 2019 7:19 am
Operator : chriss2
Sample : icv6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:43:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:42:02 2019
Response via : Initial Calibration

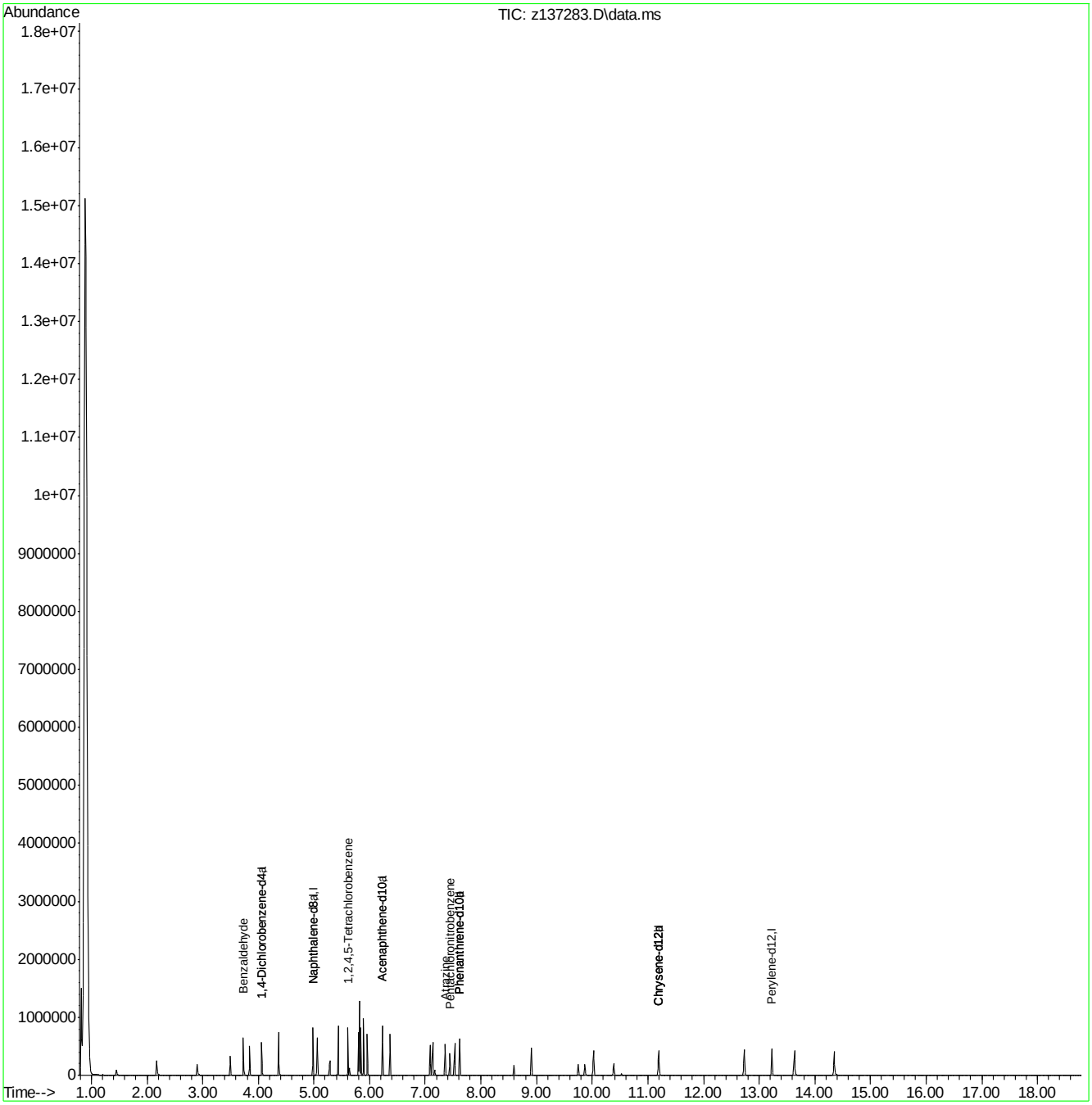
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	63790	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	251535	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	132287	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	220439	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	174449	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	197131	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	63790	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	220439	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	174449	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	132287	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	251535	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	220439	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	174449	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	91681	57.04	ppm	99
106) Atrazine	7.358	215	27276	50.03	ppm	95
110) 1,2,4,5-Tetrachloroben...	5.611	216	89944	50.52	ppm	98
114) Pentachloronitrobenzene	7.444	295	10750	44.12	ppm	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137283.D
Acq On : 26 Apr 2019 7:19 am
Operator : chriss2
Sample : icv6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:43:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:42:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137284.D
Acq On : 26 Apr 2019 7:47 am
Operator : chriss2
Sample : icv6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:44:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:42:02 2019
Response via : Initial Calibration

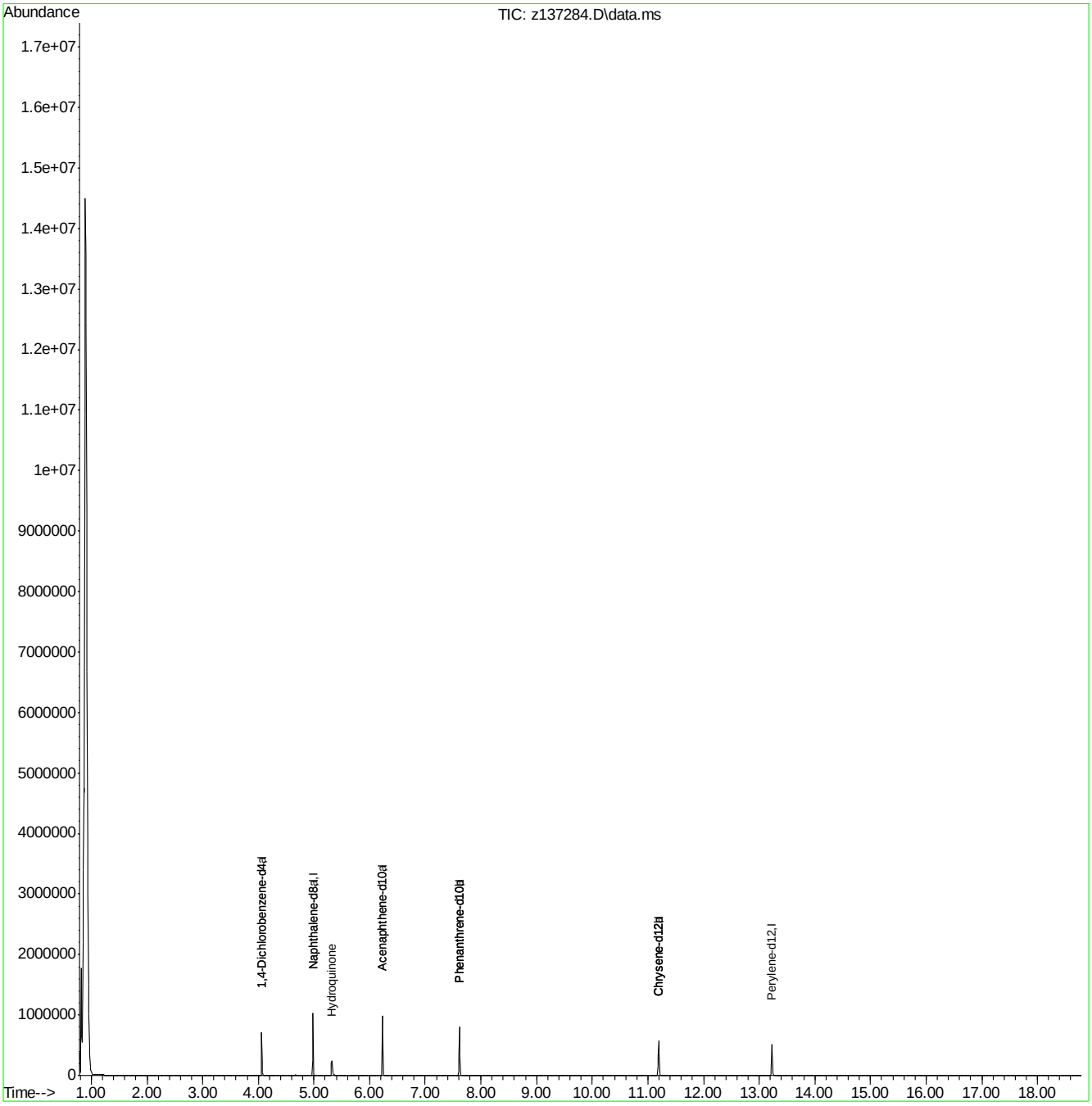
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	81891	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	320123	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	156741	40.00	ppm	-0.02
69) Phenanthrene-d10	7.615	188	282547	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	240085	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	232845	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	81891	40.00	ppm	0.00
103) Phenanthrene-d10a	7.615	188	282547	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	240085	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	156741	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	320123	40.00	ppm	0.00
113) Phenanthrene-d10b	7.615	188	282547	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	240085	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
112) Hydroquinone	5.323	110	150826	59.23	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6763\
Data File : z137284.D
Acq On : 26 Apr 2019 7:47 am
Operator : chriss2
Sample : icv6763-50
Misc : op17006,ez6763,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:44:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:42:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137286.D
Acq On : 26 Apr 2019 9:25 am
Operator : angelar
Sample : cc6761-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 14:21:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	68641	40.00	ppm	-0.02
24) Naphthalene-d8	4.986	136	270792	40.00	ppm	-0.02
47) Acenaphthene-d10	6.236	164	152483	40.00	ppm	-0.02
69) Phenanthrene-d10	7.615	188	244966	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	198387	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	230667	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	68641	40.00	ppm	0.00
103) Phenanthrene-d10a	7.615	188	244966	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	198387	40.00	ppm	0.00
109) Acenaphthene-d10a	6.236	164	152483	40.00	ppm	0.00
111) Naphthalene-d8a	4.986	136	270792	40.00	ppm	0.00
113) Phenanthrene-d10b	7.615	188	244966	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	198387	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.063	112	53050	26.83	ppm	-0.02
Spiked Amount 50.000			Recovery = 53.66%			
8) Phenol-d5	3.832	99	71736	25.72	ppm	-0.02
Spiked Amount 50.000			Recovery = 51.44%			
25) Nitrobenzene-d5	4.473	82	67235	26.82	ppm	-0.02
Spiked Amount 50.000			Recovery = 53.64%			
51) 2-Fluorobiphenyl	5.750	172	126885	24.60	ppm	-0.02
Spiked Amount 50.000			Recovery = 49.20%			
73) 2,4,6-Tribromophenol	6.909	330	15697	24.13	ppm	-0.03
Spiked Amount 50.000			Recovery = 48.26%			
85) Terphenyl-d14	9.714	244	114134	27.70	ppm	-0.04
Spiked Amount 50.000			Recovery = 55.40%			
104) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
105) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.450	88	20931	37.00	ppm	97
3) Pyridine	1.722	79	59368	33.55	ppm	96
4) N-Nitrosodimethylamine	1.701	74	32726	31.75	ppm	75
6) Indene	4.249	116	98974	26.50	ppm	100
7) Cumene	3.448	105	137237	27.22	ppm	98
9) Phenol	3.843	94	79268	25.99	ppm	97
10) Aniline	3.822	93	81455	26.91	ppm	99
11) bis(2-Chloroethyl)ether	3.880	93	55937	26.02	ppm	100
12) 2-Chlorophenol	3.912	128	61326	25.61	ppm	94
13) Decane	3.966	43	58476	28.17	ppm	98
14) 1,3-Dichlorobenzene	4.019	146	69031	26.15	ppm	98
15) 1,4-Dichlorobenzene	4.073	146	74006	27.24	ppm	99
16) Benzyl alcohol	4.185	108	36658	24.60	ppm	87
17) 1,2-Dichlorobenzene	4.185	146	68580	25.96	ppm	99
18) Acetophenone	4.367	105	85761	25.04	ppm	98
19) 2-Methylphenol	4.281	108	57765	25.69	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137286.D
Acq On : 26 Apr 2019 9:25 am
Operator : angelar
Sample : cc6761-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 14:21:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20)	2,2'-oxybis(1-Chloropr...	4.281	121	16514	26.60	ppm		93
21)	3&4-Methylphenol	4.399	108	59613	26.52	ppm		99
22)	n-Nitroso-di-n-propyla...	4.377	70	44295	23.97	ppm		98
23)	Hexachloroethane	4.431	201	23364	26.07	ppm		95
26)	Nitrobenzene	4.489	77	68014	26.20	ppm		88
27)	Quinoline	5.237	129	120789	24.76	ppm		99
28)	Isophorone	4.660	82	114692	26.71	ppm		98
29)	2-Nitrophenol	4.719	139	36167	27.67	ppm		79
30)	2,4-Dimethylphenol	4.773	107	56797	25.41	ppm		99
31)	Benzoic Acid	4.874	105	21530	22.90	ppm		93
32)	bis(2-Chloroethoxy)met...	4.826	93	70153	27.40	ppm		99
33)	2,4-Dichlorophenol	4.901	162	50874	26.45	ppm		96
34)	2,6-Dichlorophenol	5.056	162	50443	25.20	ppm		98
35)	1,3,5-Trichlorobenzene	4.724	180	56456	26.59	ppm		99
36)	1,2,4-Trichlorobenzene	4.949	180	52652	25.52	ppm		99
37)	1,2,3-Trichlorobenzene	5.104	180	53021	25.04	ppm		98
38)	Naphthalene	4.997	128	181326	25.68	ppm		100
39)	4-Chloroaniline	5.050	127	78079	26.41	ppm		99
40)	2,3-Dichloroaniline	5.691	161	62929	24.08	ppm		98
41)	Caprolactam	5.301	55	25990	23.39	ppm		98
42)	Hexachlorobutadiene	5.098	225	27898	25.09	ppm		98
43)	4-Chloro-3-methylphenol	5.414	107	51334	24.97	ppm	#	70
44)	2-Methylnaphthalene	5.488	141	94771	24.13	ppm		97
45)	1-Methylnaphthalene	5.558	141	108324	24.02	ppm		96
46)	Dimethylnaphthalene	5.926	156	105079	24.02	ppm		98
48)	Hexachlorocyclopentadiene	5.606	237	38756	47.59	ppm		97
49)	2,4,6-Trichlorophenol	5.702	196	33993	25.28	ppm		97
50)	2,4,5-Trichlorophenol	5.734	196	34965	24.41	ppm		99
52)	2-Chloronaphthalene	5.830	162	109927	24.93	ppm		99
53)	Biphenyl	5.820	154	145686	24.86	ppm		98
54)	2-Nitroaniline	5.910	65	43849	30.57	ppm		95
55)	Dimethylphthalate	6.044	163	122785	23.86	ppm		100
56)	Acenaphthylene	6.124	152	176224	24.45	ppm		99
57)	2,6-Dinitrotoluene	6.087	165	28401	25.08	ppm		83
58)	3-Nitroaniline	6.215	138	36391	25.89	ppm		94
59)	Acenaphthene	6.258	153	123272	25.28	ppm		98
60)	2,4-Dinitrophenol	6.306	184	34469	56.07	ppm	#	43
61)	4-Nitrophenol	6.375	109	16356	20.73	ppm		87
62)	Dibenzofuran	6.397	168	157999	24.86	ppm		92
63)	2,4-Dinitrotoluene	6.402	165	41316	26.00	ppm		97
64)	2,3,4,6-Tetrachlorophenol	6.514	232	28639	24.42	ppm		93
65)	Diethylphthalate	6.610	149	130730	23.83	ppm		99
66)	Fluorene	6.685	166	127491	24.09	ppm		97
67)	4-Chlorophenyl-phenyle...	6.690	204	53500	23.44	ppm		93
68)	4-Nitroaniline	6.722	138	35263	26.22	ppm		86
70)	4,6-Dinitro-2-methylph...	6.760	198	21941	26.25	ppm	#	97
71)	n-Nitrosodiphenylamine	6.803	169	90456	27.39	ppm		97
72)	1,2-Diphenylhydrazine	6.835	77	135976	26.53	ppm		99
74)	4-Bromophenyl-phenylether	7.155	248	31719	26.37	ppm		96
75)	Hexachlorobenzene	7.214	284	34030	25.22	ppm		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137286.D
Acq On : 26 Apr 2019 9:25 am
Operator : angelar
Sample : cc6761-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 14:21:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration

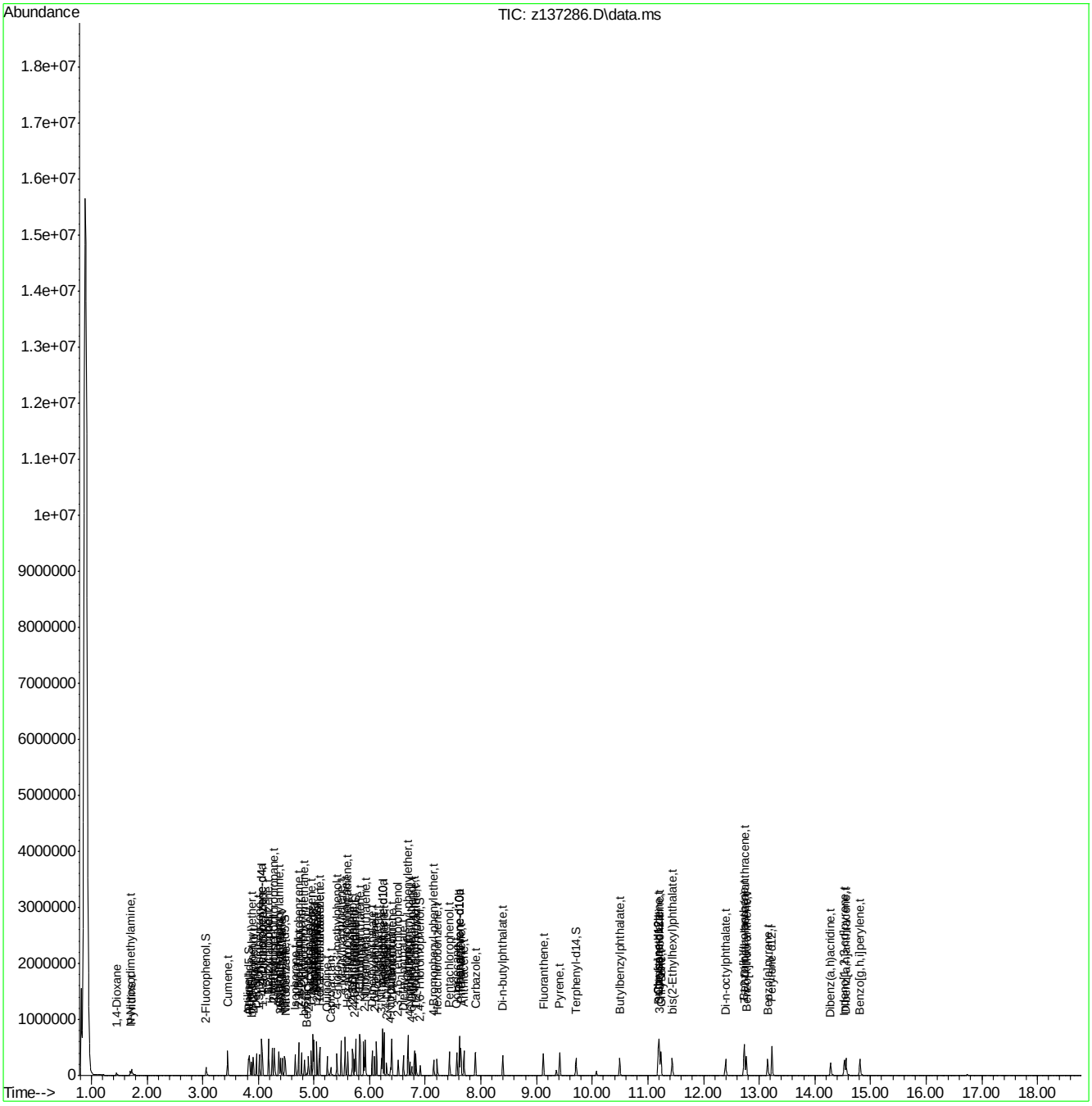
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	7.433	266	38541	48.18	ppm	97
77) Phenanthrene	7.641	178	175396	25.23	ppm	99
78) Anthracene	7.695	178	177275	25.58	ppm	98
79) Carbazole	7.903	167	180787	26.10	ppm	98
80) Di-n-butylphthalate	8.389	149	223302	25.05	ppm	100
81) Fluoranthene	9.121	202	182109	24.07	ppm	100
82) Octadecane	7.567	57	73789	27.85	ppm	98
84) Pyrene	9.415	202	191555	28.90	ppm	99
86) Butylbenzylphthalate	10.494	149	95152	27.49	ppm	98
87) Benzo[a]anthracene	11.189	228	161846	26.20	ppm	99
88) 3,3'-Dichlorobenzidine	11.215	252	61486	25.72	ppm	96
89) Chrysene	11.237	228	166836	27.72	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.440	149	130168	27.44	ppm	100
92) Di-n-octylphthalate	12.396	149	217980	22.25	ppm	99
93) Benzo[b]fluoranthene	12.732	252	165043	22.54	ppm	98
94) Benzo[k]fluoranthene	12.770	252	166298	25.58	ppm	97
95) Benzo[a]pyrene	13.149	252	144946	24.20	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.527	276	136189	24.28	ppm	97
97) Dibenz(a,h)acridine	14.282	279	126611	24.77	ppm	99
98) Dibenz[a,h]anthracene	14.560	278	148185	25.42	ppm	97
99) 7,12-Dimethylbenz(a)an...	12.738	256	69930	24.85	ppm	99
100) Benzo[g,h,i]perylene	14.811	276	145301	27.52	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137286.D
Acq On : 26 Apr 2019 9:25 am
Operator : angelar
Sample : cc6761-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 14:21:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 10:08:29 2019
Response via : Initial Calibration



9.6.82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137287.D
Acq On : 26 Apr 2019 9:53 am
Operator : angelar
Sample : cc6763-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 14:18:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration

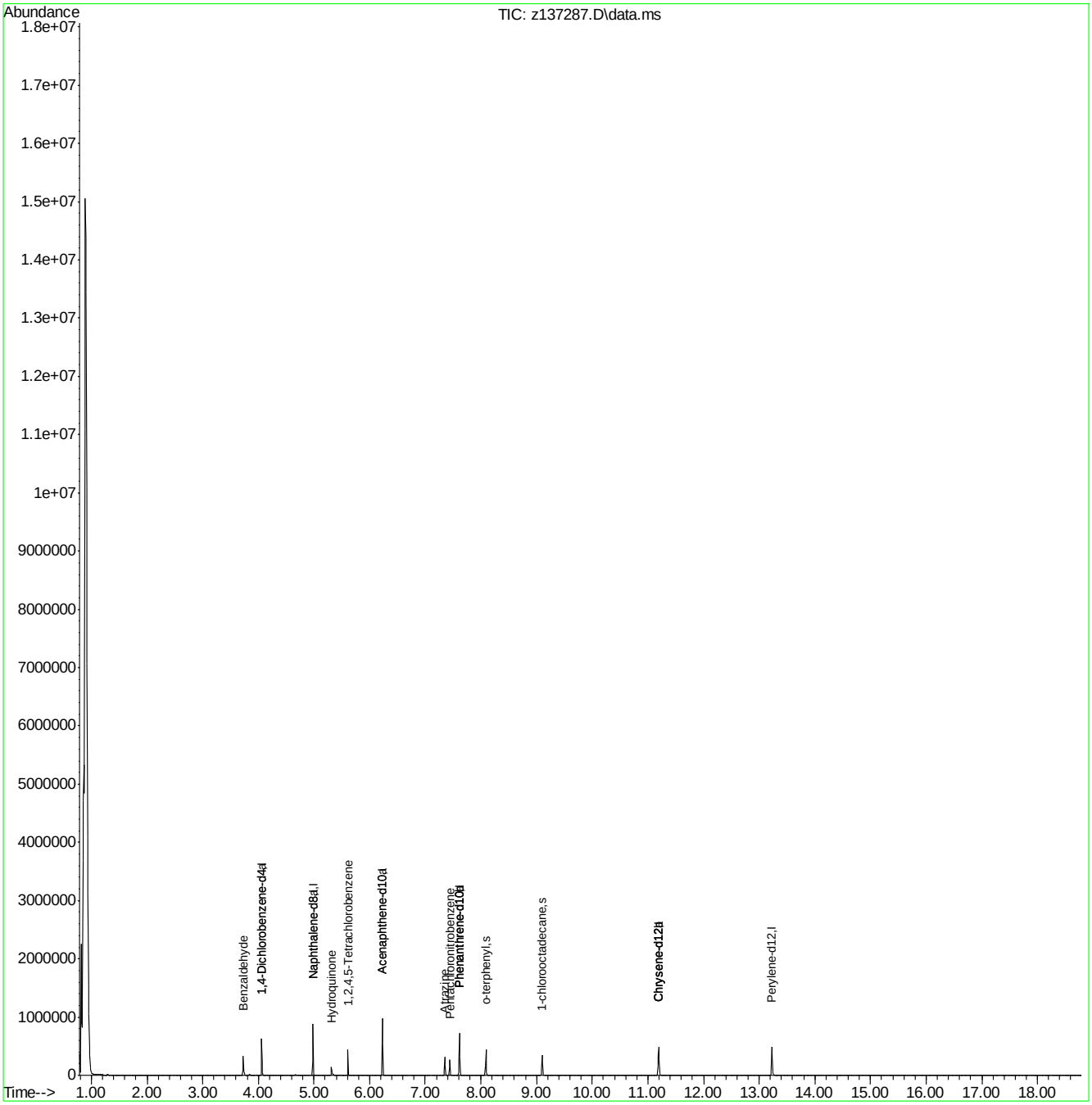
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.062	152	71488	40.00	ppm	-0.02
24) Naphthalene-d8	4.981	136	281843	40.00	ppm	-0.02
47) Acenaphthene-d10	6.231	164	147917	40.00	ppm	-0.02
69) Phenanthrene-d10	7.614	188	252345	40.00	ppm	-0.03
83) Chrysene-d12	11.199	240	207487	40.00	ppm	-0.05
91) Perylene-d12	13.229	264	214474	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.062	152	71488	40.00	ppm	0.00
103) Phenanthrene-d10a	7.614	188	252345	40.00	ppm	0.00
107) Chrysene-d12a	11.199	240	207487	40.00	ppm	0.00
109) Acenaphthene-d10a	6.231	164	147917	40.00	ppm	0.00
111) Naphthalene-d8a	4.981	136	281843	40.00	ppm	0.00
113) Phenanthrene-d10b	7.614	188	252345	40.00	ppm	0.00
115) Chrysene-d12b	11.199	240	207487	40.00	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
104) 1-chlorooctadecane	9.099	57	51366	29.12	ppm	0.00
Spiked Amount 50.000			Recovery = 58.24%			
105) o-terphenyl	8.090	230	83490	26.43	ppm	0.00
Spiked Amount 50.000			Recovery = 52.86%			
Target Compounds						Qvalue
102) Benzaldehyde	3.731	105	49499	27.48	ppm	99
106) Atrazine	7.353	215	15799	26.40	ppm	97
110) 1,2,4,5-Tetrachloroben...	5.611	216	50705	25.47	ppm	99
112) Hydroquinone	5.312	110	65588	29.26	ppm	98
114) Pentachloronitrobenzene	7.443	295	6360	22.80	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\ez6764\
Data File : z137287.D
Acq On : 26 Apr 2019 9:53 am
Operator : angelar
Sample : cc6763-25
Misc : op17006,ez6764,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 14:18:29 2019
Quant Method : C:\MSDCHEM\1\METHODS\MZ6761.M
Quant Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
QLast Update : Fri Apr 26 08:39:01 2019
Response via : Initial Calibration



GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182490-117	50ppm	ISTD	A0144955	4000ppm
			DCM- fisher	189494	---

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	3/7/2018	Sequence Loaded By:	chriss2	Quant Method/s	M2P3781
Batch ID	E2P3783	Analysis Date	3/8/2019	Data Processed By:	kristis	Injection Volume	1 uL
Approved By:	NINAP	Approved Date	1/2019 10:34:31 A				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	85593	DFTPP				1					ok	2:56am
2P	85594	IC3783-100		TCL42		2					ok	sv182535-50a
2P	85595	IC3783-80				3					ok	sv182535-50b
2P	85596	ICC3783-50				4					ok	sv182535-50c
2P	85597	IC3783-25				5					ok	sv182535-50d
2P	85598	IC3783-10				6					ok	sv182535-50e
2P	85599	IC3783-5				7					ok	sv182535-50g
2P	85600	IC3783-2				8					ok	sv182535-50h
2P	85601	IC3783-1				9					ok	sv182535-50i
2P	85602	ICV3783-50		AP9 Mix #2		10					ok	sv182490-65

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	85603	ICV3783-50		HQ 2nd		11					ok	sv182490-103a 6:54am

GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM- fisher	190729	---

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	4/5/2019	Sequence Loaded By:	chriss2	Quant Method/s	M2P3788
Batch ID	E2P3816	Analysis Date	4/5/2019	Data Processed By:	kristis	Injection Volume	1 uL
Approved By:	NINAP	Approved Date	10/2019 9:04:30 A				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86289	DFTPP				1					ok	6:10am
2P	86290	IC3816-100		BNA		2					ok	sv182535-96a
2P	86291	IC3816-80				3					ok	sv182535-96b
2P	86292	ICC3816-50				4					ok	sv182535-96c
2P	86293	IC3816-25				5					ok	sv182535-96d
2P	86294	IC3816-10				6					ok	sv182535-96e
2P	86295	IC3816-5				7					ok	sv182535-96g
2P	86296	IC3816-2				8					ok	sv182535-96h
2P	86297	IC3816-1				9					ok	sv182535-96i
2P	86298	ICV3816-50		BN1		10					ok	op192336-70

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86299	ICV3816-50		BN2		11					ok	op192336-72
2P	86300	ICV3816-50		Aniline		12					ng	op192336-39
2P	86301	ICV3816-50		Acid		13					ok	op192336-47
2P	86302	ICV3816-50		ABN Surr		14					ok	op192336-76
2P	86303	ICV3816-50		Bzd 3rd		15					ok	sv182490-113

GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM- fisher	190729	---

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	4/5/2019	Sequence Loaded By:	christc2	Quant Method/s	M2P3817
Batch ID	E2P3817	Analysis Date	4/5/2019	Data Processed By:	chriss2	Injection Volume	1 uL
Approved By:	NINAP	Approved Date	9/2019 4:44:00 PI				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86304	DFTPP				1					OK	3:23pm
2P	86305	ICV3817-50		bn1		2					not using	op192336-70, #4 low
2P	86306	ICV3817-50		bn2		3					not using	op192336-72, #40 low, 4:13pm
2P	86307	ICV3817-50		aniline		4					OK	op192336-85

GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
BNA	sv182535-121f	25ppm	DCM-fisher	191108	---
TCL42	sv182535-120f	25ppm			

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	4/5/2019	Sequence Loaded By:	carolb	Quant Method/s	M2P3816
Batch ID	E2P3831	Analysis Date	4/18/2019	Data Processed By:	dipap	Injection Volume	1 uL
Approved By:	KRISTIS	Approved Date	30/2019 4:15:33 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86727	DFTPP				1					ok	10.12pm
2P	86728	CC3816-25				2					ok	
2P	86729	CC3783-25				3					rr	
2P	86730	CC3783-25				4					ok	
	86731	OP19810-MB1	OP19810	AB8270TCL20,B82702MNAP	SO	5			x	x	ok	
	86732	OP19810-BS1	OP19810	AB8270TCL20,B82702MNAP	SO	6			x	x	ok	
2P	86733	JC86406-6	OP19810	AB8270TCL20	SO	7			x	x	ok	
2P	86734	JC86406-9	OP19810	AB8270TCL20	SO	8			x	x	ok	
2P	86735	JC86406-13	OP19810	AB8270TCL20	SO	9			x	x	ok	
2P	86736	JC86413-1	OP19810	B82702MNAP	SO	10			x	x	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86737	JC86413-2	OP19810	B82702MNAP	SO	11			x	x	ok	
2P	86738	JC86413-3	OP19810	B82702MNAP	SO	12			x	x	ok	
2P	86739	JC86406-2	OP19810	AB8270TCL20	SO	13			x	x	ok	
2P	86740	JC86406-7	OP19810	AB8270TCL20	SO	14			x	x	ok	
2P	86741	JC86406-8	OP19810	AB8270TCL20	SO	15			x	x	ok	
2P	86742	JC86406-10	OP19810	AB8270TCL20	SO	16			x	x		
2P	86743	JC86406-1	OP19810	AB8270TCL20	SO	17			x	x	ok/dl	rr 5X
	86744	OP19810-MS	OP19810	AB8270TCL20,B82702MNAP	SO	18			x	x	ok	
	86745	OP19810-MSD	OP19810	AB8270TCL20,B82702MNAP	SO	19			x	x	ok	
2P	86746	JC86406-3	OP19810	AB8270TCL20	SO	20			x	x	ok/dl	rr 10x/100x
2P	86747	JC86406-4	OP19810	AB8270TCL20	SO	21			x	x	ok/dl	rr 5x
2P	86748	JC86406-5	OP19810	AB8270TCL20	SO	22			x	x	ok/dl	rr 10x/100x
2P	86749	JC86406-11	OP19810	AB8270TCL20	SO	23			x	x	ok/dl	rr 10x
2P	86750	JC86406-14	OP19810	AB8270TCL20	SO	24			x	x	ok/dl	rr 20x 6:37am
2P	86751	JC86406-15	OP19810	AB8270TCL20	SO	25					rr	run not finished, rr 1X run method error
	86751b	JC86406-15	OP19810	AB8270TCL20	SO	25					no data	run method error
2P	86752	JC86424-2	OP19810	AB8270TCL20	SO	26						not ran
2P	86753	JC86424-3	OP19810	AB8270TCL20	SO	27						not ran
2P	86754	JC86406-12	OP19810	AB8270TCL20	SO	28	10					not ran

GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
BNA	sv182535-121b	50ppm	DCM-fisher	190729	---
TCL42	sv182535-120b	50ppm			

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	4/5/2019	Sequence Loaded By:	yujiac	Quant Method/s	M2P3816
Batch ID	E2P3832	Analysis Date	4/22/2019	Data Processed By:	michellc	Injection Volume	1 uL
Approved By:	KRISTIS	Approved Date	30/2019 4:16:39 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86752	DFTPP				1					N	PCP & BZD tailing high; rr
2P	86753	DFTPP				1					N	PCP tailing high; rr
2P	86754	DFTPP				1					N	61 high; PCP tailing high reinstalled
2P	86755	DFTPP				1					ok	1:11 pm
2P	86756	CC3816-50		bna		2					ok	3,4,30,43,90,92,96,98 high
2P	86757	CC3783-50		tcl42		3					ok	104, 112 high
2P	86758	JC86249-1	OP19724	AB8270SL3,BMS+MNAP	AQ	4		X	y	y	ok	no ecc
2P	86759	JC86249-2	OP19724	AB8270SL3,BMS+MNAP	AQ	5		X	y	y	ok	no ecc
2P	86760	JC86249-3	OP19724	AB8270SL3,BMS+MNAP	AQ	6		X	y	y	ok	no ecc
2P	86761	JC86249-4	OP19724	AB8270SL3,BMS+MNAP	AQ	7		X	y	y	ok	no ecc

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86762	JC86249-5	OP19724	AB8270SL3,BMS+MNAP	AQ	8		X	y	y	ok	no ecc
2P	86763	JC86249-6	OP19724	AB8270SL3,BMS+MNAP	AQ	9		X	y	1,2 high	ok	rr for istdno ecc
2P	86764	JC86249-7	OP19724	AB8270SL3,BMS+MNAP	AQ	10		X	y	y	ok	no ecc
2P	86765	JC86249-8	OP19724	AB8270SL3,BMS+MNAP	AQ	11		X	y	1 high	ok	rr for istdno ecc
2P	86766	JC86249-9	OP19724	AB8270SL3,BMS+MNAP	AQ	12		X	y	y	ok	no ecc
2P	86767	JC86406-1	OP19810	AB8270TCL20	SO	13	5		y	y	ok	
2P	86768	JC86406-4	OP19810	AB8270TCL20	SO	14	5		y	high	ok	
2P	86769	JC86406-3	OP19810	AB8270TCL20	SO	15	100		y	high	ok	
2P	86770	JC86406-5	OP19810	AB8270TCL20	SO	16	100		y	high	ok	
2P	86771	JC86406-11	OP19810	AB8270TCL20	SO	17	10		y	high	ok	
2P	86772	JC86406-14	OP19810	AB8270TCL20	SO	18	20		y	high	ok	
2P	86773	JC86406-15	OP19810	AB8270TCL20	SO	19			y	y	ok	
2P	86774	JC86424-2	OP19810	AB8270TCL20	SO	20			y	high	ok	
2P	86775	JC86424-3	OP19810	AB8270TCL20	SO	21			y	high	ok	
2P	86776	JC86406-12	OP19810	AB8270TCL20	SO	22	10		high	high	ok	diluted due to visc.rerun for overcal.922 pm
2P	86777	JC86249-6	OP19724	AB8270SL3,BMS+MNAP	AQ	9		X	y	1high	ok	ran after 2p86766.no ecc
2P	86778	JC86249-8	OP19724	AB8270SL3,BMS+MNAP	AQ	11		X	y	1 high	ok	ran after 2p86766.no ecc

GCMS Semi Volatile Run Log

Instrument ID: GCMS2P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
BNA	sv182535-121e	25ppm	DCM-fisher	190729	---
TCL42	sv182535-120e	25ppm			
bna verif	sv182535-10t	2ppm			

Column	il MS 30m x 0.25 mm x (	Initial Calib Date	4/5/2019	Sequence Loaded By:	chriss2	Quant Method/s	M2P3816
Batch ID	E2P3839	Analysis Date	4/27/2019	Data Processed By:	michellc	Injection Volume	1 uL
Approved By:	KRISTIS	Approved Date	30/2019 4:17:00 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86896	DFTPP				1					ok	12:14am
2P	86897	CC3816-25				2					ok	
2P	86898	CC3783-25				3					ok	
2P	86899	BNA VERIF-2PPM				4					ok	
	86900	OP19948-MB1	OP19948	AB8270TCL20,AB8270TCL20+,B8270SL	SO	5		X	y	y	ok	
	86901	OP19948-BS1	OP19948	AB8270TCL20,AB8270TCL20+,B8270SL	SO	6		X	y	y	ok	
2P	86902	JC86689-4	OP19948	AB8270TCL20	SO	7			y	y	ok	
2P	86903	JC86689-5	OP19948	AB8270TCL20	SO	8			y	y	ok	
2P	86904	JC86689-3	OP19948	AB8270TCL20	SO	9			y	y	ok	
2P	86905	JC86696-3	OP19948	AB8270TCL20	SO	10			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86906	JC86696-4	OP19948	AB8270TCL20	SO	11			y	y	ok	
2P	86907	JC86696-1	OP19948	AB8270TCL20	SO	12			y	y	ok	
	86908	OP19948-MS	OP19948	AB8270TCL20,AB8270TCL20+,B8270SL	SO	13		X	y	y	ok	
	86909	OP19948-MSD	OP19948	AB8270TCL20,AB8270TCL20+,B8270SL	SO	14		X	y	y	ok	
2P	86910	JC86716-3	OP19948	AB8270TCL20	SO	15			y	y	ok	
2P	86911	JC86716-6	OP19948	AB8270TCL20	SO	16			y	y	ok	
2P	86912	JC86710-3	OP19948	AB8270TCL20+	SO	17		X	y	y	ok	
2P	86913	JC86406-12	OP19810	AB8270TCL20	SO	18	1000		y	y	ok	
2P	86914	JC86716-8	OP19948	AB8270TCL20	SO	19	40		y	y	ok	rerun overcal
2P	86915	JC86716-7	OP19948	AB8270TCL20	SO	20	10		y	y	ok	
2P	86916	JC86716-4	OP19948	AB8270TCL20	SO	21	5		y	y	ok	
2P	86917	JC86716-5	OP19948	AB8270TCL20	SO	22	100		y	y	ok	rerun overcal
2P	86918	JC86716-1	OP19948	AB8270TCL20	SO	23	5		y	y	ok	
2P	86919	JC86406-12	OP19810	AB8270TCL20	SO	24	100		y	y	ok	
2P	86920	JC86696-2	OP19948	AB8270TCL20	SO	25			y	y	ok	
2P	86921	JC86716-7	OP19948	AB8270TCL20	SO	26			y	y	ok	
2P	86922	JC86716-4	OP19948	AB8270TCL20	SO	27			y	y	ok	
2P	86923	OP19948-MS2				28			y	y	ok	
2P	86924	OP19948-MSD2				29			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2P	86925	JC86716-1	OP19948	AB8270TCL20	SO	30			y	y	ok	
2P	86926	JC86716-5	OP19948	AB8270TCL20	SO	31	2		y	y	ok	diluted for visc.
2P	86927	JC86716-8	OP19948	AB8270TCL20	SO	32	2		y	y	ok	diluted for visc.
2P	86928	JC86716-2	OP19948	AB8270TCL20	SO	33	10		y	y	ok	diluted for visc.rerun overcal
2P	86929	JC86424-2	OP19810	AB8270TCL20	SO	34			y	y	ok	
2P	86930	JC86424-3	OP19810	AB8270TCL20	SO	35			y	y	ok	1208 pm
2P	86931	JC86406-12	OP19810	AB8270TCL20	SO	36	20		y	y	no	diluted for visc. Out of tune. Rerun for overcal

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM/fisher	190729	

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6556	Analysis Date	4/12/2019	Data Processed By:	ying li	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:48:51 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153397	DFTPP				1						
M	153398	DFTPP				1						
M	153399	DFTPP				1						
M	153400	DFTPP				1					ok	4:58pm
M	153401	IC6556-100				2					ok	sv182535-96a
M	153402	IC6556-80				3					ok	sv182535-96b
M	153403	ICC6556-50				4					ok	sv182535-96c
M	153404	IC6556-25				5					ok	sv182535-96d
M	153405	IC6556-10				6					ok	sv182535-96e
M	153406	IC6556-5				7					ok	sv182535-96g

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153407	IC6556-2				8					ok	sv182535-96h
M	153408	IC6556-1				9					ok	sv182535-96i
M	153409	ICV6556-50		bn1		10					ok	op182336-51
M	153410	ICV6556-50		bn2		11					ok	op182160-30
M	153411	ICV6556-50		acid		12					ok	op192336-47
M	153412	ICV6556-50		aniline		13					ng	op192336-72 10#/68# high
M	153413	ICV6556-50		abn surr		14					ok	op192336-76
M	153414	ICV6556-50		bzd 3rd		15					ok	sv182490-113 12:06am

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM/fisher	190729	

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	chriss2	Quant Method/s	MM6556
Batch ID	EM6557	Analysis Date	4/13/2019	Data Processed By:	ying li	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:49:14 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153415	DFTPP				1						51 low, up flow
M	153416	DFTPP				1						51 low, rerun
M	153417	DFTPP				1						51 low, drop flow
M	153418	DFTPP				1						51 low, drop repeller
M	153419	DFTPP				1					ok	1:19am
M	153420	IC6557-100		TCL42		2					ok	sv192573-9a
M	153421	IC6557-80				3					ok	sv192573-9b
M	153422	ICC6557-50				4					ok	sv192573-9c
M	153423	IC6557-25				5					ok	sv192573-9d
M	153424	IC6557-10				6					ok	sv192573-9e

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153425	IC6557-5				7					ok	sv192573-9g
M	153426	IC6557-2				8					ok	sv192573-9h
M	153427	IC6557-1				9					ok	sv192573-9i 5:11am
M	153428	ICV6557-50		AP9 Mix#2		10					nr	sv192573-8
M	153429	ICV6557-50		HQ 2nd		11					nr	sv18490-103b

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
bna	sv182535-121b	50ppm	DCM/fisher	190729	
tcl42	sv182535-120b	50ppm			
bzd	sv182535-71b	50ppm			
bna verf	sv182535-10t	2ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6559	Analysis Date	4/15/2019	Data Processed By:	aimeel	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:50:30 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153443	DFTPP				1					ok	1:54pm
M	153444	ICV6556-50		aniline		2					ok	op192336-85
M	153445	CC6556-50		bna		3					ok	Low 31,60
M	153446	CC6557-50		tcl42		4					OK	
M	153447	CC6558-50		bzd		5					OK	
M	153448	BNA 2PPM VERF				6					OK	Verified
M	153449	OP19637-MB1	OP19637	B8270HQ	AQ	7						
M	153450	JC80385A-2I	OP19637	B8270HQ	AQ	8						bs1
M	153451	JC80385A-2I	OP19637	B8270HQ	AQ	9						bs2
M	153452	JC80385A-2I	OP19637	B8270HQ	AQ	10						bs3

GCMS Semi Volatile Run Log

	Data File	Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
	153453	OP19732-MB1	OP19732		SO	11		X	y	y	OK	Hit 53
	153454	OP19732-BS1	OP19732		SO	12		X	y	y	OK	
	153455	OP19732-BSD	OP19732		SO	13		X	y	y	OK	
	153456	JC86060-8F	OP19680	B8270TICS+	AQ	14		X	y	y	OK	
	153457	JC86060-8	OP19680	B8270TICS+	AQ	15		X	y	y	OK	
M	153458	JC86229-5	OP19732	AB8270TCL20+	SO	16		X	y	y	OK	
M	153459	JC86222-1	OP19732	AB8270PPTCL20+	SO	17		X	y	y	OK	
M	153460	JC86204-7	OP19732	AB8270TCL20	SO	18			y	y	OK	
	153461	OP19732-MS	OP19732		SO	19		X	y	y	OK	
	153462	OP19732-MSD	OP19732		SO	20		X	y	y	OK	
M	153463	JC86204-8	OP19732	AB8270TCL20	SO	21			y	y	OK	
M	153464	JC86204-14	OP19732	AB8270TCL20	SO	22			y	y	OK	
M	153465	JC86204-10	OP19732	AB8270TCL20	SO	23			y	y	OK	
M	153466	JC86204-9	OP19732	AB8270TCL20	SO	24			y	y	OK	
M	153467	JC86204-13	OP19732	AB8270TCL20	SO	25			y	y	OK	
M	153468	JC86204-12	OP19732	AB8270TCL20	SO	26			y	y	N	Needs Dilution
M	153469	JC86204-4	OP19732	AB8270TCL20	SO	27			y	y	OK	1:50am

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
bna	sv182535-121e	50ppm	DCM/fisher	190729	
tcl42	sv182535-120e	50ppm			
verification bna	sv18-2535-96i	1ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	carolb	Quant Method/s	MM6556
Batch ID	EM6566	Analysis Date	4/20/2019	Data Processed By:	michellc	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	30/2019 4:18:02 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153629	DFTPP				1					ok	1042 pm
M	153630	CC6556-50		bna		2					ok	
M	153631	CC6557-50		tcl		3					ok	
M	153632	VERIF 1PPM		bna		4					ok	
	153633	OP19854-MB1	OP19854	AB8270TCL20,B8270PAH	SO	5			y	y	ok	
	153634	OP19854-BS1	OP19854	AB8270TCL20,B8270PAH	SO	6			y	y	ok	
M	153635	JC86567-1	OP19854	B8270PAH	SO	7			y	y	ok	
M	153636	JC86567-2	OP19854	B8270PAH	SO	8			y	y	ok	
M	153637	JC86567-4	OP19854	B8270PAH	SO	9			y	y	ok	
M	153638	JC86553-22	OP19854	AB8270TCL20	SO	10			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153639	JC86567-3	OP19854	B8270PAH	SO	11			y	y	ok	
M	153640	JC86567-7	OP19854	B8270PAH	SO	12			y	y	ok	
M	153641	JC86567-5	OP19854	B8270PAH	SO	13			y	y	ok	
M	153642	JC86553-16	OP19854	AB8270TCL20	SO	14			y	y	ok	
M	153643	JC86553-25	OP19854	AB8270TCL20	SO	15			y	y	ok	
M	153644	JC86553-27	OP19854	AB8270TCL20	SO	16			y	y	ok	
M	153645	JC86553-17	OP19854	AB8270TCL20	SO	17			y	y	ok	rerun for overcal
M	153646	JC86553-21	OP19854	AB8270TCL20	SO	18			y	y	ok	
M	153647	JC86553-23	OP19854	AB8270TCL20	SO	19			y	y	ok	rerun for overcal
M	153648	JC86553-28	OP19854	AB8270TCL20	SO	20			y	y	ok	
M	153649	JC86406-10	OP19854	AB8270TCL20	SO	21			y	y	ok	
M	153650	OP19854-MS	OP19854	AB8270TCL20,B8270PAH	SO	22			y	y	ok	
M	153651	OP19854-MSD	OP19854	AB8270TCL20,B8270PAH	SO	23			y	y	ok	
M	153652	JC86553-26	OP19854	AB8270TCL20	SO	24			y	y	ok	
M	153653	JC86553-24	OP19854	AB8270TCL20	SO	25			y	y	ok	rerun for overcal
M	153654	JC86553-20	OP19854	AB8270TCL20	SO	26			y	y	ok	rerun for overcal.1037 am
M	153655	JC86553-18	OP19854	AB8270TCL20	SO	27					no	out of tune
M	153656	JC86553-19	OP19854	AB8270TCL20	SO	28					no	out of tune

GCMS Semi Volatile Run Log

Instrument ID: GCMSZ

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	DCM/fisher	191108	---
			ISTD	CL13166	4000ppm

Column	silms30mx0.25mmx0.25	Initial Calib Date	4/25/2019	Sequence Loaded By:	chriss2	Quant Method/s	MZ6761
Batch ID	EZ6761	Analysis Date	4/25/2019	Data Processed By:	ying li	Injection Volume	1ul
Approved By:	KRISTIS	Approved Date	30/2019 4:18:20 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137237	DFTPP				1						plunger error, rerun
Z	137238	DFTPP				1					ok	3:59am
Z	137239	IC6761-100		BNA		2					ok	sv182535-96a
Z	137240	IC6761-80				3					ok	sv182535-96b
Z	137241	ICC6761-50				4					ok	sv182535-96c
Z	137242	IC6761-25				5					ok	sv182535-96d
Z	137243	IC6761-10				6					ok	sv182535-96e
Z	137244	IC6761-5				7					ok	sv182535-96g
Z	137245	IC6761-2				8					ok	sv182535-96h
Z	137246	IC6761-1				9					ok	sv182535-96i

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137247	ICV6761-50		BN1		10					ok	op192336-51
Z	137248	ICV6761-50		BN2		11					ok	op192336-72
Z	137249	ICV6761-50		Aniline		12					ok	op192336-85
Z	137250	ICV6761-50		Acid		13					ok	op192336-47
Z	137251	ICV6761-50		ABN Surr		14					ok	op192336-76
Z	137252	ICV6761-50		Bzd 3rd		15					ok	sv182490-113 11:57am

GCMS Semi Volatile Run Log

Instrument ID: GCMSZ

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	DCM/fisher	191108	---
BNA	sv182535-121c	50ppm	ISTD	CL13166	4000ppm

Column	silms30mx0.25mmx0.25	Initial Calib Date	4/25/2019	Sequence Loaded By:	angelar	Quant Method/s	MZ6761
Batch ID	EZ6762	Analysis Date	4/25/2019	Data Processed By:		Injection Volume	1ul
Approved By:	KRISTIS	Approved Date	30/2019 4:18:40 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137253	DFTPP				1					ok	2:45pm
Z	137254	CC6761-50		bna		2					ok	
Z	137255	OP19957-MB1	OP19957	AB8270TCLP	SO	3			y	y	ok	
Z	137256	OP19957-LB1	OP19957	AB8270TCLP	SO	4			y	y	ok	
Z	137257	OP19957-BS1	OP19957	AB8270TCLP	SO	5			y	y	ok	
	137258	OP19810-MB1	OP19810	AB8270TCL20,B82702MNAP	SO	6			y	y	ok	
Z	137259	JC86217-5R	OP19957	AB8270TCLP	SO	7			y	y	ok	
Z	137260	JC86217-10R	OP19957	AB8270TCLP	SO	8			y	y	ok	
Z	137261	JC86217-15R	OP19957	AB8270TCLP	SO	9			y	y	ok	
Z	137262	OP19957-LS1	OP19957	AB8270TCLP	SO	10			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137263	OP19957-MSD	OP19957	AB8270TCLP	SO	11			y	y	ok	
Z	137264	TD37703-1	OP19957	AB8270TCLP	SO	12			y	y	ok	
Z	137265	TD37704-1	OP19957	AB8270TCLP	SO	13			y	y	ok	
Z	137266	TD37705-1	OP19957	AB8270TCLP	SO	14			y	y	ok	
Z	137267	TD37706-1	OP19957	AB8270TCLP	SO	15			y	y	ok	
Z	137268	TD37707-1	OP19957	AB8270TCLP	SO	16			y	y	ok	
Z	137269	JC86406-3	OP19810	AB8270TCL20	SO	17	100		y	y	ok	
Z	137270	JC86406-5	OP19810	AB8270TCL20	SO	18	100		y	y	ok	
Z	137271	JC86406-4	OP19810	AB8270TCL20	SO	19	5		y	y	ok	
Z	137272	JC86406-14	OP19810	AB8270TCL20	SO	20	20		y	y	ok	
Z	137273	JC86406-11	OP19810	AB8270TCL20	SO	21	10		y	y	ok	1155pm

GCMS Semi Volatile Run Log

Instrument ID: GCMSZ

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	DCM/fisher	191108	---
			ISTD	CL13166	4000ppm

Column	silms30mx0.25mmx0.25	Initial Calib Date	4/25/2019	Sequence Loaded By:	chriss2	Quant Method/s	MZ6761
Batch ID	EZ6763	Analysis Date	4/26/2019	Data Processed By:	ying li	Injection Volume	1ul
Approved By:	KRISTIS	Approved Date	30/2019 4:18:56 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137274	DFTPP				1					ok	2:46am
Z	137275	IC6763-100		TCL42		2					ok	sv192573-9a
Z	137276	IC6763-80				3					ok	sv192573-9b
Z	137277	ICC6763-50				4					ok	sv192573-9c
Z	137278	IC6763-25				5					ok	sv192573-9d
Z	137279	IC6763-10				6					ok	sv192573-9e
Z	137280	IC6763-5				7					ok	sv192573-9g
Z	137281	IC6763-2				8					ok	sv192573-9h
Z	137282	IC6763-1				9					ok	sv192573-9i
Z	137283	ICV6763-50		AP9 Mix #2		10					ok	sv182490-78

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137284	ICV6763-50		HQ 2nd		11					ok	sv182490-103a 7:47am

SGS
1713 of 2068
JC86406

GCMS Semi Volatile Run Log

Instrument ID: GCMSZ

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	DCM/fisher	191108	---
BNA	sv182535-121e	25ppm	ISTD	CL13166	4000ppm
TCL42	sv182535-120e	25ppm			

Column	silms30mx0.25mmx0.25	Initial Calib Date	4/25/2019	Sequence Loaded By:	angelar	Quant Method/s	MZ6761
Batch ID	EZ6764	Analysis Date	4/26/2019	Data Processed By:	Ying li/DIPAP	Injection Volume	1ul
Approved By:	KRISTIS	Approved Date	30/2019 4:19:13 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137285	DFTPP				1					ok	9:10am
Z	137286	CC6761-25		bna		2					ok	
Z	137287	CC6763-25		tcl42		3					ok	
Z	137288	OP19684A-MB1	OP19684A	B8270EPHNAP+2MNAP	SO	4		X	y	y	ok	
Z	137289	OP19684A-BS1	OP19684A	B8270EPHNAP+2MNAP	SO	5		X	y	y	ok	
Z	137290	OP19684A-BSD	OP19684A	B8270EPHNAP+2MNAP	SO	6		X	y	y	ok	
Z	137291	OP19712A-MB1	OP19712A	B8270EPHNAP+2MNAP	SO	7		X	y	y	ok	
Z	137292	OP19712A-BS1	OP19712A	B8270EPHNAP+2MNAP	SO	8		X	y	y	ok	
Z	137293	OP19712A-BSD	OP19712A	B8270EPHNAP+2MNAP	SO	9		X	y	y	ok	
Z	137294	OP19875A-MB1	OP19875A	B8270EPHPAH	SO	10			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
Z	137295	OP19875A-BS1	OP19875A	B8270EPHPAH	SO	11			y	y	ok	
Z	137296	OP19875A-BSD	OP19875A	B8270EPHPAH	SO	12			y	y	ok	
Z	137297	OP19711A-MB1	OP19711A	B8270EPHNAP+2MNAP	SO	13		X	y	y	ok	
Z	137298	OP19711A-BS1	OP19711A	B8270EPHNAP+2MNAP	SO	14		X	y	y	ok	
Z	137299	OP19711A-BSD	OP19711A	B8270EPHNAP+2MNAP	SO	15		X	y	y	ok	
Z	137300	JC86103-12R	OP19711A	B8270EPHNAP+2MNAP	SO	16		X	y	y	ok	
Z	137301	JC86116-4R	OP19712A	B8270EPHNAP+2MNAP	SO	17		X	y	y	ok/r	rr 5x
Z	137302	JC86632-1R	OP19875A	B8270EPHPAH	SO	18			X	X	OK	
Z	137303	OP19875A-DUP	OP19875A	B8270EPHPAH	SO	19			X	X	OK	
Z	137304	JC86632-4R	OP19875A	B8270EPHPAH	SO	20			X	X	OK	
Z	137305	JC86045-4R	OP19684A	B8270EPHNAP+2MNAP	SO	21		X	y	y	ok	rr 1:2 2MNAP
Z	137306	OP19712A-MS	OP19712A	B8270EPHNAP+2MNAP	SO	22		X	X	X	OK	
Z	137307	OP19712A-MSD	OP19712A	B8270EPHNAP+2MNAP	SO	23		X	X	X	OK	
Z	137308	JC86406-14	OP19810	AB8270TCL20	SO	24	50		y	y	ok	
Z	137309	JC86406-11	OP19810	AB8270TCL20	SO	25	20		y	y	ok	
Z	137310	JC86406-5	OP19810	AB8270TCL20	SO	26	5		y	y	ok	9:07pm

LOGBOOK ID:

ABN Extraction Log - Solids

Date started: 4/17/19 Time started: 18:45
Date finished: 4-18-2019 Time finished: 00:08

Extract Method (CHECK/OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C _____
Waste Dil. SW3580A _____ Soxhlet SW3540C _____

BATCH # MS 19810 RACK# R-46

Weighed by:	aj
Extracted by:	SH
Concentrated by:	SH
Final Vol. Top-up:	SH
Vialed by:	SH
Supervisor Review:	4.18.19

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume: due 4/30
Other:

	Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Wet Wt. (g) Oil (g) Liq (mL)	Decant Y	Decant N	Microwave ID / Sonicator ID	Final Extract Color	Final Extract Vol(mL)	GPC Cleanup	Comments
	MB1	abn		sand	30.0			15	clear	1.0		
	BS1			sand	30.0			15	yellow	1.0		
	JC86406-1 MS		1	soil	30.1			15	brown	1.0		
	MSD		1	soil	30.1			15	brown	1.0		
	BS											
	MS											
	MSD											
	BS											
	MS											
	MSD											
1	JC86406-1	abn	1	soil	30.0			15	brown	1.0		
2	-2		1	clay/soil	31.4			15	brown	1.0		
3	-3		1	soil	30.8			15	brown	1.0		
4	-4		1	soil	30.8			15	brown	1.0		
5	-5		1	soil	31.4			15	brown	1.0		
6	-6		1	soil/sand	31.2			15	yellow	1.0		
7	-7		1	soil/clay	30.0			15	brown	1.0		
8	-8		1	clay	31.8			15	brown	1.0		
9	-9		1	clay	30.0			15	yellow	1.0		
10	-10		2	clay	30.2			15	brown	1.0		
11	-11		1	clay	30.7			15	brown	1.0		
12	-12		1	wet soil	32.0			15	brown	1.0		
13	-13		1	clay	31.4			15	yellow	1.0		
14	-14		1	soil	30.3			15	brown	1.0		
15	-15		1	soil	31.9			15	brown	1.0		
16	JC86413-1		1	wet sand	30.4			15	clear	1.0		
17	-2		1	clay/sand	30.7			15	clear	1.0		
18	-3		1	sand	30.2			15	brown	1.0	•	
19	JC86424-2		1	sand	30.9			15	brown	1.0		
20	-3		1	soil	31.6			15	brown	1.0		

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:
•final color is clear.

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	10, 11	74.2, 74.7	-1.0	73.2, 73.7	0.8
Waterbath Chiller (GPM)	V3, V4	6, 7	—	—	0.8
NEVAP (32-38°C, LPM)	2	35	+0.1	35.1	10
Balance	B35	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	OP192336097	50	1.0
ABN DOD SIM			

WITNESS SIGN: NIT SPIKE SIGN: SH

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	OP192336067	50	Acid: 1.0
Acid (for SIM)			A(SIM):
Base #1	OP192336087	50	1.0
Base #2	OP192336093	50	1.0
Aniline	OP192336095	50	1.0
BSIM			

WITNESS SIGN: NIT SPIKE SIGN: SH

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	191109 / 186143	fisher / fisher	30
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	6435092	3-15-19	agilent
SODIUM SULFATE	183473	4-18-19	fisher
FILTER PAPER	168194760		fisher

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	86A-1801030IA	3-13-19	fisher

SGS
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LOGBOOK ID:

ABN Extraction Log - Solids

Date started: 4/19/19 Time started: 0745
Date finished: 4/19/19 Time finished: 1130

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C ____
Waste Dil. SW3580A ____ Soxhlet SW3540C ____

BATCH # MS 19854 RACK# B-46

Weighed by:	NT
Extracted by:	NT CC
Concentrated by:	CC
Final Vol. Top-up:	
Vialed by:	CC, NT
Supervisor Review:	BF 4/19/19

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	3.11	796.701	-1.0	796.741	-
Waterbath Chiller (GPM)	N3.44	7.6e	-	-	1.0
NEVAP (32-38°C, LPM)	2	35.1	1.01	35.52	1.00
Balance	2018	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	192336G7	50	1.0
ABN DOD SIM			

WITNESS SIGN: SA SPIKE SIGN: NT

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	192336G7	50	Acid: 1.0
Acid (for SIM)			A(SIM):
Base #1	192336G7	50	1.6
Base #2	192336G5	50	1.0
Aniline	192336G6	50	1.0
BSIM			

WITNESS SIGN: SA SPIKE SIGN: NT

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	191165 18836	[illegible]	30.0
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	0435082	5.20.19	CHEM
SODIUM SULFATE	1324 12	4.13.19	PISTOL
FILTER PAPER	16956462		PISTOL

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	5718001803	33.19	PISTOL

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD: JC86406-10
Final Volume: due 4/24
Other:

	Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Wet Wt (g) Oil (g) Liq (mL)	Decant Y	Decant N	Sonication ID	Microwave ID	Final Extract Color	Final Extract Vol(mL)	GPC Cleanup	Comments
	MB1	abn		Sand	400			15		CLEAR	1.0		
	BS1			Sand	400			15		YELLOW	1.0		
	JC86553-10MS												
	MSD												
	BS												
	JC86406-10MS		1	Soil	30.8		/	15		Brown	1.0		
	MSD		1	Soil	31.5		/	15		Brown	1.0		
	BS												
	MS												
	MSD												
1	JC86553-16	abn	1	Soil	30.2		/	15		Yellow	1.0		
2	-17		1	Clay	30.3		/	15		Brown	1.0		
3	-18		1	Soil	30.4		/	15		Brown	1.0		
4	-19		1	Soil	30.5		/	15		Brown	1.0		
5	-20		1	Soil	15.4		/	15		Brown	1.0		
6	-21		1	Clay	30.3		/	15		Brown	1.0		
7	-22		1	Soil	31.2		/	15		Yellow	1.0		
8	-23		1	Soil	30.4		/	15		Brown	1.0		
9	-24		1	Soil	31.3		/	15		Brown	1.0		
10	-25		1	Clay	30.6		/	15		Brown	1.0		
11	-26		1	Soil	30.4		/	15		Brown	1.0		
12	-27		1	Soil	30.6		/	15		Brown	1.0		
13	-28		1	Soil	30.1		/	15		Brown	1.0		
14	JC86567-1		1	Soil	31.4		/	15		Brown	1.0		
15	-2		1	Soil	31.4		/	15		Yellow	1.0		
16	-3		1	Soil	30.4		/	15		Clear	1.0		
17	-4		1	Rocks	15.8		/	15		Yellow	1.0		
18	-5		1	Soil	30.9		/	15		Yellow	1.0		
19	-7		1	Soil	30.0		/	15		Clear	1.0		
20	JC86406-10		1	Soil	31.8		/	15		Brown	1.0		

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:
cFIAS 0302

SGS
Form: OP019A-10
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RX

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:04	MA46522-STD1	1		B=1.6076e-004, C=2.0044e-001, Rho=0.9999190
12:05	MA46522-STD2	1		STDB
12:06	MA46522-STD3	1		STDC
12:08	MA46522-STD4	1		STDD
12:10	MA46522-STD5	1		STDE
12:12	MA46522-STD6	1		STDF
12:15	MA46522-ICV1	1		
12:17	MA46522-ICB1	1		
12:19	MA46522-CCV1	1		
12:20	MA46522-CCB1	1		
12:22	MA46522-CRI1	1		
12:24	MP14310-MB1	1		
12:26	MP14310-B1	1		
12:27	ZZZZZZ	1		
12:29	MA46522-CCV2	1		
12:30	MA46522-CCB2	1		
13:09	MA46522-CCV3	1		
13:10	MA46522-CCB3	1		
13:31	MP14301-MB1	1		
13:32	MP14301-B1	1		
13:34	MP14301-S1	1		
13:36	MP14301-S2	1		
13:38	JC86331-1	1		(sample used for QC only; not part of login JC86406)
13:39	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	MA46522-CCV4	1		
13:49	MA46522-CCB4	1		
13:51	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:58	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:05	MP14302-MB1	1		
14:07	MA46522-CCV5	1		
14:08	MA46522-CCB5	1		
14:10	MP14302-B1	1		
14:11	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:15	JC86406-14	1		
14:18	JC86406-1	1		
14:19	JC86406-2	1		
14:21	JC86406-3	1		
14:23	JC86406-4	1		
14:26	JC86406-5	1		
14:28	MA46522-CCV6	1		
14:30	MA46522-CCB6	1		
14:32	JC86406-6	1		
14:34	JC86406-7	1		
14:36	JC86406-8	1		
14:38	JC86406-9	1		
14:40	JC86406-10	1		
14:42	JC86406-11	1		
14:44	JC86406-12	1		
14:46	JC86406-13	1		
14:48	JC86406-15	1		
14:50	MA46522-CCV7	1		
14:52	MA46522-CCB7	1		
14:55	MA46522-CRI2	1		
14:57	MA46522-CCV8	1		
14:58	MA46522-CCB8	1		
15:33	MA46522-CCV9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:34	MA46522-CCB9	1		
15:36	JC86406-2	5		
15:38	JC86406-3	2		
15:40	JC86406-7	5		
15:42	JC86406-12	5		
15:44	MP14302-S1	1		
15:46	ZZZZZZ	1		
15:49	MP14302-S2	1		
15:50	MA46522-CRI3	1		
15:52	MA46522-CCV10	1		
15:54	MA46522-CCB10	1		
16:05	JC86406-2	5		Confirmation
16:07	JC86406-3	5		Confirmation
16:09	JC86406-7	5		Confirmation
16:11	JC86406-12	5		Confirmation
---------->	Last reportable sample/prep for job JC86406			
16:12	MA46522-CRI4	1		
16:14	MA46522-CCV11	1		
16:16	MA46522-CCB11	1		
---------->	Last reportable CCB for job JC86406			

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:15	MA46522-ICV1	1	X	
12:17	MA46522-ICB1	1	X	
12:19	MA46522-CCV1	1	X	
12:20	MA46522-CCB1	1	X	
12:22	MA46522-CRI1	1	X	
12:24	MP14310-MB1	1	X	
12:26	MP14310-B1	1	X	
12:27	ZZZZZZ	1		
12:29	MA46522-CCV2	1	X	
12:30	MA46522-CCB2	1	X	
13:09	MA46522-CCV3	1	X	
13:10	MA46522-CCB3	1	X	
13:31	MP14301-MB1	1	X	
13:32	MP14301-B1	1	X	
13:34	MP14301-S1	1	X	
13:36	MP14301-S2	1	X	
13:38	JC86331-1	1	X	(a)
13:39	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	MA46522-CCV4	1	X	
13:49	MA46522-CCB4	1	X	
13:51	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:05	MP14302-MB1	1	X	
14:07	MA46522-CCV5	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
14:08	MA46522-CCB5	1	X
14:10	MP14302-B1	1	X
14:11	ZZZZZZ	1	
14:14	ZZZZZZ	1	
14:15	JC86406-14	1	X
14:18	JC86406-1	1	X
14:19	JC86406-2	1	
14:21	JC86406-3	1	
14:23	JC86406-4	1	X
14:26	JC86406-5	1	X
14:28	MA46522-CCV6	1	X
14:30	MA46522-CCB6	1	X
14:32	JC86406-6	1	X
14:34	JC86406-7	1	
14:36	JC86406-8	1	X
14:38	JC86406-9	1	X
14:40	JC86406-10	1	X
14:42	JC86406-11	1	X
14:44	JC86406-12	1	
14:46	JC86406-13	1	X
14:48	JC86406-15	1	X
14:50	MA46522-CCV7	1	X
14:52	MA46522-CCB7	1	X
14:55	MA46522-CRI2	1	X
14:57	MA46522-CCV8	1	X
14:58	MA46522-CCB8	1	X
15:33	MA46522-CCV9	1	X
15:34	MA46522-CCB9	1	X
15:36	JC86406-2	5	X
15:38	JC86406-3	2	X
15:40	JC86406-7	5	X
15:42	JC86406-12	5	X
15:44	MP14302-S1	1	X
		Element:	Hg

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46522
Parameters: Hg

Time	Sample Description	Dilution	Element: Hg
15:46	ZZZZZZ	1	
15:49	MP14302-S2	1	X
15:50	MA46522-CRI3	1	X
15:52	MA46522-CCV10	1	X
15:54	MA46522-CCB10	1	X
16:05	JC86406-2	5	
16:07	JC86406-3	5	
16:09	JC86406-7	5	
16:11	JC86406-12	5	
16:12	MA46522-CRI4	1	X
16:14	MA46522-CCV11	1	X
16:16	MA46522-CCB11	1	X

(a) Sample used for QC only; not part of login JC86406.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46522 Units: ug/l

Time: / Sample ID:			12:17 ICB1		12:20 CCB1		12:30 CCB2		13:10 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.048	0.00430	<0.20	0.00290	<0.20	-0.00320	<0.20	-0.0103	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46522 Units: ug/l

Time:			13:49		14:08		14:30		14:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.048	-0.0106	<0.20	-0.0306	<0.20	0.0432	<0.20	0.0461	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46522 Units: ug/l

Time:			14:58		15:34		15:54		16:16	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.048	0.0577	<0.20	-0.00730	<0.20	0.00300	<0.20	0.0622	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46522 Units: ug/l

Time:		12:15			12:19			12:29	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.13	104.3	2.5	2.53	101.2	2.5	2.44	97.6

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46522 Units: ug/l

Time:		13:09			13:47			14:07	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.55	102.0	2.5	2.56	102.4	2.5	2.43	97.2

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46522 Units: ug/l

Time:		14:28			14:50			14:57	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.63	105.2	2.5	2.58	103.2	2.5	2.73	109.2

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46522 Units: ug/l

Time:		15:33			15:52			16:14	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.60	104.0	2.5	2.49	99.6	2.5	2.56	102.4

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H9041719S1.CSV Date Analyzed: 04/17/19 Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery Run ID: MA46522 Units: ug/l

Time:			12:22		14:55		15:50		16:12	
Sample ID:	CRI	CRIA	CRI1		CRI2		CRI3		CRI4	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Mercury	0.20		0.209	104.5	0.218	109.0	0.159	79.5	0.195	97.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:27	MA46556-STD1	1		STDA
12:32	MA46556-STD2	1		STDB
12:37	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:48	MA46556-ICV1	1		
12:53	MA46556-ICB1	1		
13:00	MA46556-ICCV1	1		
13:08	MA46556-CCB1	1		
13:12	MA46556-CRI1	1		
13:18	MA46556-CRID1	1		
13:23	MA46556-ICSA1	1		
13:29	MA46556-ICSAB1	1		
13:34	MA46556-HSTD1	1		
13:39	MA46556-HSTD2	1		
13:44	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:55	ZZZZZZ	1		
14:01	MA46556-CCV1	1		
14:06	MA46556-CCB2	1		
14:11	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:22	MP14344-S1	3		
14:27	MP14344-S2	3		
14:32	JC86547-9	3		(sample used for QC only; not part of login JC86406)
14:37	MP14344-SD1	15		
14:43	ZZZZZZ	2		
14:48	ZZZZZZ	2		
14:53	ZZZZZZ	2		
14:59	MA46556-CCV2	1		
15:04	MA46556-CCB3	1		
15:09	ZZZZZZ	2		
15:15	ZZZZZZ	3		
15:20	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:25	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:36	ZZZZZZ	5		
15:41	ZZZZZZ	1		
15:47	ZZZZZZ	2		
15:52	ZZZZZZ	5		
15:58	MA46556-CCV3	1		
16:03	MA46556-CCB4	1		
16:08	ZZZZZZ	1		
16:14	ZZZZZZ	5		
16:19	ZZZZZZ	2		
16:25	ZZZZZZ	2		
16:30	ZZZZZZ	2		
16:35	ZZZZZZ	1		
16:41	ZZZZZZ	1		
16:46	MA46556-ICSA2	1		
16:51	MA46556-ICSAB2	1		
16:56	MA46556-CCV4	1		
17:01	MA46556-CCB5	1		
17:07	JC86284-1	3		(sample used for QC only; not part of login JC86406)
17:12	MP14374-SD1	15		
17:18	ZZZZZZ	10		
17:23	ZZZZZZ	5		
17:28	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:39	ZZZZZZ	10		
17:45	ZZZZZZ	1		
17:50	ZZZZZZ	2		
17:55	MA46556-CCV5	1		
18:00	MA46556-CCB6	1		
18:06	ZZZZZZ	1		
18:11	ZZZZZZ	2		
18:17	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:22	ZZZZZZ	10		
18:27	ZZZZZZ	1		
18:33	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:43	ZZZZZZ	1		
18:49	ZZZZZZ	1		
18:54	MA46556-CCV6	1		
18:59	MA46556-CCB7	1		
19:05	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:16	ZZZZZZ	1		
19:21	ZZZZZZ	1		
19:27	ZZZZZZ	1		
19:32	ZZZZZZ	1		
19:38	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:05	ZZZZZZ	1		
20:11	MA46556-CCV7	1		
20:16	MA46556-CCB8	1		
20:21	ZZZZZZ	1		
20:27	ZZZZZZ	1		
20:32	ZZZZZZ	1		
20:38	ZZZZZZ	1		
20:43	ZZZZZZ	1		
20:49	ZZZZZZ	1		
20:54	ZZZZZZ	1		
20:59	MP14400-MB1	1		
21:05	MP14400-B1	1		
21:10	MA46556-CCV8	1		
21:15	MA46556-CCB9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:20	MP14400-S1	1		Needs post spike for Sb, Mn, PB
21:25	MP14400-S2	1		
21:30	JC86406-10	1		
21:36	MP14400-SD1	5		
21:41	JC86406-1	1		Fe, al high
21:46	JC86406-2	1		FE high
21:51	JC86406-3	1		
21:57	JC86406-4	1		
22:02	JC86406-5	1		FE high
22:07	JC86406-6	1		FE, Ti high
22:12	MA46556-CCV9	1		
22:17	MA46556-CCB10	1		
22:23	JC86406-7	1		
22:28	JC86406-8	1		
22:34	JC86406-9	1		
22:39	JC86406-11	1		high rsd-s
22:44	JC86406-12	1		
22:49	JC86406-13	1		
22:55	JC86406-14	1		
23:00	JC86406-15	1		
---------->	Last reportable sample/prep for job JC86406			
23:05	ZZZZZZ	1		
23:10	ZZZZZZ	1		
23:16	MA46556-CCV10	1		
23:21	MA46556-CCB11	1		
---------->	Last reportable CCB for job JC86406			
23:26	MP14348-MB1	1		
23:32	MP14348-B1	1		
23:37	MP14348-S1	1		FE high. Need PS for Al, Sb, Ca, Mn and Zn
23:42	MP14348-S2	1		FE high. Need PS for Al, Sb, Ca, Mn and Zn
23:47	JC86553-1	1		(sample used for QC only; not part of login JC86406)
23:52	MP14348-SD1	5		%sol
23:57	ZZZZZZ	1		
00:03	ZZZZZZ	1		
00:08	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:13	ZZZZZZ	1		
00:18	MA46556-CCV11	1		
00:24	MA46556-CCB12	1		
00:29	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	ZZZZZZ	1		
00:45	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:01	ZZZZZZ	1		
01:06	ZZZZZZ	1		
01:11	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:22	MA46556-CCV12	1		
01:27	MA46556-CCB13	1		
01:32	ZZZZZZ	1		
01:38	ZZZZZZ	1		
01:43	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:54	ZZZZZZ	1		
01:59	MP14413-B1	1		
02:04	MP14413-MB1	1		
02:09	MP14413-S1	1		Zn, SN high
02:14	MP14413-S2	1		Zn, SN high
02:19	JC86518-21	1		(sample used for QC only; not part of login JC86406)
02:25	MA46556-CCV13	1		
02:30	MA46556-CCB14	1		
02:35	MP14413-SD1	5		Zn, SN high
02:40	ZZZZZZ	1		
02:46	ZZZZZZ	1		
02:51	ZZZZZZ	1		
02:56	ZZZZZZ	1		
03:02	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:07	ZZZZZZ	1		
03:12	ZZZZZZ	1		
03:17	ZZZZZZ	1		
03:23	ZZZZZZ	1		
03:28	MA46556-CCV14	1		
03:33	MA46556-CCB15	1		
03:39	ZZZZZZ	1		
03:44	ZZZZZZ	1		
03:49	ZZZZZZ	1		
03:55	ZZZZZZ	1		
04:00	ZZZZZZ	1		
04:05	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:16	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:31	MA46556-CCV15	1		
04:36	MA46556-CCB16	1		
04:42	MP14409-MB1	1		
04:48	MP14409-B1	1		
04:53	MP14409-S1	1		
04:58	MP14409-S2	1		
05:03	JC86554-1	1		(sample used for QC only; not part of login JC86406)
05:08	MP14409-SD1	5		
05:14	ZZZZZZ	1		
05:19	ZZZZZZ	1		
05:25	ZZZZZZ	1		
05:30	MA46556-CCV16	1		
05:35	MA46556-CCB17	1		
05:41	ZZZZZZ	1		
05:46	ZZZZZZ	1		
05:51	ZZZZZZ	1		
05:57	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:02	ZZZZZZ	1		
06:08	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:19	ZZZZZZ	1		
06:24	ZZZZZZ	1		
06:29	MA46556-CCV17	1		
06:34	MA46556-CCB18	1		
06:40	ZZZZZZ	1		
06:46	ZZZZZZ	1		
06:51	ZZZZZZ	1		
06:57	ZZZZZZ	1		
07:02	ZZZZZZ	1		
07:08	ZZZZZZ	1		
07:13	MA46556-CCV18	1		
07:18	MA46556-CCB19	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
12:37	ZZZZZZ	1																							
12:42	ZZZZZZ	1																							
12:48	MA46556-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:53	MA46556-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:00	MA46556-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:08	MA46556-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:12	MA46556-CRI1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:18	MA46556-CRID1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:23	MA46556-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:29	MA46556-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:34	MA46556-HSTD1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:39	MA46556-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:44	ZZZZZZ	1																							
13:50	ZZZZZZ	1																							
13:55	ZZZZZZ	1																							
14:01	MA46556-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:06	MA46556-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:11	ZZZZZZ	1																							
14:17	ZZZZZZ	1																							
14:22	MP14344-S1	3			X		X	X					X							X	X				
14:27	MP14344-S2	3			X		X	X					X							X	X				
14:32	JC86547-9	3			X		X	X					X												(a)
14:37	MP14344-SD1	15			X		X	X					X							X	X				
14:43	ZZZZZZ	2																							
14:48	ZZZZZZ	2																							
14:53	ZZZZZZ	2																							
14:59	MA46556-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
15:04	MA46556-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
15:09	ZZZZZZ	2																							
15:15	ZZZZZZ	3																							
15:20	ZZZZZZ	2																							
15:25	ZZZZZZ	1																							
15:31	ZZZZZZ	1																							
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
15:36	ZZZZZZ	5																							
15:41	ZZZZZZ	1																							
15:47	ZZZZZZ	2																							
15:52	ZZZZZZ	5																							
15:58	MA46556-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:03	MA46556-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:08	ZZZZZZ	1																							
16:14	ZZZZZZ	5																							
16:19	ZZZZZZ	2																							
16:25	ZZZZZZ	2																							
16:30	ZZZZZZ	2																							
16:35	ZZZZZZ	1																							
16:41	ZZZZZZ	1																							
16:46	MA46556-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:51	MA46556-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:56	MA46556-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:01	MA46556-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:07	JC86284-1	3																		X					(a)
17:12	MP14374-SD1	15																		X					
17:18	ZZZZZZ	10																							
17:23	ZZZZZZ	5																							
17:28	ZZZZZZ	1																							
17:34	ZZZZZZ	1																							
17:39	ZZZZZZ	10																							
17:45	ZZZZZZ	1																							
17:50	ZZZZZZ	2																							
17:55	MA46556-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:00	MA46556-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:06	ZZZZZZ	1																							
18:11	ZZZZZZ	2																							
18:17	ZZZZZZ	1																							
18:22	ZZZZZZ	10																							
18:27	ZZZZZZ	1																							
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
18:33	ZZZZZZ	1																						
18:38	ZZZZZZ	1																						
18:43	ZZZZZZ	1																						
18:49	ZZZZZZ	1																						
18:54	MA46556-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:59	MA46556-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:05	ZZZZZZ	1																						
19:10	ZZZZZZ	1																						
19:16	ZZZZZZ	1																						
19:21	ZZZZZZ	1																						
19:27	ZZZZZZ	1																						
19:32	ZZZZZZ	1																						
19:38	ZZZZZZ	1																						
19:43	ZZZZZZ	1																						
19:49	ZZZZZZ	1																						
19:54	ZZZZZZ	1																						
20:00	ZZZZZZ	1																						
20:05	ZZZZZZ	1																						
20:11	MA46556-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:16	MA46556-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:21	ZZZZZZ	1																						
20:27	ZZZZZZ	1																						
20:32	ZZZZZZ	1																						
20:38	ZZZZZZ	1																						
20:43	ZZZZZZ	1																						
20:49	ZZZZZZ	1																						
20:54	ZZZZZZ	1																						
20:59	MP14400-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:05	MP14400-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:10	MA46556-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:15	MA46556-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:20	MP14400-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:25	MP14400-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
21:30	JC86406-10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:36	MP14400-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:41	JC86406-1	1		X		X	X		X	X	X				X		X	X			X		X	X	
21:46	JC86406-2	1	X	X		X	X	X	X	X	X				X		X	X			X		X	X	
21:51	JC86406-3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:57	JC86406-4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:02	JC86406-5	1	X	X		X	X		X	X	X				X		X	X			X		X	X	
22:07	JC86406-6	1	X			X		X	X	X	X				X		X	X			X		X	X	
22:12	MA46556-CCV9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:17	MA46556-CCB10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:23	JC86406-7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:28	JC86406-8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:34	JC86406-9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:39	JC86406-11	1	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	
22:44	JC86406-12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:49	JC86406-13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:55	JC86406-14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:00	JC86406-15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:05	ZZZZZZ	1																							
23:10	ZZZZZZ	1																							
23:16	MA46556-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:21	MA46556-CCB11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:26	MP14348-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:32	MP14348-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:37	MP14348-S1	1	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
23:42	MP14348-S2	1	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
23:47	JC86553-1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(a)
23:52	MP14348-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:57	ZZZZZZ	1																							
00:03	ZZZZZZ	1																							
00:08	ZZZZZZ	1																							
00:13	ZZZZZZ	1																							
00:18	MA46556-CCV11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
00:24	MA46556-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:29	ZZZZZZ	1																							
00:34	ZZZZZZ	1																							
00:40	ZZZZZZ	1																							
00:45	ZZZZZZ	1																							
00:50	ZZZZZZ	1																							
00:56	ZZZZZZ	1																							
01:01	ZZZZZZ	1																							
01:06	ZZZZZZ	1																							
01:11	ZZZZZZ	1																							
01:17	ZZZZZZ	1																							
01:22	MA46556-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
01:27	MA46556-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
01:32	ZZZZZZ	1																							
01:38	ZZZZZZ	1																							
01:43	ZZZZZZ	1																							
01:48	ZZZZZZ	1																							
01:54	ZZZZZZ	1																							
01:59	MP14413-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:04	MP14413-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:09	MP14413-S1	1	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
02:14	MP14413-S2	1	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
02:19	JC86518-21	1											X		X										(a)
02:25	MA46556-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:30	MA46556-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:35	MP14413-SD1	5	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
02:40	ZZZZZZ	1																							
02:46	ZZZZZZ	1																							
02:51	ZZZZZZ	1																							
02:56	ZZZZZZ	1																							
03:02	ZZZZZZ	1																							
03:07	ZZZZZZ	1																							
03:12	ZZZZZZ	1																							
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
03:17	ZZZZZZ	1																						
03:23	ZZZZZZ	1																						
03:28	MA46556-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:33	MA46556-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:39	ZZZZZZ	1																						
03:44	ZZZZZZ	1																						
03:49	ZZZZZZ	1																						
03:55	ZZZZZZ	1																						
04:00	ZZZZZZ	1																						
04:05	ZZZZZZ	1																						
04:10	ZZZZZZ	1																						
04:16	ZZZZZZ	1																						
04:21	ZZZZZZ	1																						
04:26	ZZZZZZ	1																						
04:31	MA46556-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:36	MA46556-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:42	MP14409-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:48	MP14409-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:53	MP14409-S1	1																						
04:58	MP14409-S2	1																						
05:03	JC86554-1	1	missed cup																					
05:08	MP14409-SD1	5																						
05:14	ZZZZZZ	1																						
05:19	ZZZZZZ	1																						
05:25	ZZZZZZ	1																						
05:30	MA46556-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
05:35	MA46556-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
05:41	ZZZZZZ	1																						
05:46	ZZZZZZ	1																						
05:51	ZZZZZZ	1																						
05:57	ZZZZZZ	1																						
06:02	ZZZZZZ	1																						
06:08	ZZZZZZ	1																						
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: / Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
06:13	ZZZZZZ	1																						
06:19	ZZZZZZ	1																						
06:24	ZZZZZZ	1																						
06:29	MA46556-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
06:34	MA46556-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
06:40	ZZZZZZ	1																						
06:46	ZZZZZZ	1																						
06:51	ZZZZZZ	1																						
06:57	ZZZZZZ	1																						
07:02	ZZZZZZ	1																						
07:08	ZZZZZZ	1																						
07:13	MA46556-CCV18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07:18	MA46556-CCB19	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login JC86406.

Element: / Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:27	MA46556-STD1	4342 R	115990 R	8112 R	9775 R
12:32	MA46556-STD2	4062	108530	8007	8358
12:37	ZZZZZZ	4181	110270	8012	8732
12:42	ZZZZZZ	4349	115320	8112	9790
12:48	MA46556-ICV1	4173	110340	8054	8732
12:53	MA46556-ICB1	4327	117490	8117	9742
13:00	MA46556-ICCV1	4167	110030	8024	8714
13:08	MA46556-CCB1	4398	114570	8086	9891
13:12	MA46556-CRI1	4243	113580	8037	9405
13:18	MA46556-CRID1	4323	115350	8081	9682
13:23	MA46556-ICSA1	3855	102450	7753	7637
13:29	MA46556-ICSAB1	3845	102120	7793	7640
13:34	MA46556-HSTD1	4222	112360	8024	9344
13:39	MA46556-HSTD2	3842	102790	7768	7606
13:44	ZZZZZZ	4232	113920	8095	9541
13:50	ZZZZZZ	4241	115730	8124	9672
13:55	ZZZZZZ	4316	115610	8052	9700
14:01	MA46556-CCV1	4149	109630	7922	8672
14:06	MA46556-CCB2	4293	115020	8006	9655
14:11	ZZZZZZ	4368	116100	8168	9874
14:17	ZZZZZZ	4229	112840	8134	9010
14:22	MP14344-S1	4328	114670	8276	9057
14:27	MP14344-S2	4292	114360	8206	8977
14:32	JC86547-9	4395	116570	8296	9261
14:37	MP14344-SD1	4463	118270	8324	9685
14:43	ZZZZZZ	4443	117750	8433	9176
14:48	ZZZZZZ	4553	118890	8723	9490
14:53	ZZZZZZ	4459	118980	8440	9695
14:59	MA46556-CCV2	4263	114020	8151	8892
15:04	MA46556-CCB3	4247	114380	7933	9563
15:09	ZZZZZZ	4334	114410	8245	9017
15:15	ZZZZZZ	4192	113010	8091	8855
15:20	ZZZZZZ	4250	113660	8113	8925

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:25	ZZZZZZ	4289	116210	8066	9677
15:31	ZZZZZZ	4172	112820	8012	8866
15:36	ZZZZZZ	3789	101170	7660	7688
15:41	ZZZZZZ	3411	91650	7428	6689 !a
15:47	ZZZZZZ	3632	97216	7589	7265
15:52	ZZZZZZ	3717	99208	7608	7502
15:58	MA46556-CCV3	4107	109700	7842	8584
16:03	MA46556-CCB4	4268	114460	7974	9614
16:08	ZZZZZZ	3171	85795	7195	6144 !a
16:14	ZZZZZZ	3742	99987	7541	7562
16:19	ZZZZZZ	4427	117310	8457	8915
16:25	ZZZZZZ	4294	115810	8037	9414
16:30	ZZZZZZ	4342	116690	8260	8872
16:35	ZZZZZZ	4287	115420	7928	9678
16:41	ZZZZZZ	4182	111320	7936	8887
16:46	MA46556-ICSA2	3822	102290	7643	7557
16:51	MA46556-ICSAB2	3796	101380	7646	7526
16:56	MA46556-CCV4	4104	109800	7660	8556
17:01	MA46556-CCB5	4267	114960	7821	9581
17:07	JC86284-1	4249	114720	7865	9456
17:12	MP14374-SD1	4263	115190	7857	9508
17:18	ZZZZZZ	4250	114660	7804	9358
17:23	ZZZZZZ	4212	112970	7848	9184
17:28	ZZZZZZ	4247	114760	7914	9544
17:34	ZZZZZZ	4161	112750	7898	9125
17:39	ZZZZZZ	4265	115050	7883	9491
17:45	ZZZZZZ	4246	114900	7937	9550
17:50	ZZZZZZ	4260	116140	7934	9553
17:55	MA46556-CCV5	4133	110740	7809	8616
18:00	MA46556-CCB6	4278	115520	7897	9606
18:06	ZZZZZZ	4224	114940	7977	9479
18:11	ZZZZZZ	4255	115290	7940	9525
18:17	ZZZZZZ	4135	112680	7923	9016

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:22	ZZZZZZ	4268	115210	7947	9480
18:27	ZZZZZZ	4253	115910	8005	9657
18:33	ZZZZZZ	4181	113630	7951	9127
18:38	ZZZZZZ	4275	115620	8021	9664
18:43	ZZZZZZ	4158	113310	7890	9091
18:49	ZZZZZZ	4215	114670	7950	9330
18:54	MA46556-CCV6	4130	110650	7797	8608
18:59	MA46556-CCB7	4289	116220	7886	9615
19:05	ZZZZZZ	4287	115620	7903	9643
19:10	ZZZZZZ	4278	115640	7825	9547
19:16	ZZZZZZ	4293	115880	7867	9592
19:21	ZZZZZZ	4301	115940	7945	9617
19:27	ZZZZZZ	4277	115250	7842	9577
19:32	ZZZZZZ	4300	115810	7897	9605
19:38	ZZZZZZ	4274	115380	7831	9560
19:43	ZZZZZZ	4273	113490	7842	9568
19:49	ZZZZZZ	4280	115560	7857	9585
19:54	ZZZZZZ	4379	110150	8136	8523
20:00	ZZZZZZ	4278	115430	7851	9620
20:05	ZZZZZZ	3895	106380	7566	8170
20:11	MA46556-CCV7	4129	110570	7747	8589
20:16	MA46556-CCB8	4286	115520	7860	9605
20:21	ZZZZZZ	4244	115280	7731	9526
20:27	ZZZZZZ	4219	115060	7884	9445
20:32	ZZZZZZ	4255	115860	8007	9632
20:38	ZZZZZZ	4251	115460	7927	9640
20:43	ZZZZZZ	4278	115320	7970	9629
20:49	ZZZZZZ	4184	111870	7902	8875
20:54	ZZZZZZ	4291	115840	7930	9662
20:59	MP14400-MB1	4284	116260	7996	9672
21:05	MP14400-B1	4162	112400	7838	8856
21:10	MA46556-CCV8	4124	110390	7696	8598
21:15	MA46556-CCB9	4281	115040	7860	9609

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:20	MP14400-S1	4205	113000	8046	8660
21:25	MP14400-S2	4202	112670	8048	8646
21:30	JC86406-10	4431	119040	8492	8871
21:36	MP14400-SD1	4308	115600	7982	9282
21:41	JC86406-1	4360	112720	8129	8876
21:46	JC86406-2	4336	115050	8205	8870
21:51	JC86406-3	4318	115870	8081	9146
21:57	JC86406-4	4315	115490	8081	9052
22:02	JC86406-5	4216	113150	8017	9148
22:07	JC86406-6	4151	112390	8010	8494
22:12	MA46556-CCV9	4119	110340	7763	8577
22:17	MA46556-CCB10	4287	115640	7796	9608
22:23	JC86406-7	4343	116590	8125	9069
22:28	JC86406-8	4263	114370	7966	9047
22:34	JC86406-9	4295	116480	8186	9034
22:39	JC86406-11	4329	113140	8122	9075
22:44	JC86406-12	4324	115790	8072	9107
22:49	JC86406-13	4285	115150	8004	9007
22:55	JC86406-14	4303	114340	8147	9109
23:00	JC86406-15	4195	113430	8132	8375
23:05	ZZZZZZ	4311	115020	8105	8849
23:10	ZZZZZZ	4297	115810	8081	8523
23:16	MA46556-CCV10	4143	111140	7711	8625
23:21	MA46556-CCB11	4293	116170	7769	9623
23:26	MP14348-MB1	4286	116460	7799	9627
23:32	MP14348-B1	4177	112830	7772	8862
23:37	MP14348-S1	4135	112820	7932	8827
23:42	MP14348-S2	4249	114880	8119	8691
23:47	JC86553-1	4266	114670	7874	9397
23:52	MP14348-SD1	4277	115830	7839	9494
23:57	ZZZZZZ	4242	114350	7927	9304
00:03	ZZZZZZ	4220	114020	7823	9174
00:08	ZZZZZZ	4245	114480	7820	9325

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:13	ZZZZZZ	4222	114050	7820	9098
00:18	MA46556-CCV11	4137	111270	7728	8617
00:24	MA46556-CCB12	4295	116360	7704	9628
00:29	ZZZZZZ	4321	115910	7915	9293
00:34	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:40	ZZZZZZ	4283	116070	7912	9137
00:45	ZZZZZZ	4323	115200	7904	9087
00:50	ZZZZZZ	4325	116300	7793	9151
00:56	ZZZZZZ	4280	112720	7940	9165
01:01	ZZZZZZ	4285	116240	7934	9270
01:06	ZZZZZZ	4275	116130	7912	9174
01:11	ZZZZZZ	4301	116550	8073	8890
01:17	ZZZZZZ	4301	117040	7836	8801
01:22	MA46556-CCV12	4098	111170	7595	8554
01:27	MA46556-CCB13	4263	115410	7701	9569
01:32	ZZZZZZ	4296	115070	7981	9120
01:38	ZZZZZZ	4353	117570	8141	8904
01:43	ZZZZZZ	4161	113070	7963	8532
01:48	ZZZZZZ	4128	112580	7904	8388
01:54	ZZZZZZ	4242	114760	7876	8986
01:59	MP14413-B1	4169	112590	7733	8845
02:04	MP14413-MB1	4238	116570	7818	9547
02:09	MP14413-S1	4204	113700	8049	8523
02:14	MP14413-S2	4190	113200	8044	8515
02:19	JC86518-21	4236	115880	8087	8876
02:25	MA46556-CCV13	4099	110910	7728	8554
02:30	MA46556-CCB14	4278	115590	7624	9606
02:35	MP14413-SD1	4290	115970	7813	9328
02:40	ZZZZZZ	4356	116170	8139	8858
02:46	ZZZZZZ	4375	119340	7968	8904
02:51	ZZZZZZ	4821	127770	8898	8903
02:56	ZZZZZZ	4509	122050	8619	8466
03:02	ZZZZZZ	4521	121770	8614	8664

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:07	ZZZZZZ	4347	118280	8098	8772
03:12	ZZZZZZ	4388	117120	8133	8894
03:17	ZZZZZZ	4470	120040	8342	8931
03:23	ZZZZZZ	4256	113700	7829	8904
03:28	MA46556-CCV14	4104	110770	7634	8567
03:33	MA46556-CCB15	4257	115900	7702	9572
03:39	ZZZZZZ	4330	116420	8027	8759
03:44	ZZZZZZ	4006	108860	7600	7957
03:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:55	ZZZZZZ	3891	107300	7530	7995
04:00	ZZZZZZ	4220	114620	7963	8799
04:05	ZZZZZZ	4193	113720	7846	8807
04:10	ZZZZZZ	4168	113960	7877	8859
04:16	ZZZZZZ	4177	114440	7917	8893
04:21	ZZZZZZ	4216	114380	7934	8745
04:26	ZZZZZZ	4212	114770	7976	8767
04:31	MA46556-CCV15	4081	110110	7536	8531
04:36	MA46556-CCB16	4244	115350	7626	9533
04:42	MP14409-MB1	4246	115930	7739	9559
04:48	MP14409-B1	4121	111830	7706	8764
04:53	MP14409-S1	No results reported for the elements associated with this internal standard.			
04:58	MP14409-S2	No results reported for the elements associated with this internal standard.			
05:03	JC86554-1	No results reported for the elements associated with this internal standard.			
05:08	MP14409-SD1	No results reported for the elements associated with this internal standard.			
05:14	ZZZZZZ	4107	112780	7675	8963
05:19	ZZZZZZ	3988	104300	7569	8371
05:25	ZZZZZZ	4109	113170	7704	8878
05:30	MA46556-CCV16	4088	110610	7556	8538
05:35	MA46556-CCB17	4240	115500	7457	9535
05:41	ZZZZZZ	4163	114170	7590	9131
05:46	ZZZZZZ	4237	115660	7711	9459
05:51	ZZZZZZ	4169	116460	7725	9265
05:57	ZZZZZZ	4008	109690	7571	8519

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46556
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:02	ZZZZZZ	4043	110590	7625	8571
06:08	ZZZZZZ	4214	115690	7719	9408
06:13	ZZZZZZ	4208	115240	7719	9376
06:19	ZZZZZZ	4038	110610	7605	8582
06:24	ZZZZZZ	4253	115070	7772	9031
06:29	MA46556-CCV17	4100	110790	7528	8558
06:34	MA46556-CCB18	4226	115610	7599	9495
06:40	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:46	ZZZZZZ	3799	103310	7426	7633
06:51	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:57	ZZZZZZ	4221	115470	7695	9511
07:02	ZZZZZZ	4086	112020	7577	8842
07:08	ZZZZZZ	3792	103060	7405	7610
07:13	MA46556-CCV18	4095	110440	7493	8554
07:18	MA46556-CCB19	4238	115670	7648	9525

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time:			12:53		13:08		14:06		15:04	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	0.00	<200	-7.50	<200	-2.70	<200	-1.50	<200
Antimony	6.0	1.1	-0.800	<6.0	-1.80	<6.0	-1.30	<6.0	-1.00	<6.0
Arsenic	3.0	1.2	-0.600	<3.0	0.200	<3.0	0.500	<3.0	0.00	<3.0
Barium	200	.2	0.00	<200	-0.200	<200	0.100	<200	0.200	<200
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.00	<1.0	0.100	<1.0
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	0.00	<3.0	0.00	<3.0	0.100	<3.0	0.100	<3.0
Calcium	5000	3.7	2.10	<5000	-3.50	<5000	2.30	<5000	1.40	<5000
Chromium	10	.4	-0.300	<10	-0.100	<10	-0.200	<10	0.00	<10
Cobalt	50	.3	0.300	<50	0.100	<50	0.200	<50	0.100	<50
Copper	10	1	-0.200	<10	-0.200	<10	0.100	<10	-0.100	<10
Iron	100	2.4	-0.700	<100	0.400	<100	3.00	<100	3.10	<100
Lead	3.0	1.5	0.200	<3.0	-0.200	<3.0	0.200	<3.0	-0.500	<3.0
Lithium	50	1.5								
Magnesium	5000	17	-14.3	<5000	-2.00	<5000	-30.2	<5000	-12.8	<5000
Manganese	15	.1	0.100	<15	0.00	<15	0.00	<15	0.00	<15
Molybdenum	20	.3								
Nickel	10	.3	-0.100	<10	-0.200	<10	-0.200	<10	-0.300	<10
Phosphorus	50	2								
Potassium	10000	40	45.0	<10000	40.8	<10000	84.3	<10000	83.0	<10000
Selenium	10	1.8	2.20	<10	1.00	<10	1.40	<10	1.40	<10
Silicon	200	.9								
Silver	10	.5	0.00	<10	-0.400	<10	0.00	<10	-0.200	<10
Sodium	10000	13	16.1	<10000	20.2	<10000	27.1	<10000	18.7	<10000
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	-0.400	<10	0.500	<10	0.100	<10	0.200	<10
Tin	10	.6								
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	0.200	<50	0.100	<50	0.100	<50	0.100	<50
Zinc	20	.2	0.00	<20	0.100	<20	0.100	<20	0.100	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time:			12:53		13:08		14:06		15:04	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time: / Sample ID:			16:03 CCB4		17:01 CCB5		18:00 CCB6		18:59 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	3.10	<200	5.00	<200	6.80	<200	-2.80	<200
Antimony	6.0	1.1	-0.200	<6.0	-0.100	<6.0	-0.900	<6.0	-0.400	<6.0
Arsenic	3.0	1.2	-1.00	<3.0	0.500	<3.0	-0.200	<3.0	0.500	<3.0
Barium	200	.2	0.100	<200	0.200	<200	0.200	<200	0.500	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.100	<1.0	0.300	<1.0
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	0.200	<3.0	0.200	<3.0	0.300	<3.0	0.400	<3.0
Calcium	5000	3.7	3.80	<5000	3.80	<5000	0.00	<5000	3.90	<5000
Chromium	10	.4	0.00	<10	-0.400	<10	0.200	<10	0.100	<10
Cobalt	50	.3	0.200	<50	0.100	<50	0.200	<50	0.200	<50
Copper	10	1	-0.100	<10	0.300	<10	-0.100	<10	-0.200	<10
Iron	100	2.4	-1.90	<100	1.80	<100	-2.90	<100	2.40	<100
Lead	3.0	1.5	0.600	<3.0	0.300	<3.0	-0.500	<3.0	0.700	<3.0
Lithium	50	1.5								
Magnesium	5000	17	-30.3	<5000	4.40	<5000	18.5	<5000	15.3	<5000
Manganese	15	.1	0.100	<15	0.300	<15	0.200	<15	0.200	<15
Molybdenum	20	.3								
Nickel	10	.3	0.100	<10	0.300	<10	0.00	<10	0.200	<10
Phosphorus	50	2								
Potassium	10000	40	150	<10000	53.2	<10000	66.3	<10000	76.1	<10000
Selenium	10	1.8	1.50	<10	1.20	<10	1.00	<10	1.20	<10
Silicon	200	.9								
Silver	10	.5	-0.100	<10	-0.600	<10	-0.800	<10	-1.00	<10
Sodium	10000	13	285	<10000	158	<10000	82.9	<10000	68.5	<10000
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	-0.300	<10	-0.200	<10	0.400	<10	0.400	<10
Tin	10	.6								
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	0.300	<50	0.00	<50	0.100	<50	0.400	<50
Zinc	20	.2	0.100	<20	0.100	<20	0.600	<20	0.700	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time:			16:03		17:01		18:00		18:59	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time: / Sample ID:			20:16 CCB8		21:15 CCB9		22:17 CCB10		23:21 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	-4.00	<200	0.100	<200	-4.10	<200	-0.900	<200
Antimony	6.0	1.1	0.200	<6.0	-0.800	<6.0	-0.700	<6.0	0.300	<6.0
Arsenic	3.0	1.2	1.00	<3.0	1.00	<3.0	0.500	<3.0	1.00	<3.0
Barium	200	.2	0.400	<200	0.200	<200	0.300	<200	0.400	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.200	<1.0	0.200	<1.0
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	0.100	<3.0	0.100	<3.0	0.200	<3.0	0.100	<3.0
Calcium	5000	3.7	-0.900	<5000	1.50	<5000	1.30	<5000	-0.300	<5000
Chromium	10	.4	-0.400	<10	-0.500	<10	-0.300	<10	-0.300	<10
Cobalt	50	.3	0.300	<50	0.300	<50	0.200	<50	0.300	<50
Copper	10	1	-0.500	<10	-0.100	<10	-0.500	<10	-0.300	<10
Iron	100	2.4	0.500	<100	4.20	<100	7.80	<100	4.90	<100
Lead	3.0	1.5	0.00	<3.0	0.200	<3.0	-0.100	<3.0	-0.100	<3.0
Lithium	50	1.5								
Magnesium	5000	17	-20.6	<5000	-1.10	<5000	1.90	<5000	-31.0	<5000
Manganese	15	.1	0.200	<15	0.100	<15	0.200	<15	0.300	<15
Molybdenum	20	.3								
Nickel	10	.3	-0.100	<10	0.00	<10	0.00	<10	0.100	<10
Phosphorus	50	2								
Potassium	10000	40	76.6	<10000	85.4	<10000	90.7	<10000	65.4	<10000
Selenium	10	1.8	1.70	<10	2.30	<10	0.600	<10	1.80	<10
Silicon	200	.9								
Silver	10	.5	-0.700	<10	-0.200	<10	-0.400	<10	-0.400	<10
Sodium	10000	13	54.8	<10000	55.1	<10000	34.2	<10000	35.2	<10000
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	-0.400	<10	-0.500	<10	0.400	<10	0.400	<10
Tin	10	.6								
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	0.200	<50	0.300	<50	0.200	<50	0.200	<50
Zinc	20	.2	0.300	<20	0.300	<20	0.300	<20	0.300	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46556 Units: ug/l

Time:			20:16		21:15		22:17		23:21	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46556 Units: ug/l

Time:		13:00	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	39900	99.8
Antimony	2000	2020	101.0
Arsenic	2000	2000	100.0
Barium	2000	2030	101.5
Beryllium	2000	2050	102.5
Bismuth			
Boron	anr		
Cadmium	2000	2020	101.0
Calcium	40000	40400	101.0
Chromium	2000	2050	102.5
Cobalt	2000	2000	100.0
Copper	2000	2000	100.0
Iron	40000	41000	102.5
Lead	2000	2030	101.5
Lithium			
Magnesium	40000	40300	100.8
Manganese	2000	2070	103.5
Molybdenum			
Nickel	2000	2020	101.0
Phosphorus			
Potassium	40000	40100	100.3
Selenium	2000	2000	100.0
Silicon			
Silver	250	253	101.2
Sodium	40000	40100	100.3
Strontium			
Sulfur			
Thallium	2000	2070	103.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	2040	102.0
Zinc	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46556 Units: ug/l

Time:		13:00	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		12:48			14:01			14:59	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39800	99.5	40000	38400	96.0
Antimony	2000	1970	98.5	2000	2030	101.5	2000	1970	98.5
Arsenic	2000	1980	99.0	2000	2010	100.5	2000	1940	97.0
Barium	2000	2000	100.0	2000	2030	101.5	2000	1970	98.5
Beryllium	2000	2000	100.0	2000	2050	102.5	2000	1980	99.0
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	2030	101.5	2000	1960	98.0
Calcium	40000	39800	99.5	40000	40500	101.3	40000	39000	97.5
Chromium	2000	1990	99.5	2000	2060	103.0	2000	1970	98.5
Cobalt	2000	1990	99.5	2000	2010	100.5	2000	1950	97.5
Copper	2000	1960	98.0	2000	2000	100.0	2000	1930	96.5
Iron	40000	40500	101.3	40000	41200	103.0	40000	39700	99.3
Lead	2000	1970	98.5	2000	2040	102.0	2000	1970	98.5
Lithium									
Magnesium	40000	40000	100.0	40000	40400	101.0	40000	39000	97.5
Manganese	2000	2020	101.0	2000	2080	104.0	2000	1990	99.5
Molybdenum									
Nickel	2000	1980	99.0	2000	2030	101.5	2000	1960	98.0
Phosphorus									
Potassium	40000	40000	100.0	40000	40500	101.3	40000	39300	98.3
Selenium	2000	1950	97.5	2000	2010	100.5	2000	1950	97.5
Silicon									
Silver	250	257	102.8	250	252	100.8	250	244	97.6
Sodium	40000	39900	99.8	40000	40300	100.8	40000	39100	97.8
Strontium									
Sulfur									
Thallium	2000	2020	101.0	2000	2070	103.5	2000	2020	101.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2000	100.0	2000	2050	102.5	2000	1970	98.5
Zinc	2000	1980	99.0	2000	2050	102.5	2000	1980	99.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		12:48			14:01			14:59	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		15:58			16:56			17:55	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	41000	102.5	40000	39500	98.8
Antimony	2000	2060	103.0	2000	2080	104.0	2000	2050	102.5
Arsenic	2000	2030	101.5	2000	2050	102.5	2000	2020	101.0
Barium	2000	2050	102.5	2000	2110	105.5	2000	2020	101.0
Beryllium	2000	2060	103.0	2000	2120	106.0	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	2040	102.0	2000	2050	102.5	2000	2010	100.5
Calcium	40000	40600	101.5	40000	41700	104.3	40000	40300	100.8
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2040	102.0
Cobalt	2000	2030	101.5	2000	2060	103.0	2000	2030	101.5
Copper	2000	2020	101.0	2000	2020	101.0	2000	1990	99.5
Iron	40000	41300	103.3	40000	42400	106.0	40000	40700	101.8
Lead	2000	2060	103.0	2000	2080	104.0	2000	2050	102.5
Lithium									
Magnesium	40000	40500	101.3	40000	41800	104.5	40000	40300	100.8
Manganese	2000	2080	104.0	2000	2090	104.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2060	103.0	2000	2020	101.0
Phosphorus									
Potassium	40000	40900	102.3	40000	42300	105.8	40000	40800	102.0
Selenium	2000	2030	101.5	2000	2050	102.5	2000	2010	100.5
Silicon									
Silver	250	254	101.6	250	255	102.0	250	250	100.0
Sodium	40000	40000	100.0	40000	41300	103.3	40000	40000	100.0
Strontium									
Sulfur									
Thallium	2000	2100	105.0	2000	2120	106.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2050	102.5	2000	2070	103.5	2000	2030	101.5
Zinc	2000	2070	103.5	2000	2080	104.0	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		15:58			16:56			17:55	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		18:54			20:11			21:10	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39400	98.5	40000	39700	99.3
Antimony	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Arsenic	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Barium	2000	2020	101.0	2000	2020	101.0	2000	2040	102.0
Beryllium	2000	2030	101.5	2000	2040	102.0	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Calcium	40000	40400	101.0	40000	40300	100.8	40000	40400	101.0
Chromium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Copper	2000	1980	99.0	2000	1990	99.5	2000	2000	100.0
Iron	40000	40500	101.3	40000	40500	101.3	40000	40800	102.0
Lead	2000	2050	102.5	2000	2060	103.0	2000	2060	103.0
Lithium									
Magnesium	40000	40100	100.3	40000	40200	100.5	40000	40500	101.3
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5
Molybdenum									
Nickel	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0
Phosphorus									
Potassium	40000	40900	102.3	40000	40800	102.0	40000	41200	103.0
Selenium	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Silicon									
Silver	250	250	100.0	250	250	100.0	250	252	100.8
Sodium	40000	40100	100.3	40000	40000	100.0	40000	40400	101.0
Strontium									
Sulfur									
Thallium	2000	2080	104.0	2000	2090	104.5	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0
Zinc	2000	2060	103.0	2000	2060	103.0	2000	2060	103.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		18:54			20:11			21:10	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		22:12			23:16	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39100	97.8	40000	39300	98.3
Antimony	2000	2050	102.5	2000	2040	102.0
Arsenic	2000	2030	101.5	2000	2020	101.0
Barium	2000	2010	100.5	2000	2020	101.0
Beryllium	2000	2020	101.0	2000	2020	101.0
Bismuth						
Boron	anr					
Cadmium	2000	2020	101.0	2000	2010	100.5
Calcium	40000	39800	99.5	40000	40000	100.0
Chromium	2000	2050	102.5	2000	2030	101.5
Cobalt	2000	2030	101.5	2000	2030	101.5
Copper	2000	1990	99.5	2000	1980	99.0
Iron	40000	40000	100.0	40000	40000	100.0
Lead	2000	2060	103.0	2000	2050	102.5
Lithium						
Magnesium	40000	39700	99.3	40000	39800	99.5
Manganese	2000	2060	103.0	2000	2050	102.5
Molybdenum						
Nickel	2000	2030	101.5	2000	2020	101.0
Phosphorus						
Potassium	40000	40700	101.8	40000	40700	101.8
Selenium	2000	2010	100.5	2000	2000	100.0
Silicon						
Silver	250	251	100.4	250	249	99.6
Sodium	40000	39900	99.8	40000	39900	99.8
Strontium						
Sulfur						
Thallium	2000	2090	104.5	2000	2080	104.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	2030	101.5	2000	2020	101.0
Zinc	2000	2060	103.0	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46556 Units: ug/l

Time:		22:12			23:16	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46556 Units: ug/l

Time:		13:34			13:39	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	318000	106.0
Antimony	8000	8330	104.1			
Arsenic	8000	8130	101.6			
Barium	8000	8100	101.3			
Beryllium	8000	8190	102.4			
Bismuth						
Boron	anr					
Cadmium	8000	7800	97.5			
Calcium				200000	203000	101.5
Chromium	8000	8300	103.8			
Cobalt	8000	7910	98.9			
Copper	8000	8230	102.9			
Iron				200000	199000	99.5
Lead	8000	8010	100.1			
Lithium						
Magnesium				300000	311000	103.7
Manganese	8000	8070	100.9			
Molybdenum						
Nickel	8000	7850	98.1			
Phosphorus						
Potassium				200000	207000	103.5
Selenium	8000	8000	100.0			
Silicon						
Silver	625	671	107.4			
Sodium				200000	205000	102.5
Strontium						
Sulfur						
Thallium	8000	8180	102.3			
Tin						
Titanium						
Tungsten						
Vanadium	8000	8260	103.3			
Zinc	8000	8180	102.3			

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46556 Units: ug/l

Time:		13:34			13:39	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46556 Units: ug/l

Time:				13:12		13:18	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	211	105.5	117	117.0
Antimony	6.0	20	3.0	6.00	100.0		
Arsenic	8.0	20	3.0	8.20	102.5	3.40	113.3
Barium	200		4.0	209	104.5	4.50	112.5
Beryllium	2.0		1.0	2.10	105.0	1.20	120.0
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	3.20	106.7		
Calcium	5000	2000	1000	5380	107.6	1200	120.0
Chromium	10		2.0	10.7	107.0	2.20	110.0
Cobalt	50		3.0	49.9	99.8	3.30	110.0
Copper	10		2.0	9.90	99.0		
Iron	100	500		114	114.0		
Lead	3.0	20	2.5	2.60	86.7		
Lithium	50						
Magnesium	5000	2000	100	5360	107.2	101	101.0
Manganese	15		3.0	16.4	109.3	3.60	120.0
Molybdenum	20						
Nickel	10		4.0	9.80	98.0	4.40	110.0
Phosphorus	50						
Potassium	5000		2000	5270	105.4	2340	117.0
Selenium	10	20	5.0	11.6	116.0		
Silicon	200						
Silver	5.0		2.0	5.00	100.0		
Sodium	5000		1000	5280	105.6	1180	118.0
Strontium	10						
Sulfur	50						
Thallium	10		2.0	9.30	93.0		
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	52.5	105.0	2.30	115.0
Zinc	20		10	22.0	110.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46556 Units: ug/l

Time:				13:12		13:18	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46556 Units: ug/l

Time:			13:23		13:29		16:46		16:51	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	512000	102.4	509000	101.8	507000	101.4	504000	100.8
Antimony		1000	-5.93		1060	106.0	-2.40		1080	108.0
Arsenic		1000	2.00		1050	105.0	0.00		1070	107.0
Barium		500	0.00		508	101.6	0.200		505	101.0
Beryllium		500	0.600		498	99.6	0.700		492	98.4
Bismuth		500	7.50		515	103.0	8.00		519	103.8
Boron		500	-2.90		473	94.6	-2.10		477	95.4
Cadmium		1000	0.300		1010	101.0	0.400		1020	102.0
Calcium	400000	400000	385000	96.3	382000	95.5	381000	95.3	380000	95.0
Chromium		500	0.800		484	96.8	0.300		488	97.6
Cobalt		500	-0.400		484	96.8	-0.600		491	98.2
Copper		500	0.100		506	101.2	0.400		509	101.8
Iron	200000	200000	189000	94.5	195000	97.5	186000	93.0	192000	96.0
Lead		1000	2.30		962	96.2	1.20		974	97.4
Lithium		500	-12.3		527	105.4	-9.50		532	106.4
Magnesium	500000	500000	503000	100.6	509000	101.8	495000	99.0	502000	100.4
Manganese		500	2.60		501	100.2	2.10		503	100.6
Molybdenum		500	-1.00		481	96.2	-1.10		486	97.2
Nickel		1000	-0.500		970	97.0	0.400		978	97.8
Phosphorus		500	2.10		510	102.0	3.60		521	104.2
Potassium			-380		-352		-291		-333	
Selenium		1000	7.30		1030	103.0	3.80		1040	104.0
Silicon		500	-13.9		511	102.2	-5.40		523	104.6
Silver		1000	-0.400		1110	111.0	-1.90		1120	112.0
Sodium			24.8		30.1		383		359	
Strontium		500	-2.80		505	101.0	-2.70		500	100.0
Sulfur		500	-30.9		477	95.4	-24.8		481	96.2
Thallium		1000	0.300		957	95.7	-1.20		965	96.5
Tin		500	-1.90		467	93.4	-1.40		473	94.6
Titanium		500	-0.200		502	100.4	0.00		503	100.6
Tungsten		500	5.90		480	96.0	14.1		488	97.6
Vanadium		500	1.50		495	99.0	1.80		497	99.4
Zinc		1000	-1.40		939	93.9	-1.10		948	94.8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042219M1.ICP Date Analyzed: 04/22/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46556 Units: ug/l

Time:			13:23		13:29		16:46		16:51	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-1.50		487	97.4	-1.20		491	98.2

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:42	MA46568-STD1	1		STDA
11:47	MA46568-STD2	1		STDB
11:52	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:03	MA46568-ICV1	1		
12:12	MA46568-ICB1	1		
12:21	MA46568-ICCV1	1		
12:34	MA46568-CCB1	1		
12:41	MA46568-CRI1	1		
12:46	MA46568-CRID1	1		
12:52	MA46568-ICSA1	1		
12:57	MA46568-ICSAB1	1		
13:02	MA46568-HSTD1	1		
13:08	MA46568-HSTD2	1		
13:13	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:30	MA46568-CCV1	1		
13:35	MA46568-CCB2	1		
13:40	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:51	JC86406-1	3		
13:56	JC86406-2	2		
14:01	JC86406-5	3		
14:07	JC86406-6	2		
14:12	JC86406-11	1		
14:17	ZZZZZZ	5		
14:23	MP14400-PS1	1		
14:28	MA46568-CCV2	1		
14:33	MA46568-CCB3	1		
14:38	ZZZZZZ	1		
14:44	ZZZZZZ	1		
14:49	MP14348-S1	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:54	MP14348-S2	2		
14:59	ZZZZZZ	2		
15:04	ZZZZZZ	2		
15:10	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:20	ZZZZZZ	2		
15:25	MA46568-CCV3	1		
15:30	MA46568-CCB4	1		
15:36	ZZZZZZ	1		
15:41	ZZZZZZ	2		
15:46	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:57	ZZZZZZ	2		
16:02	ZZZZZZ	5		
16:08	ZZZZZZ	3		
16:13	ZZZZZZ	2		
16:18	ZZZZZZ	3		
16:23	MA46568-CCV4	1		
16:28	MA46568-CCB5	1		
16:34	ZZZZZZ	1		
16:39	ZZZZZZ	1		
16:45	ZZZZZZ	1		
16:50	MP14409-S1	1		
16:55	MP14409-S2	1		
17:00	JC86554-1	1		(sample used for QC only; not part of login JC86406)
17:05	MP14409-SD1	5		
17:11	ZZZZZZ	2		
17:16	ZZZZZZ	1		
17:21	ZZZZZZ	1		
17:27	MA46568-CCV5	1		
17:32	MA46568-CCB6	1		
17:38	JC86406-1	2		Al and Fe high RSD
17:43	JC86406-5	2		
---------->	Last reportable sample/prep for job JC86406			

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:48	MP14495-MB1	1		
17:54	MP14495-B1	1		
17:59	MA46568-ICSA2	1		
18:04	MA46568-ICSAB2	1		
18:09	MA46568-CCV6	1		
18:14	MA46568-CCB7	1		
---------->	Last reportable CCB for job JC86406			
18:20	MP14495-S1	1		
18:25	MP14495-S2	1		
18:30	JC86638-1	1		(sample used for QC only; not part of login JC86406)
18:35	MP14495-SD1	5		
18:41	ZZZZZZ	1		
18:46	ZZZZZZ	1		
18:51	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:07	MA46568-CCV7	1		
19:12	MA46568-CCB8	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:44	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:05	MA46568-CCV8	1		
20:10	MA46568-CCB9	1		
20:15	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:32	ZZZZZZ	1		
20:38	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:43	ZZZZZZ	1		
20:49	ZZZZZZ	1		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:05	ZZZZZZ	1		
21:11	ZZZZZZ	1		
21:16	ZZZZZZ	1		
21:22	MA46568-CCV9	1		
21:27	MA46568-CCB10	1		
21:32	ZZZZZZ	1		
21:38	MP14425-MB1	1		
21:43	MP14425-MB2	1		
21:49	MP14425-B1	1		
21:54	MP14425-B2	1		
21:59	MP14425-B3	1		
22:04	MP14425-S1	1		
22:09	MP14425-S2	1		
22:14	JC86687-8F	1		(sample used for QC only; not part of login JC86406)
22:19	MA46568-CCV10	1		
22:24	MA46568-CCB11	1		
22:30	MP14425-SD1	5		
22:35	ZZZZZZ	1		
22:41	ZZZZZZ	1		
22:46	ZZZZZZ	1		
22:52	ZZZZZZ	1		
22:57	ZZZZZZ	1		
23:03	ZZZZZZ	1		
23:08	ZZZZZZ	1		
23:14	ZZZZZZ	1		
23:19	MA46568-CCV11	1		
23:24	MA46568-CCB12	1		
23:30	ZZZZZZ	1		
23:35	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:40	ZZZZZZ	1		
23:46	ZZZZZZ	1		
23:51	ZZZZZZ	1		
23:57	ZZZZZZ	1		
00:02	ZZZZZZ	1		
00:08	ZZZZZZ	1		
00:14	ZZZZZZ	1		
00:19	MA46568-CCV12	1		
00:24	MA46568-CCB13	1		
00:30	ZZZZZZ	1		
00:35	MP14420-MB1	5		
00:41	MP14420-B1	5		
00:46	MP14420-S1	5		
00:51	MP14420-S2	5		
00:56	JC86726-1	5		(sample used for QC only; not part of login JC86406)
01:02	MP14420-SD1	25		
01:07	ZZZZZZ	5		
01:13	ZZZZZZ	5		
01:18	MA46568-CCV13	1		
01:23	MA46568-CCB14	1		
01:29	ZZZZZZ	5		
01:34	ZZZZZZ	5		
01:40	ZZZZZZ	5		
01:45	ZZZZZZ	5		
01:51	ZZZZZZ	5		
01:56	ZZZZZZ	5		
02:01	ZZZZZZ	5		
02:07	ZZZZZZ	5		
02:12	ZZZZZZ	5		
02:18	MA46568-CCV14	1		
02:23	MA46568-CCB15	1		
02:28	ZZZZZZ	5		
02:34	ZZZZZZ	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:39	ZZZZZZ	5		
02:45	ZZZZZZ	5		
02:50	MP14489-MB1	1		As hit.
02:56	MP14489-B1	1		
03:01	MP14489-S1	1		
03:06	MP14489-S2	1		
03:11	JC86652-6	1		(sample used for QC only; not part of login JC86406)
03:16	MA46568-CCV15	1		
03:21	MA46568-CCB16	1		
03:27	MP14489-SD1	5		
03:32	ZZZZZZ	1		
03:38	ZZZZZZ	1		
03:43	ZZZZZZ	1		
03:49	ZZZZZZ	1		
03:54	ZZZZZZ	1		
03:59	ZZZZZZ	1		
04:05	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:16	MA46568-CCV16	1		
04:21	MA46568-CCB17	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:37	ZZZZZZ	1		
04:43	ZZZZZZ	1		
04:48	ZZZZZZ	1		
04:54	ZZZZZZ	1		
04:59	ZZZZZZ	1		
05:05	ZZZZZZ	1		
05:10	ZZZZZZ	1		
05:16	MA46568-CCV17	1		Be, Fe, Mg and Ag out
05:21	MA46568-CCB18	1		
08:23	ZZZZZZ	1		
08:29	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:31	MP14489-MB1	1		Confirming AS

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
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Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Element: Dilution	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl
11:52	ZZZZZZ	1													
11:57	ZZZZZZ	1													
12:03	MA46568-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:12	MA46568-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:21	MA46568-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:34	MA46568-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:41	MA46568-CRI1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:46	MA46568-CRID1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:52	MA46568-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
12:57	MA46568-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
13:02	MA46568-HSTD1	1	X	X	X	X	X	X	X		X	X	X	X	X
13:08	MA46568-HSTD2	1								X					
13:13	ZZZZZZ	1													
13:19	ZZZZZZ	1													
13:24	ZZZZZZ	1													
13:30	MA46568-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
13:35	MA46568-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X
13:40	ZZZZZZ	1													
13:46	ZZZZZZ	1													
13:51	JC86406-1	3													
13:56	JC86406-2	2		X					X	X	X	X	X	X	X
14:01	JC86406-5	3													
14:07	JC86406-6	2	X	X	X			X	X	X	X	X	X	X	X
14:12	JC86406-11	1					X					X			
14:17	ZZZZZZ	5													
14:23	MP14400-PS1	1	X								X	X			
14:28	MA46568-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X
14:33	MA46568-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X
14:38	ZZZZZZ	1													
14:44	ZZZZZZ	1													
14:49	MP14348-S1	2								X					
14:54	MP14348-S2	2								X					
14:59	ZZZZZZ	2													
		Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Element: Dilution	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	
15:04	ZZZZZZ	2														
15:10	ZZZZZZ	1														
15:15	ZZZZZZ	1														
15:20	ZZZZZZ	2														
15:25	MA46568-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
15:30	MA46568-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
15:36	ZZZZZZ	1														
15:41	ZZZZZZ	2														
15:46	ZZZZZZ	1														
15:52	ZZZZZZ	1														
15:57	ZZZZZZ	2														
16:02	ZZZZZZ	5														
16:08	ZZZZZZ	3														
16:13	ZZZZZZ	2														
16:18	ZZZZZZ	3														
16:23	MA46568-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:28	MA46568-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:34	ZZZZZZ	1														
16:39	ZZZZZZ	1														
16:45	ZZZZZZ	1														
16:50	MP14409-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
16:55	MP14409-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:00	JC86554-1	1								X		X				(a)
17:05	MP14409-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:11	ZZZZZZ	2														
17:16	ZZZZZZ	1														
17:21	ZZZZZZ	1														
17:27	MA46568-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:32	MA46568-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:38	JC86406-1	2		X		X			X		X	X	X	X	X	
17:43	JC86406-5	2		X		X			X	X	X	X	X	X	X	
17:48	MP14495-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
17:54	MP14495-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
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Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution	Element: Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	
17:59	MA46568-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:04	MA46568-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:09	MA46568-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:14	MA46568-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
18:20	MP14495-S1	1						X								
18:25	MP14495-S2	1						X								
18:30	JC86638-1	1						X								(a)
18:35	MP14495-SD1	5						X								
18:41	ZZZZZZ	1														
18:46	ZZZZZZ	1														
18:51	ZZZZZZ	1														
18:56	ZZZZZZ	1														
19:02	ZZZZZZ	1														
19:07	MA46568-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
19:12	MA46568-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
19:18	ZZZZZZ	1														
19:23	ZZZZZZ	1														
19:28	ZZZZZZ	1														
19:33	ZZZZZZ	1														
19:39	ZZZZZZ	1														
19:44	ZZZZZZ	1														
19:49	ZZZZZZ	1														
19:54	ZZZZZZ	1														
20:00	ZZZZZZ	1														
20:05	MA46568-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
20:10	MA46568-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
20:15	ZZZZZZ	1														
20:21	ZZZZZZ	1														
20:26	ZZZZZZ	1														
20:32	ZZZZZZ	1														
20:38	ZZZZZZ	1														
20:43	ZZZZZZ	1														
20:49	ZZZZZZ	1														
		Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution	Element: Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	
20:54	ZZZZZZ	1														
21:00	ZZZZZZ	1														
21:05	ZZZZZZ	1														
21:11	ZZZZZZ	1														
21:16	ZZZZZZ	1														
21:22	MA46568-CCV9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:27	MA46568-CCB10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:32	ZZZZZZ	1														
21:38	MP14425-MB1	1		X		X		X		X	X		X			
21:43	MP14425-MB2	1		X		X		X		X	X		X			
21:49	MP14425-B1	1		X		X		X		X	X		X			
21:54	MP14425-B2	1		X		X		X		X	X		X			
21:59	MP14425-B3	1		X		X		X		X	X		X			
22:04	MP14425-S1	1		X		X		X		X	X		X			
22:09	MP14425-S2	1		X		X		X		X	X		X			
22:14	JC86687-8F	1		X												(a)
22:19	MA46568-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:24	MA46568-CCB11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:30	MP14425-SD1	5		X		X		X		X	X		X			
22:35	ZZZZZZ	1														
22:41	ZZZZZZ	1														
22:46	ZZZZZZ	1														
22:52	ZZZZZZ	1														
22:57	ZZZZZZ	1														
23:03	ZZZZZZ	1														
23:08	ZZZZZZ	1														
23:14	ZZZZZZ	1														
23:19	MA46568-CCV11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:24	MA46568-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:30	ZZZZZZ	1														
23:35	ZZZZZZ	1														
23:40	ZZZZZZ	1														
23:46	ZZZZZZ	1														
		Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution	Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	
23:51	ZZZZZZ	1															
23:57	ZZZZZZ	1															
00:02	ZZZZZZ	1															
00:08	ZZZZZZ	1															
00:14	ZZZZZZ	1															
00:19	MA46568-CCV12	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
00:24	MA46568-CCB13	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
00:30	ZZZZZZ	1															
00:35	MP14420-MB1	5			X		X	X				X		X	X		
00:41	MP14420-B1	5			X		X	X				X		X	X		
00:46	MP14420-S1	5			X		X	X				X		X	X		
00:51	MP14420-S2	5			X		X	X				X		X	X		
00:56	JC86726-1	5			X		X	X				X		X	X		(a)
01:02	MP14420-SD1	25			X		X	X				X		X	X		
01:07	ZZZZZZ	5															
01:13	ZZZZZZ	5															
01:18	MA46568-CCV13	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
01:23	MA46568-CCB14	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
01:29	ZZZZZZ	5															
01:34	ZZZZZZ	5															
01:40	ZZZZZZ	5															
01:45	ZZZZZZ	5															
01:51	ZZZZZZ	5															
01:56	ZZZZZZ	5															
02:01	ZZZZZZ	5															
02:07	ZZZZZZ	5															
02:12	ZZZZZZ	5															
02:18	MA46568-CCV14	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
02:23	MA46568-CCB15	1		X	X	X	X	X	X	X	X	X	X	X	X	X	
02:28	ZZZZZZ	5															
02:34	ZZZZZZ	5															
02:39	ZZZZZZ	5															
02:45	ZZZZZZ	5															
			Element:	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Element: Dilution	Sb	As	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Se	Ag	Tl	
02:50	MP14489-MB1	1	X		X	X	X	X	X	X	X	X	X	X	X	
02:56	MP14489-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:01	MP14489-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:06	MP14489-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:11	JC86652-6	1														(a)
03:16	MA46568-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:21	MA46568-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:27	MP14489-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:32	ZZZZZZ	1														
03:38	ZZZZZZ	1														
03:43	ZZZZZZ	1														
03:49	ZZZZZZ	1														
03:54	ZZZZZZ	1														
03:59	ZZZZZZ	1														
04:05	ZZZZZZ	1														
04:10	ZZZZZZ	1														
04:16	MA46568-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
04:21	MA46568-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
04:26	ZZZZZZ	1														
04:32	ZZZZZZ	1														
04:37	ZZZZZZ	1														
04:43	ZZZZZZ	1														
04:48	ZZZZZZ	1														
04:54	ZZZZZZ	1														
04:59	ZZZZZZ	1														
05:05	ZZZZZZ	1														
05:10	ZZZZZZ	1														
05:16	MA46568-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
05:21	MA46568-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	
08:23	ZZZZZZ	1														
08:29	ZZZZZZ	1														
09:31	MP14489-MB1	1	Confirming AS													

(a) Sample used for QC only; not part of login JC86406.

Element: Sb As Be Cd Cr Co Cu Fe Pb Mn Se Ag Tl

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:42	MA46568-STD1	4078 R	111240 R	7249 R	9310 R
11:47	MA46568-STD2	3828	103970	7083	8008
11:52	ZZZZZZ	3944	106770	7241	8360
11:57	ZZZZZZ	4091	112020	7260	9312
12:03	MA46568-ICV1	3948	107390	7233	8374
12:12	MA46568-ICB1	4118	112500	7354	9379
12:21	MA46568-ICCV1	3978	107670	7287	8426
12:34	MA46568-CCB1	4137	113120	7378	9417
12:41	MA46568-CRI1	4024	109980	7204	9022
12:46	MA46568-CRID1	4131	113050	7365	9357
12:52	MA46568-ICSA1	3669	99975	7054	7385
12:57	MA46568-ICSAB1	3664	99969	7058	7388
13:02	MA46568-HSTD1	4054	109860	7408	9077
13:08	MA46568-HSTD2	3684	100560	7048	7399
13:13	ZZZZZZ	4046	111180	7298	9233
13:19	ZZZZZZ	4073	113440	7363	9386
13:24	ZZZZZZ	4154	113580	7372	9446
13:30	MA46568-CCV1	3989	108510	7303	8443
13:35	MA46568-CCB2	4151	113660	7300	9440
13:40	ZZZZZZ	4204	114710	7523	9604
13:46	ZZZZZZ	4022	110260	7407	8689
13:51	JC86406-1	No results reported for the elements associated with this internal standard.			
13:56	JC86406-2	4173	113240	7577	8898
14:01	JC86406-5	No results reported for the elements associated with this internal standard.			
14:07	JC86406-6	4065	111390	7507	8640
14:12	JC86406-11	4209	115010	7720	8948
14:17	ZZZZZZ	4142	113770	7367	9417
14:23	MP14400-PS1	4178	114550	7872	8386
14:28	MA46568-CCV2	4002	109650	7309	8466
14:33	MA46568-CCB3	4145	114340	7384	9418
14:38	ZZZZZZ	4152	114570	7492	9458
14:44	ZZZZZZ	4041	111000	7437	8710
14:49	MP14348-S1	4086	112310	7540	8931

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:54	MP14348-S2	4112	113070	7579	8760
14:59	ZZZZZZ	4138	113720	7519	9232
15:04	ZZZZZZ	4181	113460	7500	9272
15:10	ZZZZZZ	4154	114070	7639	8997
15:15	ZZZZZZ	4220	115560	7683	9054
15:20	ZZZZZZ	4185	114610	7561	9154
15:25	MA46568-CCV3	4021	110230	7351	8497
15:30	MA46568-CCB4	4198	115370	7485	9533
15:36	ZZZZZZ	4214	116670	7905	8735
15:41	ZZZZZZ	4090	112980	7601	8734
15:46	ZZZZZZ	4190	115390	7626	9559
15:52	ZZZZZZ	4061	111710	7461	8747
15:57	ZZZZZZ	4194	114670	7674	8938
16:02	ZZZZZZ	4211	115350	7647	8923
16:08	ZZZZZZ	4237	116170	7760	8852
16:13	ZZZZZZ	4187	115020	7668	8872
16:18	ZZZZZZ	4031	111120	7493	8483
16:23	MA46568-CCV4	4026	110330	7431	8501
16:28	MA46568-CCB5	4160	115550	7469	9453
16:34	ZZZZZZ	3982	109460	7583	8270
16:39	ZZZZZZ	4133	115930	7561	9423
16:45	ZZZZZZ	4051	112160	7559	8717
16:50	MP14409-S1	3911	108400	7441	8156
16:55	MP14409-S2	3932	108640	7430	8205
17:00	JC86554-1	3903	108870	7425	8455
17:05	MP14409-SD1	4096	114110	7507	9150
17:11	ZZZZZZ	4192	116200	7657	9159
17:16	ZZZZZZ	4162	116150	7622	9231
17:21	ZZZZZZ	3836	105790	7389	7873
17:27	MA46568-CCV5	4038	111940	7448	8538
17:32	MA46568-CCB6	4190	116280	7514	9522
17:38	JC86406-1	4220	115170	7790	8905
17:43	JC86406-5	4187	115110	7675	9239

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:48	MP14495-MB1	4214	118000	7611	9608
17:54	MP14495-B1	4102	114120	7612	8839
17:59	MA46568-ICSA2	3736	103210	7261	7493
18:04	MA46568-ICSAB2	3729	102920	7270	7504
18:09	MA46568-CCV6	4069	112150	7515	8596
18:14	MA46568-CCB7	4207	116950	7545	9554
18:20	MP14495-S1	3618	103570	7290	8542
18:25	MP14495-S2	3622	103450	7251	8543
18:30	JC86638-1	3636	104710	7305	8663
18:35	MP14495-SD1	4035	112520	7438	9063
18:41	ZZZZZZ	4326	119800	7870	9491
18:46	ZZZZZZ	4307	118760	7939	9103
18:51	ZZZZZZ	4172	116190	7904	8526
18:56	ZZZZZZ	4216	116980	7835	8749
19:02	ZZZZZZ	4210	117430	7883	8886
19:07	MA46568-CCV7	4072	112460	7527	8604
19:12	MA46568-CCB8	4228	117610	7546	9599
19:18	ZZZZZZ	4122	114320	7809	8569
19:23	ZZZZZZ	4209	116830	7856	8864
19:28	ZZZZZZ	4107	114590	7847	8496
19:33	ZZZZZZ	4206	116960	7880	8853
19:39	ZZZZZZ	4210	999999 !a	7860	8761
19:44	ZZZZZZ	4178	118930	7876	8687
19:49	ZZZZZZ	4221	117120	7863	8920
19:54	ZZZZZZ	4222	117290	7892	8893
20:00	ZZZZZZ	4294	115000	8004	8787
20:05	MA46568-CCV8	4077	112320	7543	8619
20:10	MA46568-CCB9	4222	115590	7617	9597
20:15	ZZZZZZ	4232	117670	7626	9662
20:21	ZZZZZZ	4218	117800	7620	9561
20:26	ZZZZZZ	4222	117700	7570	9571
20:32	ZZZZZZ	4224	117920	7571	9569
20:38	ZZZZZZ	4232	118500	7559	9601

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:43	ZZZZZZ	4249	118400	7613	9620
20:49	ZZZZZZ	4231	117610	7579	9588
20:54	ZZZZZZ	4238	116410	7580	9627
21:00	ZZZZZZ	4231	118160	7635	9616
21:05	ZZZZZZ	4333	112980	8041	8595
21:11	ZZZZZZ	4229	117610	7586	9653
21:16	ZZZZZZ	3856	108230	7389	8219
21:22	MA46568-CCV9	4093	113240	7454	8657
21:27	MA46568-CCB10	4226	118380	7585	9615
21:32	ZZZZZZ	4209	117650	8071	8777
21:38	MP14425-MB1	4247	118610	7648	9704
21:43	MP14425-MB2	4232	118660	7718	9657
21:49	MP14425-B1	4121	114830	7651	8891
21:54	MP14425-B2	4113	115170	7660	8874
21:59	MP14425-B3	4105	114600	7679	8862
22:04	MP14425-S1	3944	109790	7517	8214
22:09	MP14425-S2	3944	109980	7511	8213
22:14	JC86687-8F	3973	111110	7490	8414
22:19	MA46568-CCV10	4110	115040	7567	8685
22:24	MA46568-CCB11	4234	118830	7653	9632
22:30	MP14425-SD1	4138	116320	7653	9120
22:35	ZZZZZZ	3823	107120	7485	7819
22:41	ZZZZZZ	4229	119040	7676	9642
22:46	ZZZZZZ	4013	113410	7449	8703
22:52	ZZZZZZ	3791	104660	7437	7743
22:57	ZZZZZZ	4140	117010	7658	9288
23:03	ZZZZZZ	3976	111190	7531	8414
23:08	ZZZZZZ	3808	107920	7397	8028
23:14	ZZZZZZ	3949	112220	7580	8598
23:19	MA46568-CCV11	4093	114200	7527	8649
23:24	MA46568-CCB12	4247	118530	7670	9653
23:30	ZZZZZZ	4047	113070	7632	8689
23:35	ZZZZZZ	4005	113150	7575	8757

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:40	ZZZZZZ	3767	105160	7440	7723
23:46	ZZZZZZ	3932	109720	7524	8243
23:51	ZZZZZZ	3967	110990	7611	8256
23:57	ZZZZZZ	3819	106910	7499	7887
00:02	ZZZZZZ	3779	105560	7515	7746
00:08	ZZZZZZ	3796	105760	7485	7720
00:14	ZZZZZZ	3761	104050	7456	7679
00:19	MA46568-CCV12	4061	113080	7596	8609
00:24	MA46568-CCB13	4196	118110	7661	9571
00:30	ZZZZZZ	4034	113800	7620	8828
00:35	MP14420-MB1	3959	110180	7543	8411
00:41	MP14420-B1	3987	110760	7573	8370
00:46	MP14420-S1	3960	110780	7553	8276
00:51	MP14420-S2	3961	110590	7532	8270
00:56	JC86726-1	4060	107300	7592	8529
01:02	MP14420-SD1	4085	114720	7563	9006
01:07	ZZZZZZ	3891	109590	7456	8155
01:13	ZZZZZZ	3931	109880	7479	8256
01:18	MA46568-CCV13	4054	113200	7509	8604
01:23	MA46568-CCB14	4177	117760	7603	9549
01:29	ZZZZZZ	3931	109970	7499	8264
01:34	ZZZZZZ	3949	110700	7486	8347
01:40	ZZZZZZ	3957	110050	7515	8357
01:45	ZZZZZZ	3937	110190	7509	8312
01:51	ZZZZZZ	3939	110760	7493	8315
01:56	ZZZZZZ	3882	109480	7270	8160
02:01	ZZZZZZ	3879	109140	7420	8128
02:07	ZZZZZZ	3878	109090	7403	8137
02:12	ZZZZZZ	3879	109560	7482	8136
02:18	MA46568-CCV14	4049	113240	7538	8589
02:23	MA46568-CCB15	4195	118360	7599	9569
02:28	ZZZZZZ	3952	110890	7488	8334
02:34	ZZZZZZ	3958	111280	7658	8361

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:39	ZZZZZZ	3958	110900	7466	8343
02:45	ZZZZZZ	3949	111050	7494	8312
02:50	MP14489-MB1	4225	120080	7707	9682
02:56	MP14489-B1	4085	115080	7623	8828
03:01	MP14489-S1	4054	114540	7599	8698
03:06	MP14489-S2	4051	115120	7562	8694
03:11	JC86652-6	4111	117060	7614	9257
03:16	MA46568-CCV15	4060	114030	7529	8603
03:21	MA46568-CCB16	4190	119120	7562	9553
03:27	MP14489-SD1	4179	118340	7604	9520
03:32	ZZZZZZ	3974	113320	7571	8588
03:38	ZZZZZZ	3890	110390	7463	8242
03:43	ZZZZZZ	3989	113350	7584	8718
03:49	ZZZZZZ	4124	116650	7675	9061
03:54	ZZZZZZ	3999	113170	7591	8550
03:59	ZZZZZZ	4040	114280	7694	8706
04:05	ZZZZZZ	4159	118130	7695	9264
04:10	ZZZZZZ	3950	112200	7548	8406
04:16	MA46568-CCV16	4073	114040	7488	8635
04:21	MA46568-CCB17	4241	119520	7591	9667
04:26	ZZZZZZ	4042	115230	7639	8848
04:32	ZZZZZZ	4239	120610	7701	9689
04:37	ZZZZZZ	3924	111480	7479	8421
04:43	ZZZZZZ	3971	112280	7552	8466
04:48	ZZZZZZ	3835	108470	7446	7928
04:54	ZZZZZZ	3835	108580	7446	7928
04:59	ZZZZZZ	4232	120670	7686	9675
05:05	ZZZZZZ	4097	116430	7633	9031
05:10	ZZZZZZ	4233	120950	7657	9691
05:16	MA46568-CCV17	4083	116010	7559	8664
05:21	MA46568-CCB18	4246	120380	7658	9682
08:23	ZZZZZZ	4360	121780	7596	9932
08:29	ZZZZZZ	4239	118040	7556	9102

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46568
Parameters: Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:31	MP14489-MB1	No results reported for the elements associated with this internal standard.			

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46568 Units: ug/l

Time: / Sample ID:			12:12 ICB1		12:34 CCB1		13:35 CCB2		14:33 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	anr							
Antimony	6.0	1.1	0.00	<6.0	0.800	<6.0	0.300	<6.0	0.900	<6.0
Arsenic	3.0	1.2	-0.600	<3.0	-0.300	<3.0	0.200	<3.0	0.500	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.1	-0.100	<1.0	0.00	<1.0	0.200	<1.0	-0.100	<1.0
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	0.300	<3.0	0.200	<3.0	0.200	<3.0	0.300	<3.0
Calcium	5000	3.7	anr							
Chromium	10	.4	-0.200	<10	0.100	<10	0.00	<10	-0.100	<10
Cobalt	50	.3	-0.100	<50	-0.200	<50	0.200	<50	-0.100	<50
Copper	10	1	-0.200	<10	-0.100	<10	-0.100	<10	-0.700	<10
Iron	100	2.4	3.30	<100	-1.10	<100	5.30	<100	0.100	<100
Lead	3.0	1.5	0.00	<3.0	0.700	<3.0	0.400	<3.0	0.500	<3.0
Lithium	50	1.5								
Magnesium	5000	17	anr							
Manganese	15	.1	0.100	<15	0.100	<15	0.300	<15	0.200	<15
Molybdenum	20	.3	anr							
Nickel	10	.3	anr							
Phosphorus	50	2								
Potassium	10000	40	anr							
Selenium	10	1.8	0.00	<10	0.100	<10	-0.300	<10	-0.600	<10
Silicon	200	.9								
Silver	10	.5	-1.20	<10	-0.600	<10	-0.700	<10	-1.00	<10
Sodium	10000	13	anr							
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	0.600	<10	0.600	<10	0.500	<10	0.600	<10
Tin	10	.6								
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	anr							
Zinc	20	.2	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46568 Units: ug/l

Time: / Sample ID:			12:12 ICB1		12:34 CCB1		13:35 CCB2		14:33 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46568 Units: ug/l

Time: / Sample ID:			15:30 CCB4		16:28 CCB5		17:32 CCB6		18:14 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	anr							
Antimony	6.0	1.1	0.500	<6.0	0.300	<6.0	0.500	<6.0	0.500	<6.0
Arsenic	3.0	1.2	1.10	<3.0	0.400	<3.0	0.800	<3.0	-0.300	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.200	<1.0	-0.200	<1.0
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	0.200	<3.0	0.400	<3.0	0.400	<3.0	0.100	<3.0
Calcium	5000	3.7	anr							
Chromium	10	.4	0.200	<10	0.200	<10	0.300	<10	0.200	<10
Cobalt	50	.3	-0.100	<50	0.100	<50	0.00	<50	-0.100	<50
Copper	10	1	-0.800	<10	-0.700	<10	-0.800	<10	-1.00	<10
Iron	100	2.4	2.80	<100	5.10	<100	4.10	<100	3.70	<100
Lead	3.0	1.5	0.400	<3.0	-0.300	<3.0	0.400	<3.0	0.200	<3.0
Lithium	50	1.5								
Magnesium	5000	17	anr							
Manganese	15	.1	0.100	<15	0.200	<15	0.300	<15	0.200	<15
Molybdenum	20	.3	anr							
Nickel	10	.3	anr							
Phosphorus	50	2								
Potassium	10000	40	anr							
Selenium	10	1.8	0.900	<10	-0.400	<10	-0.600	<10	-1.10	<10
Silicon	200	.9								
Silver	10	.5	-1.60	<10	-1.60	<10	-1.40	<10	-1.90	<10
Sodium	10000	13	anr							
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	1.10	<10	0.700	<10	-0.100	<10	0.300	<10
Tin	10	.6								
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	anr							
Zinc	20	.2	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46568 Units: ug/l

Time:			15:30		16:28		17:32		18:14	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46568 Units: ug/l

Time:		12:21	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	2000	1980	99.0
Arsenic	2000	1980	99.0
Barium	anr		
Beryllium	2000	1990	99.5
Bismuth			
Boron	anr		
Cadmium	2000	2010	100.5
Calcium	anr		
Chromium	2000	2040	102.0
Cobalt	2000	2000	100.0
Copper	2000	1960	98.0
Iron	40000	40400	101.0
Lead	2000	2040	102.0
Lithium			
Magnesium	anr		
Manganese	2000	2030	101.5
Molybdenum	anr		
Nickel	anr		
Phosphorus			
Potassium	anr		
Selenium	2000	2010	100.5
Silicon			
Silver	250	245	98.0
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	2070	103.5
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46568 Units: ug/l

Time:		12:21	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		12:03			13:30			14:28	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1980	99.0	2000	1980	99.0	2000	1970	98.5
Arsenic	2000	1990	99.5	2000	1970	98.5	2000	1960	98.0
Barium	anr								
Beryllium	2000	1980	99.0	2000	1990	99.5	2000	1970	98.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2000	100.0	2000	1970	98.5
Calcium	anr								
Chromium	2000	1980	99.0	2000	2030	101.5	2000	2000	100.0
Cobalt	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5
Copper	2000	1920	96.0	2000	1950	97.5	2000	1920	96.0
Iron	40000	40400	101.0	40000	40400	101.0	40000	40300	100.8
Lead	2000	1990	99.5	2000	2040	102.0	2000	2020	101.0
Lithium									
Magnesium	anr								
Manganese	2000	1990	99.5	2000	2020	101.0	2000	1990	99.5
Molybdenum	anr								
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	2000	1970	98.5	2000	2000	100.0	2000	1980	99.0
Silicon									
Silver	250	252	100.8	250	244	97.6	250	240	96.0
Sodium	anr								
Strontium									
Sulfur									
Thallium	2000	2020	101.0	2000	2060	103.0	2000	2040	102.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		12:03			13:30			14:28	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		15:25			16:23			17:27	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1970	98.5	2000	1970	98.5	2000	1960	98.0
Arsenic	2000	1950	97.5	2000	1950	97.5	2000	1940	97.0
Barium	anr								
Beryllium	2000	1950	97.5	2000	1950	97.5	2000	1920	96.0
Bismuth									
Boron	anr								
Cadmium	2000	1960	98.0	2000	1950	97.5	2000	1930	96.5
Calcium	anr								
Chromium	2000	1990	99.5	2000	2000	100.0	2000	1960	98.0
Cobalt	2000	1980	99.0	2000	1980	99.0	2000	1970	98.5
Copper	2000	1910	95.5	2000	1910	95.5	2000	1890	94.5
Iron	40000	40300	100.8	40000	40200	100.5	40000	39900	99.8
Lead	2000	2020	101.0	2000	2020	101.0	2000	2000	100.0
Lithium									
Magnesium	anr								
Manganese	2000	1980	99.0	2000	1990	99.5	2000	1950	97.5
Molybdenum	anr								
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	2000	1970	98.5	2000	1980	99.0	2000	1960	98.0
Silicon									
Silver	250	239	95.6	250	238	95.2	250	236	94.4
Sodium	anr								
Strontium									
Sulfur									
Thallium	2000	2030	101.5	2000	2020	101.0	2000	2010	100.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		15:25			16:23			17:27	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		18:09	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	2000	1940	97.0
Arsenic	2000	1920	96.0
Barium	anr		
Beryllium	2000	1910	95.5
Bismuth			
Boron	anr		
Cadmium	2000	1920	96.0
Calcium	anr		
Chromium	2000	1950	97.5
Cobalt	2000	1950	97.5
Copper	2000	1870	93.5
Iron	40000	39500	98.8
Lead	2000	1980	99.0
Lithium			
Magnesium	anr		
Manganese	2000	1940	97.0
Molybdenum	anr		
Nickel	anr		
Phosphorus			
Potassium	anr		
Selenium	2000	1940	97.0
Silicon			
Silver	250	233	93.2
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	1990	99.5
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46568 Units: ug/l

Time:		18:09	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46568 Units: ug/l

Time:		13:02			13:08	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	8000	8210	102.6			
Arsenic	8000	8060	100.8			
Barium	anr					
Beryllium	8000	7880	98.5			
Bismuth						
Boron	anr					
Cadmium	8000	7700	96.3			
Calcium						
Chromium	8000	8260	103.3			
Cobalt	8000	7850	98.1			
Copper	8000	8020	100.3			
Iron				200000	196000	98.0
Lead	8000	7990	99.9			
Lithium						
Magnesium						
Manganese	8000	7900	98.8			
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	8000	7960	99.5			
Silicon						
Silver	625	651	104.2			
Sodium						
Strontium						
Sulfur						
Thallium	8000	8110	101.4			
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46568 Units: ug/l

Time:		13:02			13:08	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46568 Units: ug/l

Time:				12:41		12:46	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	7.00	116.7	0.300U	0.0* (a)
Arsenic	8.0	20	3.0	7.60	95.0	3.20	106.7
Barium	200		4.0	anr			
Beryllium	2.0		1.0	2.00	100.0	1.00	100.0
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	3.40	113.3	1.40	140.0*(a
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	10.7	107.0	2.60	130.0*(a
Cobalt	50		3.0	48.9	97.8	3.10	103.3
Copper	10		2.0	9.60	96.0	-0.300U	0.0* (a)
Iron	100	500		113	113.0		
Lead	3.0	20	2.5	2.90	96.7	-0.300U	0.0* (a)
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	15.9	106.0	3.50	116.7
Molybdenum	20			anr			
Nickel	10		4.0	anr			
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	10.6	106.0	5.80	116.0
Silicon	200						
Silver	5.0		2.0	4.20	84.0	-0.400U	0.0* (a)
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	9.50	95.0	2.50	125.0*(a
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46568 Units: ug/l

Time:				12:41		12:46	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element at this RL in the area bracketed by this QC.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46568 Units: ug/l

Time:			12:52		12:57		17:59		18:04	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	511000	102.2	508000	101.6	485000	97.0	482000	96.4
Antimony		1000	1.20		1060	106.0	2.00		1050	105.0
Arsenic		1000	-0.600		1060	106.0	1.70		1030	103.0
Barium		500	-0.200		498	99.6	-0.100		474	94.8
Beryllium		500	0.600		488	97.6	0.600		465	93.0
Bismuth		500	5.60		505	101.0	2.80		496	99.2
Boron		500	-2.80		470	94.0	-2.30		459	91.8
Cadmium		1000	0.400		1000	100.0	-0.100		962	96.2
Calcium	400000	400000	380000	95.0	379000	94.8	364000	91.0	363000	90.8
Chromium		500	1.30		479	95.8	1.40		465	93.0
Cobalt		500	-0.500		484	96.8	-0.900		472	94.4
Copper		500	2.40		498	99.6	2.90		478	95.6
Iron	200000	200000	187000	93.5	194000	97.0	181000	90.5	188000	94.0
Lead		1000	2.50		967	96.7	1.70		939	93.9
Lithium		500	-12.7		520	104.0	-12.5		497	99.4
Magnesium	500000	500000	496000	99.2	505000	101.0	485000	97.0	494000	98.8
Manganese		500	1.50		491	98.2	0.800		470	94.0
Molybdenum		500	-1.20		479	95.8	-0.100		464	92.8
Nickel		1000	0.900		969	96.9	0.600		934	93.4
Phosphorus		500	3.60		511	102.2	7.60		502	100.4
Potassium			-370		-413		-297		-327	
Selenium		1000	-4.70		1020	102.0	-7.30		994	99.4
Silicon		500	-13.9		508	101.6	-8.30		497	99.4
Silver		1000	-0.200		1090	109.0	-1.60		1040	104.0
Sodium			24.1		4.00		47.6		32.4	
Strontium		500	-2.90		494	98.8	-2.70		468	93.6
Sulfur		500	-29.8		481	96.2	-23.0		472	94.4
Thallium		1000	0.100		955	95.5	-0.300		925	92.5
Tin		500	-1.70		466	93.2	-2.00		455	91.0
Titanium		500	0.00		492	98.4	0.100		469	93.8
Tungsten		500	5.70		478	95.6	23.2		473	94.6
Vanadium		500	2.20		485	97.0	3.10		464	92.8
Zinc		1000	-0.800		942	94.2	-0.600		911	91.1

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042319M1.ICP Date Analyzed: 04/23/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46568 Units: ug/l

Time:			12:52		12:57		17:59		18:04	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-2.00		477	95.4	-1.80		458	91.6

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:32	MA46578-STD1	1		STDA
10:37	MA46578-STD2	1		STDB
10:42	ZZZZZZ	1		
10:47	ZZZZZZ	1		
10:53	ZZZZZZ	1		
10:58	ZZZZZZ	1		
11:04	MA46578-ICV1	1		
11:09	MA46578-ICB1	1		
11:17	MA46578-ICCV1	1		
11:29	MA46578-CCB1	1		
11:33	MA46578-CRI1	1		
11:39	MA46578-CRID1	1		
11:44	MA46578-ICSA1	1		
11:49	MA46578-ICSAB1	1		
11:54	MA46578-HSTD1	1		
12:00	MA46578-HSTD2	1		
12:05	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:22	MA46578-CCV1	1		
12:27	MA46578-CCB2	1		
12:32	MA46578-CRID2	1		
12:38	MP14408-MB1	1		
12:43	ZZZZZZ	1		
12:48	MP14408-S1	1		
12:53	MP14408-S2	1		
12:58	MP14408-D1	1		
13:04	JC86595-4	1		(sample used for QC only; not part of login JC86406)
13:09	MP14408-SD1	5		
13:15	MP14419-B1	1		
13:20	MA46578-CCV2	1		
13:25	MA46578-CCB3	1		
13:30	MP14419-MB1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:36	MP14419-S1	1		
13:41	MP14419-S2	1		
13:46	MP14419-D1	1		
13:52	TD37733-1	1		(sample used for QC only; not part of login JC86406)
13:57	MP14419-SD1	5		
14:03	MA46578-CCV3	1		
14:08	MA46578-CCB4	1		
14:13	MA46578-CRI2	1		
14:19	MA46578-CRID3	1		
14:24	MA46578-ICSA2	1		
14:30	MA46578-ICSAB2	1		
14:35	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:45	JC86406-1	2		
---------->	Last reportable sample/prep for job JC86406			
14:50	ZZZZZZ	5		
14:56	MA46578-CCV4	1		
15:01	MA46578-CCB5	1		
---------->	Last reportable CCB for job JC86406			
15:08	ZZZZZZ	1		
15:13	ZZZZZZ	1		
15:19	ZZZZZZ	1		
15:25	MP14489-MB1	1		
15:30	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:41	MP14496-MB1	1		
15:46	MP14496-B1	1		
15:51	MP14496-S2	1		High RSD
15:56	ZZZZZZ	1		
16:01	MA46578-CCV5	1		
16:08	MA46578-CCB6	1		
16:13	MP14496-S1	1		
16:18	JC86782-2	1		(sample used for QC only; not part of login JC86406)
16:24	MP14496-SD1	5		
16:29	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:34	ZZZZZZ	1		
16:47	ZZZZZZ	1		
16:53	MP14496-S2	1		High RSD confirmed.
16:58	ZZZZZZ	1		
17:03	ZZZZZZ	2		
17:08	MA46578-CCV6	1		
17:14	MA46578-CCB7	1		
17:19	ZZZZZZ	1		
17:24	ZZZZZZ	2		
17:30	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:40	MP14495-S1	2		
17:45	ZZZZZZ	2		
17:51	JC86638-1	2		(sample used for QC only; not part of login JC86406)
17:56	MP14495-S2	2		
18:02	MP14495-SD1	10		
18:07	MA46578-CCV7	1		
18:12	MA46578-CCB8	1		
18:19	ZZZZZZ	5		
18:25	MP14495-S1	10		
18:30	MP14495-S2	10		
18:35	JC86638-1	10		(sample used for QC only; not part of login JC86406)
18:41	MP14495-SD1	50		
18:46	ZZZZZZ	1		
18:51	ZZZZZZ	1		
18:56	ZZZZZZ	2		
19:02	ZZZZZZ	1		
19:07	MA46578-CCV8	1		
19:12	MA46578-CCB9	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:29	ZZZZZZ	1		
19:34	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:40	MP14410-MB1	1		
19:45	MP14410-B1	1		
19:50	MP14410-S1	1		
19:55	MP14410-S2	1		
20:00	JC86590-1	1		(sample used for QC only; not part of login JC86406)
20:06	MA46578-CCV9	1		
20:11	MA46578-CCB10	1		
20:16	ZZZZZZ	1		
20:22	ZZZZZZ	1		
20:27	ZZZZZZ	1		
20:33	ZZZZZZ	1		
20:39	ZZZZZZ	1		
20:44	ZZZZZZ	1		
20:50	ZZZZZZ	1		
20:55	ZZZZZZ	1		
21:01	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:12	ZZZZZZ	1		
21:18	ZZZZZZ	1		
21:23	MA46578-CCV10	1		
21:28	MA46578-CCB11	1		
21:34	MP14410-SD1	5		
21:39	ZZZZZZ	1		
21:45	ZZZZZZ	1		
21:50	MP14511-MB1	1		
21:56	MP14511-B1	1		
22:01	MP14511-S1	1		S=1200ppm
22:06	MP14511-S2	1		S=1200ppm
22:11	JC86737-23	1		(sample used for QC only; not part of login JC86406)
22:17	MP14511-SD1	5		S=1200ppm
22:22	MA46578-CCV11	1		
22:27	MA46578-CCB12	1		
22:33	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:39	ZZZZZZ	1		
22:44	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:55	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:06	ZZZZZZ	1		
23:12	ZZZZZZ	1		
23:17	ZZZZZZ	1		
23:23	MA46578-CCV12	1		
23:28	MA46578-CCB13	1		
23:33	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:45	ZZZZZZ	1		
23:50	ZZZZZZ	1		
23:56	ZZZZZZ	1		
00:01	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:12	ZZZZZZ	1		
00:18	ZZZZZZ	1		
00:23	ZZZZZZ	1		
00:29	MA46578-CCV13	1		
00:34	MA46578-CCB14	1		
00:39	MP14512-MB1	1		
00:45	MP14512-MB2	1		
00:51	MP14512-B1	1		
00:56	MP14512-B2	1		
01:01	MP14512-S1	1		Mn overrange
01:06	MP14512-S2	1		Mn overrange
01:11	JC86737-43	1		(sample used for QC only; not part of login JC86406)
01:17	MP14512-SD1	5		
01:22	ZZZZZZ	1		
01:28	MA46578-CCV14	1		
01:33	MA46578-CCB15	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:38	ZZZZZZ	1		
01:44	ZZZZZZ	1		
01:49	ZZZZZZ	1		
01:54	ZZZZZZ	1		
02:00	ZZZZZZ	1		
02:05	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:16	ZZZZZZ	1		
02:21	ZZZZZZ	1		
02:27	MA46578-CCV15	1		
02:32	MA46578-CCB16	1		
02:37	ZZZZZZ	1		
02:43	ZZZZZZ	1		
02:49	ZZZZZZ	1		
02:54	ZZZZZZ	1		
03:00	ZZZZZZ	1		
03:05	ZZZZZZ	1		
03:11	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	MP14509-MB1	1		
03:33	MA46578-CCV16	1		
03:38	MA46578-CCB17	1		
03:44	MP14509-B1	1		
03:49	MP14509-S1	1		
03:54	MP14509-S2	1		
03:59	JC86654-10	1		(sample used for QC only; not part of login JC86406)
04:04	MP14509-SD1	5		
04:10	ZZZZZZ	1		
04:15	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:37	MA46578-CCV17	1		
04:42	MA46578-CCB18	1		
04:48	ZZZZZZ	1		
04:53	ZZZZZZ	1		
04:59	ZZZZZZ	1		
05:04	ZZZZZZ	1		
05:10	ZZZZZZ	1		
05:15	ZZZZZZ	1		
05:21	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:37	ZZZZZZ	1		
05:42	MA46578-CCV18	1		CCV out
05:47	MA46578-CCB19	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Element: Dilution	Al	Fe	
10:42	ZZZZZZ	1			
10:47	ZZZZZZ	1			
10:53	ZZZZZZ	1			
10:58	ZZZZZZ	1			
11:04	MA46578-ICV1	1	X	X	
11:09	MA46578-ICB1	1	X	X	
11:17	MA46578-ICCV1	1	X	X	
11:29	MA46578-CCB1	1	X	X	
11:33	MA46578-CRI1	1	X	X	
11:39	MA46578-CRID1	1	X	X	
11:44	MA46578-ICSA1	1	X	X	
11:49	MA46578-ICSAB1	1	X	X	
11:54	MA46578-HSTD1	1			
12:00	MA46578-HSTD2	1	X	X	
12:05	ZZZZZZ	1			
12:11	ZZZZZZ	1			
12:16	ZZZZZZ	1			
12:22	MA46578-CCV1	1	X	X	
12:27	MA46578-CCB2	1	X	X	
12:32	MA46578-CRID2	1	X	X	
12:38	MP14408-MB1	1			
12:43	ZZZZZZ	1			
12:48	MP14408-S1	1			
12:53	MP14408-S2	1			
12:58	MP14408-D1	1			
13:04	JC86595-4	1			(a)
13:09	MP14408-SD1	5			
13:15	MP14419-B1	1			
13:20	MA46578-CCV2	1	X	X	
13:25	MA46578-CCB3	1	X	X	
13:30	MP14419-MB1	1			
13:36	MP14419-S1	1			
13:41	MP14419-S2	1			
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Element: Dilution	Al	Fe	
13:46	MP14419-D1	1			
13:52	TD37733-1	1			(a)
13:57	MP14419-SD1	5			
14:03	MA46578-CCV3	1	X	X	
14:08	MA46578-CCB4	1	X	X	
14:13	MA46578-CRI2	1	X	X	
14:19	MA46578-CRID3	1	X	X	
14:24	MA46578-ICSA2	1	X	X	
14:30	MA46578-ICSAB2	1	X	X	
14:35	ZZZZZZ	1			
14:40	ZZZZZZ	1			
14:45	JC86406-1	2	X	X	
14:50	ZZZZZZ	5			
14:56	MA46578-CCV4	1	X	X	
15:01	MA46578-CCB5	1	X	X	
15:08	ZZZZZZ	1			
15:13	ZZZZZZ	1			
15:19	ZZZZZZ	1			
15:25	MP14489-MB1	1			
15:30	ZZZZZZ	1			
15:35	ZZZZZZ	1			
15:41	MP14496-MB1	1		X	
15:46	MP14496-B1	1		X	
15:51	MP14496-S2	1	High RSD		
15:56	ZZZZZZ	1			
16:01	MA46578-CCV5	1	X	X	
16:08	MA46578-CCB6	1	X	X	
16:13	MP14496-S1	1		X	
16:18	JC86782-2	1			(a)
16:24	MP14496-SD1	5		X	
16:29	ZZZZZZ	1			
16:34	ZZZZZZ	1			
16:47	ZZZZZZ	1			
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution	Al	Fe	
16:53	MP14496-S2	1		X	
16:58	ZZZZZZ	1			
17:03	ZZZZZZ	2			
17:08	MA46578-CCV6	1	X	X	
17:14	MA46578-CCB7	1	X	X	
17:19	ZZZZZZ	1			
17:24	ZZZZZZ	2			
17:30	ZZZZZZ	1			
17:35	ZZZZZZ	1			
17:40	MP14495-S1	2			
17:45	ZZZZZZ	2			
17:51	JC86638-1	2			(a)
17:56	MP14495-S2	2			
18:02	MP14495-SD1	10			
18:07	MA46578-CCV7	1	X	X	
18:12	MA46578-CCB8	1	X	X	
18:19	ZZZZZZ	5			
18:25	MP14495-S1	10		X	
18:30	MP14495-S2	10		X	
18:35	JC86638-1	10		X	(a)
18:41	MP14495-SD1	50		X	
18:46	ZZZZZZ	1			
18:51	ZZZZZZ	1			
18:56	ZZZZZZ	2			
19:02	ZZZZZZ	1			
19:07	MA46578-CCV8	1	X	X	
19:12	MA46578-CCB9	1	X	X	
19:18	ZZZZZZ	1			
19:23	ZZZZZZ	1			
19:29	ZZZZZZ	1			
19:34	ZZZZZZ	1			
19:40	MP14410-MB1	1			
19:45	MP14410-B1	1			
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution	Al	Fe	
19:50	MP14410-S1	1		X	
19:55	MP14410-S2	1		X	
20:00	JC86590-1	1			(a)
20:06	MA46578-CCV9	1	X	X	
20:11	MA46578-CCB10	1	X	X	
20:16	ZZZZZZ	1			
20:22	ZZZZZZ	1			
20:27	ZZZZZZ	1			
20:33	ZZZZZZ	1			
20:39	ZZZZZZ	1			
20:44	ZZZZZZ	1			
20:50	ZZZZZZ	1			
20:55	ZZZZZZ	1			
21:01	ZZZZZZ	1			
21:06	ZZZZZZ	1			
21:12	ZZZZZZ	1			
21:18	ZZZZZZ	1			
21:23	MA46578-CCV10	1	X	X	
21:28	MA46578-CCB11	1	X	X	
21:34	MP14410-SD1	5		X	
21:39	ZZZZZZ	1			
21:45	ZZZZZZ	1			
21:50	MP14511-MB1	1			
21:56	MP14511-B1	1			
22:01	MP14511-S1	1	S=1200ppm		
22:06	MP14511-S2	1	S=1200ppm		
22:11	JC86737-23	1	S=1200ppm		
22:17	MP14511-SD1	5	S=1200ppm		
22:22	MA46578-CCV11	1	X	X	
22:27	MA46578-CCB12	1	X	X	
22:33	ZZZZZZ	1			
22:39	ZZZZZZ	1			
22:44	ZZZZZZ	1			
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Element: Dilution	Al	Fe	
22:49	ZZZZZZ	1			
22:55	ZZZZZZ	1			
23:01	ZZZZZZ	1			
23:06	ZZZZZZ	1			
23:12	ZZZZZZ	1			
23:17	ZZZZZZ	1			
23:23	MA46578-CCV12	1	X	X	
23:28	MA46578-CCB13	1	X	X	
23:33	ZZZZZZ	1			
23:39	ZZZZZZ	1			
23:45	ZZZZZZ	1			
23:50	ZZZZZZ	1			
23:56	ZZZZZZ	1			
00:01	ZZZZZZ	1			
00:07	ZZZZZZ	1			
00:12	ZZZZZZ	1			
00:18	ZZZZZZ	1			
00:23	ZZZZZZ	1			
00:29	MA46578-CCV13	1	X	X	
00:34	MA46578-CCB14	1	X	X	
00:39	MP14512-MB1	1			
00:45	MP14512-MB2	1			
00:51	MP14512-B1	1			
00:56	MP14512-B2	1			
01:01	MP14512-S1	1			
01:06	MP14512-S2	1			
01:11	JC86737-43	1			(a)
01:17	MP14512-SD1	5			
01:22	ZZZZZZ	1			
01:28	MA46578-CCV14	1	X	X	
01:33	MA46578-CCB15	1	X	X	
01:38	ZZZZZZ	1			
01:44	ZZZZZZ	1			
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Element: Dilution	Al	Fe	
01:49	ZZZZZZ	1			
01:54	ZZZZZZ	1			
02:00	ZZZZZZ	1			
02:05	ZZZZZZ	1			
02:11	ZZZZZZ	1			
02:16	ZZZZZZ	1			
02:21	ZZZZZZ	1			
02:27	MA46578-CCV15	1	X	X	
02:32	MA46578-CCB16	1	X	X	
02:37	ZZZZZZ	1			
02:43	ZZZZZZ	1			
02:49	ZZZZZZ	1			
02:54	ZZZZZZ	1			
03:00	ZZZZZZ	1			
03:05	ZZZZZZ	1			
03:11	ZZZZZZ	1			
03:16	ZZZZZZ	1			
03:22	ZZZZZZ	1			
03:28	MP14509-MB1	1		X	
03:33	MA46578-CCV16	1	X	X	
03:38	MA46578-CCB17	1	X	X	
03:44	MP14509-B1	1		X	
03:49	MP14509-S1	1		X	
03:54	MP14509-S2	1		X	
03:59	JC86654-10	1			(a)
04:04	MP14509-SD1	5		X	
04:10	ZZZZZZ	1			
04:15	ZZZZZZ	1			
04:21	ZZZZZZ	1			
04:26	ZZZZZZ	1			
04:32	ZZZZZZ	1			
04:37	MA46578-CCV17	1	X	X	
04:42	MA46578-CCB18	1	X	X	
		Element:	Al	Fe	

REPORTED ELEMENTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Dilution	Element: Al	Fe
04:48	ZZZZZZ	1		
04:53	ZZZZZZ	1		
04:59	ZZZZZZ	1		
05:04	ZZZZZZ	1		
05:10	ZZZZZZ	1		
05:15	ZZZZZZ	1		
05:21	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:37	ZZZZZZ	1		
05:42	MA46578-CCV18	1	X	X
05:47	MA46578-CCB19	1	X	X

(a) Sample used for QC only; not part of login JC86406.

Element:	Al	Fe

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:32	MA46578-STD1	3812 R	102720 R	6512 R	8817 R
10:37	MA46578-STD2	3581	95899	6437	7613
10:42	ZZZZZZ	3699	98509	6513	7962
10:47	ZZZZZZ	3853	103850	6587	8909
10:53	ZZZZZZ	3708	99472	6533	8002
10:58	ZZZZZZ	3855	103340	6628	8907
11:04	MA46578-ICV1	3722	100230	6574	8015
11:09	MA46578-ICB1	3881	104870	6612	8980
11:17	MA46578-ICCV1	3739	100570	6592	8054
11:29	MA46578-CCB1	3863	105800	6707	8938
11:33	MA46578-CRI1	3804	103060	6550	8668
11:39	MA46578-CRID1	3909	105970	6692	8996
11:44	MA46578-ICSA1	3486	93745	6444	7133
11:49	MA46578-ICSAB1	3472	93481	6464	7124
11:54	MA46578-HSTD1	3845	103390	6689	8743
12:00	MA46578-HSTD2	3488	93525	6424	7120
12:05	ZZZZZZ	3833	103460	6617	8887
12:11	ZZZZZZ	3884	105930	6741	9089
12:16	ZZZZZZ	3948	106310	6728	9109
12:22	MA46578-CCV1	3817	101410	6710	8186
12:27	MA46578-CCB2	3955	106220	6704	9120
12:32	MA46578-CRID2	3944	106080	6747	9048
12:38	MP14408-MB1	3955	106210	6847	9137
12:43	ZZZZZZ	3857	103370	6737	8412
12:48	MP14408-S1	3817	102490	6794	8217
12:53	MP14408-S2	3825	102010	6776	8230
12:58	MP14408-D1	3882	104400	6841	8712
13:04	JC86595-4	3873	104260	6840	8695
13:09	MP14408-SD1	3951	105720	6798	9068
13:15	MP14419-B1	3907	103370	6772	8486
13:20	MA46578-CCV2	3858	102250	6776	8257
13:25	MA46578-CCB3	4000	106980	6777	9211
13:30	MP14419-MB1	3980	105910	6857	9073

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:36	MP14419-S1	3882	103610	6838	8435
13:41	MP14419-S2	3888	103660	6843	8446
13:46	MP14419-D1	3980	106770	6893	9055
13:52	TD37733-1	3983	106550	6933	9066
13:57	MP14419-SD1	4008	107090	6908	9197
14:03	MA46578-CCV3	3883	102670	6789	8313
14:08	MA46578-CCB4	4030	106890	6850	9270
14:13	MA46578-CRI2	3927	104390	6744	8904
14:19	MA46578-CRID3	4039	108080	6890	9260
14:24	MA46578-ICSA2	3588	95217	6627	7306
14:30	MA46578-ICSAB2	3596	95125	6636	7338
14:35	ZZZZZZ	4061	108840	7029	9395
14:40	ZZZZZZ	3949	104640	6855	8629
14:45	JC86406-1	4054	105820	7075	8664
14:50	ZZZZZZ	4031	106440	6961	8827
14:56	MA46578-CCV4	3901	102700	6819	8335
15:01	MA46578-CCB5	4045	107390	6880	9298
15:08	ZZZZZZ	No results reported for the elements associated with this internal standard.			
15:13	ZZZZZZ	3772	99652	6819	7983
15:19	ZZZZZZ	3578	94872	6701	7407
15:25	MP14489-MB1	4077	109210	7075	9402
15:30	ZZZZZZ	3959	104810	6870	8630
15:35	ZZZZZZ	3859	102800	6872	8407
15:41	MP14496-MB1	4136	109740	7114	9602
15:46	MP14496-B1	4019	105970	7073	8796
15:51	MP14496-S2	No results reported for the elements associated with this internal standard.			
15:56	ZZZZZZ	3929	103030	6875	8397
16:01	MA46578-CCV5	3941	103700	6917	8428
16:08	MA46578-CCB6	4081	108370	6924	9384
16:13	MP14496-S1	3878	102770	6956	8254
16:18	JC86782-2	3892	103780	6944	8541
16:24	MP14496-SD1	4016	107000	6957	9065
16:29	ZZZZZZ	3760	95890	6735	7690

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:34	ZZZZZZ	3971	105370	6997	8648
16:47	ZZZZZZ	3919	102560	6824	8580
16:53	MP14496-S2	3861	102100	6888	8225
16:58	ZZZZZZ	4020	107290	6850	9268
17:03	ZZZZZZ	4043	106500	6709	9143
17:08	MA46578-CCV6	3824	100030	6499	8192
17:14	MA46578-CCB7	4001	105390	6701	9202
17:19	ZZZZZZ	3898	102830	6723	8493
17:24	ZZZZZZ	3786	99410	6614	8052
17:30	ZZZZZZ	4050	107760	6846	9353
17:35	ZZZZZZ	3937	103910	6778	8584
17:40	MP14495-S1	3677	98741	6597	8459
17:45	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:51	JC86638-1	3687	98535	6581	8568
17:56	MP14495-S2	3685	98796	6632	8482
18:02	MP14495-SD1	3978	105380	6719	9007
18:07	MA46578-CCV7	3936	103230	6722	8407
18:12	MA46578-CCB8	4085	108630	6751	9390
18:19	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:25	MP14495-S1	3982	105500	6744	8955
18:30	MP14495-S2	3989	105640	6749	8970
18:35	JC86638-1	3998	106100	6757	9042
18:41	MP14495-SD1	4080	107960	6792	9305
18:46	ZZZZZZ	4012	107060	7006	8447
18:51	ZZZZZZ	4189	109560	7231	8665
18:56	ZZZZZZ	4131	108870	6996	8844
19:02	ZZZZZZ	3665	98921	6628	7643
19:07	MA46578-CCV8	3955	105220	6674	8462
19:12	MA46578-CCB9	4115	110080	6797	9465
19:18	ZZZZZZ	3738	99541	6696	7792
19:23	ZZZZZZ	4094	110490	6852	9459
19:29	ZZZZZZ	3981	107230	6846	8858
19:34	ZZZZZZ	4123	111000	6880	9536

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:40	MP14410-MB1	4187	112830	7009	9744
19:45	MP14410-B1	4057	110440	6928	8901
19:50	MP14410-S1	3860	104440	6922	8280
19:55	MP14410-S2	3851	104400	6851	8266
20:00	JC86590-1	3860	105520	6852	8530
20:06	MA46578-CCV9	3951	105420	6745	8465
20:11	MA46578-CCB10	4111	110770	6830	9477
20:16	ZZZZZZ	4114	110730	6822	9519
20:22	ZZZZZZ	4125	110470	6862	9465
20:27	ZZZZZZ	4138	110600	6786	9493
20:33	ZZZZZZ	4130	110810	6756	9477
20:39	ZZZZZZ	4121	110720	6904	9458
20:44	ZZZZZZ	4165	111550	6856	9535
20:50	ZZZZZZ	No results reported for the elements associated with this internal standard.			
20:55	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:01	ZZZZZZ	4103	108750	6767	9436
21:06	ZZZZZZ	4129	110880	6738	9504
21:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:18	ZZZZZZ	3771	101720	6521	8137
21:23	MA46578-CCV10	4007	106750	6769	8581
21:28	MA46578-CCB11	4165	111470	6835	9596
21:34	MP14410-SD1	4078	109780	6799	9224
21:39	ZZZZZZ	3868	103450	6877	8137
21:45	ZZZZZZ	4026	108500	6955	8842
21:50	MP14511-MB1	4146	112490	6835	9591
21:56	MP14511-B1	4039	109100	6855	8819
22:01	MP14511-S1	No results reported for the elements associated with this internal standard.			
22:06	MP14511-S2	No results reported for the elements associated with this internal standard.			
22:11	JC86737-23	No results reported for the elements associated with this internal standard.			
22:17	MP14511-SD1	No results reported for the elements associated with this internal standard.			
22:22	MA46578-CCV11	4032	107990	6816	8629
22:27	MA46578-CCB12	4194	113690	6853	9668
22:33	ZZZZZZ	3961	107640	6819	8675

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:39	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:44	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:55	ZZZZZZ	3968	107680	6751	8676
23:01	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:06	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:12	ZZZZZZ	3979	107930	6773	8704
23:17	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:23	MA46578-CCV12	4057	108880	6768	8683
23:28	MA46578-CCB13	4210	114040	6809	9694
23:33	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:39	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:45	ZZZZZZ	3794	102400	6630	7934
23:50	ZZZZZZ	3640	97406	6535	7431
23:56	ZZZZZZ	3485	92380	6424	6974
00:01	ZZZZZZ	3978	108010	6707	8691
00:07	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:23	ZZZZZZ	3984	107100	6741	8692
00:29	MA46578-CCV13	4069	109490	6706	8714
00:34	MA46578-CCB14	4219	114580	6724	9718
00:39	MP14512-MB1	4210	115040	6873	9723
00:45	MP14512-MB2	4207	114040	6763	9704
00:51	MP14512-B1	4106	111120	6731	8967
00:56	MP14512-B2	4099	111310	6723	8962
01:01	MP14512-S1	3810	103090	6556	7846
01:06	MP14512-S2	3815	102730	6538	7844
01:11	JC86737-43	3813	103150	6551	7963
01:17	MP14512-SD1	4068	109790	6658	8892
01:22	ZZZZZZ	3925	106880	6581	8467
01:28	MA46578-CCV14	4078	109850	6625	8739
01:33	MA46578-CCB15	4233	114720	6712	9742

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:38	ZZZZZZ	3954	107930	6620	8681
01:44	ZZZZZZ	3750	102870	6459	7961
01:49	ZZZZZZ	3934	107030	6598	8496
01:54	ZZZZZZ	3936	107620	6516	8561
02:00	ZZZZZZ	3755	102780	6433	7971
02:05	ZZZZZZ	3917	106510	6539	8445
02:11	ZZZZZZ	3914	106080	6522	8416
02:16	ZZZZZZ	3825	104520	6435	8179
02:21	ZZZZZZ	3867	105590	6487	8322
02:27	MA46578-CCV15	4090	109660	6570	8754
02:32	MA46578-CCB16	4241	114830	6599	9740
02:37	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:43	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:54	ZZZZZZ	4011	109160	6583	8766
03:00	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:05	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:16	ZZZZZZ	3671	98277	6412	7492
03:22	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:28	MP14509-MB1	4187	114230	6660	9677
03:33	MA46578-CCV16	4066	109210	6535	8697
03:38	MA46578-CCB17	4219	114660	6590	9725
03:44	MP14509-B1	4095	111090	6616	8936
03:49	MP14509-S1	4057	110280	6587	8794
03:54	MP14509-S2	4057	110100	6617	8778
03:59	JC86654-10	4129	112120	6594	9328
04:04	MP14509-SD1	4198	113690	6616	9635
04:10	ZZZZZZ	4193	114560	6623	9608
04:15	ZZZZZZ	4151	113120	6579	9408
04:21	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:26	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:32	ZZZZZZ	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
Analyst: GT Run ID: MA46578
Parameters: Al,Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:37	MA46578-CCV17	4055	108640	6480	8675
04:42	MA46578-CCB18	4213	114810	6522	9707
04:48	ZZZZZZ	4112	112460	6638	9220
04:53	ZZZZZZ	4163	113700	6667	9470
04:59	ZZZZZZ	4135	113030	6637	9365
05:04	ZZZZZZ	4156	113410	6581	9385
05:10	ZZZZZZ	4162	113410	6576	9390
05:15	ZZZZZZ	4246	115800	6591	9802
05:21	ZZZZZZ	4154	112880	6560	9394
05:26	ZZZZZZ	4112	114240	6615	9301
05:32	ZZZZZZ	4177	114250	6594	9491
05:37	ZZZZZZ	4275	115930	6643	9624
05:42	MA46578-CCV18	4110	110950	6512	8787
05:47	MA46578-CCB19	4265	115740	6530	9804

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46578 Units: ug/l

Time: / Sample ID:			11:09 ICB1		11:29 CCB1		12:27 CCB2		13:25 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	-18.5	<200	-14.4	<200	-1.30	<200	-3.90	<200
Antimony	6.0	1.1	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.2	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.8								
Boron	100	1.2	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	3.7	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	1	anr							
Iron	100	2.4	1.40	<100	2.80	<100	6.30	<100	5.90	<100
Lead	3.0	1.5	anr							
Lithium	50	1.5								
Magnesium	5000	17	anr							
Manganese	15	.1	anr							
Molybdenum	20	.3	anr							
Nickel	10	.3	anr							
Phosphorus	50	2								
Potassium	10000	40								
Selenium	10	1.8	anr							
Silicon	200	.9								
Silver	10	.5	anr							
Sodium	10000	13								
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	anr							
Tin	10	.6	anr							
Titanium	10	.6								
Tungsten	50	1.1								
Vanadium	50	.4	anr							
Zinc	20	.2	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46578 Units: ug/l

Time:			11:09		11:29		12:27		13:25	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46578 Units: ug/l

Time: / Sample ID:			14:08 CCB4		15:01 CCB5	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	13	-2.40	<200	-2.40	<200
Antimony	6.0	1.1	anr			
Arsenic	3.0	1.2	anr			
Barium	200	.2	anr			
Beryllium	1.0	.1	anr			
Bismuth	20	1.8				
Boron	100	1.2	anr			
Cadmium	3.0	.2	anr			
Calcium	5000	3.7	anr			
Chromium	10	.4	anr			
Cobalt	50	.3	anr			
Copper	10	1	anr			
Iron	100	2.4	4.60	<100	5.50	<100
Lead	3.0	1.5	anr			
Lithium	50	1.5				
Magnesium	5000	17	anr			
Manganese	15	.1	anr			
Molybdenum	20	.3	anr			
Nickel	10	.3	anr			
Phosphorus	50	2				
Potassium	10000	40				
Selenium	10	1.8	anr			
Silicon	200	.9				
Silver	10	.5	anr			
Sodium	10000	13				
Strontium	10	.2				
Sulfur	50	3.5				
Thallium	10	1.6	anr			
Tin	10	.6	anr			
Titanium	10	.6				
Tungsten	50	1.1				
Vanadium	50	.4	anr			
Zinc	20	.2	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46578 Units: ug/l

			Time:		14:08		15:01	
			Sample ID:		CCB4		CCB5	
Metal	RL	IDL			raw	final	raw	final
Zirconium	10	.2						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46578 Units: ug/l

Time:		11:17	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	39500	98.8
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40200	100.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Phosphorus			
Potassium			
Selenium	anr		
Silicon			
Silver	anr		
Sodium			
Strontium			
Sulfur			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46578 Units: ug/l

Time:		11:17	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46578 Units: ug/l

Time:		11:04			12:22			13:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	38100	95.3	40000	37500	93.8
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40500	101.3	40000	39300	98.3	40000	38700	96.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Phosphorus									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Strontium									
Sulfur									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46578 Units: ug/l

Time:		11:04			12:22			13:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46578 Units: ug/l

Time:		14:03			14:56	
Sample ID:	CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	37100	92.8	40000	36600	91.5
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	40000	38000	95.0	40000	37800	94.5
Lead	anr					
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin	anr					
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46578 Units: ug/l

Time:		14:03			14:56	
Sample ID:	CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46578 Units: ug/l

Time:		11:54			12:00	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	311000	103.7
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron				200000	192000	96.0
Lead	anr					
Lithium						
Magnesium						
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin	anr					
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

HIGH STANDARD CHECK SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46578 Units: ug/l

Time:		11:54			12:00	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46578 Units: ug/l

Time:				11:33		11:39		12:32	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	205	102.5	103	103.0	107	107.0
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		111	111.0				
Lead	3.0	20	2.5	anr					
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000						
Strontium	10								
Sulfur	50								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46578 Units: ug/l

Time:				11:33		11:39		12:32	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46578 Units: ug/l

Time:				14:13		14:19	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	179	89.5	102	102.0
Antimony	6.0	20	3.0	anr			
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	anr			
Beryllium	2.0		1.0	anr			
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	anr			
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	anr			
Cobalt	50		3.0	anr			
Copper	10		2.0	anr			
Iron	100	500		103	103.0		
Lead	3.0	20	2.5	anr			
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	anr			
Molybdenum	20			anr			
Nickel	10		4.0	anr			
Phosphorus	50						
Potassium	5000		2000				
Selenium	10	20	5.0	anr			
Silicon	200						
Silver	5.0		2.0	anr			
Sodium	5000		1000				
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10			anr			
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46578 Units: ug/l

Time:				14:13		14:19	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46578 Units: ug/l

Time:			11:44		11:49		14:24		14:30	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	505000	101.0	501000	100.2	477000	95.4	476000	95.2
Antimony		1000	-0.900		1040	104.0	2.60		1010	101.0
Arsenic		1000	2.40		1030	103.0	2.70		990	99.0
Barium		500	-0.400		493	98.6	-0.300		469	93.8
Beryllium		500	0.500		481	96.2	0.400		462	92.4
Bismuth		500	7.10		499	99.8	5.10		480	96.0
Boron		500	-2.30		461	92.2	-2.70		443	88.6
Cadmium		1000	-0.300		989	98.9	-0.500		941	94.1
Calcium	400000	400000	370000	92.5	369000	92.3	356000	89.0	356000	89.0
Chromium		500	0.700		465	93.0	0.700		472	94.4
Cobalt		500	-0.900		470	94.0	-0.600		459	91.8
Copper		500	2.60		490	98.0	2.60		489	97.8
Iron	200000	200000	182000	91.0	188000	94.0	174000	87.0	181000	90.5
Lead		1000	0.00		934	93.4	-2.50		909	90.9
Lithium		500	-11.6		509	101.8	-10.5		488	97.6
Magnesium	500000	500000	480000	96.0	485000	97.0	462000	92.4	469000	93.8
Manganese		500	1.10		481	96.2	-0.600		482	96.4
Molybdenum		500	-1.50		467	93.4	-1.10		450	90.0
Nickel		1000	0.300		949	94.9	0.700		914	91.4
Phosphorus		500	-1.20		496	99.2	2.00		479	95.8
Potassium			-370		-390		-356		-389	
Selenium		1000	0.900		1020	102.0	-3.30		972	97.2
Silicon		500	-13.9		493	98.6	-12.2		474	94.8
Silver		1000	0.100		1070	107.0	-3.70		1060	106.0
Sodium			31.1		38.7		15.3		26.7	
Strontium		500	-2.90		491	98.2	-2.80		466	93.2
Sulfur		500	-22.5		470	94.0	-21.3		455	91.0
Thallium		1000	-3.50		933	93.3	-1.10		901	90.1
Tin		500	-1.40		454	90.8	-1.70		440	88.0
Titanium		500	-0.900		483	96.6	-0.900		482	96.4
Tungsten		500	5.20		468	93.6	8.10		454	90.8
Vanadium		500	2.10		477	95.4	2.70		479	95.8
Zinc		1000	-0.900		911	91.1	-0.800		887	88.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE042419M1.ICP Date Analyzed: 04/24/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46578 Units: ug/l

Time:			11:44		11:49		14:24		14:30	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-2.00		468	93.6	-2.90		468	93.6

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14302 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/17/19

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.008	.015	0.0041	<0.033

Associated samples MP14302: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14302 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/17/19

Metal	JC86406-14 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.13	0.20	0.373	18.8N(a)	80-120

Associated samples MP14302: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14302 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/17/19

Metal	JC86406-14 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.13	0.19	0.376	15.9N(a)	5.1	20

Associated samples MP14302: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14302
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 04/17/19

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.33	0.333	99.0	80-120

Associated samples MP14302: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/19/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	51	1.4	8.2	0.66	<51
Antimony	2.0	.11	.42	-0.071	<2.0
Arsenic	2.0	.12	.29	0.071	<2.0
Barium	20	.02	1.9	0.041	<20
Beryllium	0.20	.01	.082	0.010	<0.20
Bismuth	2.0	.18	.53		
Boron	10	.12	1.5		
Cadmium	0.51	.02	.071	0.020	<0.51
Calcium	510	.38	45	14.0	<510
Chromium	1.0	.041	.38	0.092	<1.0
Cobalt	5.1	.031	.29	0.041	<5.1
Copper	2.6	.1	.86	0.041	<2.6
Iron	51	.24	20	3.7	<51
Lead	2.0	.15	.42	0.11	<2.0
Lithium	5.1	.15	.94		
Magnesium	510	1.7	14	-0.44	<510
Manganese	1.5	.01	.42	0.051	<1.5
Molybdenum	2.0	.031	.33		
Nickel	4.1	.031	.36	0.10	<4.1
Phosphorus	20	.2	3.3		
Potassium	1000	4.1	32	8.9	<1000
Selenium	2.0	.18	.66	0.17	<2.0
Silicon	20	.092	11		
Silver	0.51	.051	.17	-0.051	<0.51
Sodium	1000	1.3	79	12.0	<1000
Strontium	5.1	.02	.18		
Sulfur	10	.36	9.6		
Thallium	1.0	.16	.59	0.041	<1.0
Tin	20	.061	3.9		
Titanium	1.0	.061	.35		
Tungsten	5.1	.11	1.8		
Vanadium	5.1	.041	.19	0.020	<5.1
Zinc	5.1	.02	2.3	1.3	<5.1

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/19/19

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.02	.23		

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/19/19

Metal	JC86406-10 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	12200	13800	2980	53.7 (a)	75-125
Antimony	0.17	149	239	62.4N(b)	75-125
Arsenic	7.0	228	239	92.6	75-125
Barium	76.0	263	239	78.4	75-125
Beryllium	0.75	225	239	94.0	75-125
Bismuth					
Boron					
Cadmium	0.18	224	239	93.8	75-125
Calcium	6050	3620	2980	-81.5N(b	75-125
Chromium	21.4	237	239	90.4	75-125
Cobalt	5.0	232	239	95.1	75-125
Copper	18.1	234	239	90.5	75-125
Iron	15700	18300	2980	87.2	75-125
Lead	193	236	239	18.0N(b)	75-125
Lithium					
Magnesium	2330	5250	2980	97.9	75-125
Manganese	160	618	239	192.0N(b	75-125
Molybdenum					
Nickel	10.6	237	239	94.9	75-125
Phosphorus					
Potassium	1210	4530	2980	111.3	75-125
Selenium	1.2	218	239	90.9	75-125
Silicon					
Silver	0.092	29.9	29.8	100.0	75-125
Sodium	98.2	2930	2980	95.0	75-125
Strontium					
Sulfur					
Thallium	0.0	230	239	96.4	75-125
Tin					
Titanium					
Tungsten					
Vanadium	25.0	242	239	91.0	75-125
Zinc	80.7	260	239	75.2	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/19/19

Metal	JC86406-10 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/19/19

Metal	JC86406-10 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	12200	14300	3010	69.7 (a)	3.6	20
Antimony	0.17	157	241	65.1N(b)	5.2	20
Arsenic	7.0	239	241	96.3	4.7	20
Barium	76.0	270	241	80.5	2.6	20
Beryllium	0.75	234	241	96.8	3.9	20
Bismuth						
Boron						
Cadmium	0.18	235	241	97.5	4.8	20
Calcium	6050	3720	3010	-77.4N(b	2.7	20
Chromium	21.4	250	241	94.9	5.3	20
Cobalt	5.0	242	241	98.4	4.2	20
Copper	18.1	245	241	94.2	4.6	20
Iron	15700	18400	3010	89.6	0.5	20
Lead	193	247	241	22.4N(b)	4.6	20
Lithium						
Magnesium	2330	5380	3010	101.3	2.4	20
Manganese	160	538	241	156.9N(b	13.8	20
Molybdenum						
Nickel	10.6	248	241	98.5	4.5	20
Phosphorus						
Potassium	1210	4700	3010	115.9	3.7	20
Selenium	1.2	228	241	94.1	4.5	20
Silicon						
Silver	0.092	31.3	30.1	103.6	4.6	20
Sodium	98.2	3060	3010	98.3	4.3	20
Strontium						
Sulfur						
Thallium	0.0	241	241	100.0	4.7	20
Tin						
Titanium						
Tungsten						
Vanadium	25.0	252	241	94.2	4.0	20
Zinc	80.7	271	241	79.0	4.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/19/19

Metal	JC86406-10 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/19/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2340	2480	94.5	80-120
Antimony	194	198	98.0	80-120
Arsenic	190	198	96.0	80-120
Barium	190	198	96.0	80-120
Beryllium	192	198	97.0	80-120
Bismuth				
Boron				
Cadmium	188	198	94.9	80-120
Calcium	2400	2480	97.0	80-120
Chromium	187	198	94.4	80-120
Cobalt	186	198	93.9	80-120
Copper	185	198	93.4	80-120
Iron	2440	2480	98.6	80-120
Lead	190	198	96.0	80-120
Lithium				
Magnesium	2380	2480	96.2	80-120
Manganese	191	198	96.5	80-120
Molybdenum				
Nickel	187	198	94.4	80-120
Phosphorus				
Potassium	2430	2480	98.2	80-120
Selenium	186	198	93.9	80-120
Silicon				
Silver	25.0	24.8	101.0	80-120
Sodium	2410	2480	97.4	80-120
Strontium				
Sulfur				
Thallium	197	198	99.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium	187	198	94.4	80-120
Zinc	193	198	97.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/19/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/19/19

Metal	JC86406-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum	106000	113000	6.5	0-10
Antimony	1.50	0.00	100.0(a)	0-10
Arsenic	60.7	69.5	14.5*(b)	0-10
Barium	663	720	8.6	0-10
Beryllium	6.50	6.60	1.5	0-10
Bismuth				
Boron				
Cadmium	1.60	2.00	25.0 (a)	0-10
Calcium	52700	57500	9.1	0-10
Chromium	187	203	8.8	0-10
Cobalt	43.9	45.1	2.7	0-10
Copper	158	164	4.0	0-10
Iron	137000	153000	11.9*(b)	0-10
Lead	1680	1750	3.9	0-10
Lithium				
Magnesium	20300	22100	9.1	0-10
Manganese	1390	1520	9.3	0-10
Molybdenum				
Nickel	92.5	93.5	1.1	0-10
Phosphorus				
Potassium	10600	11600	10.0	0-10
Selenium	10.1	12.1	19.8 (a)	0-10
Silicon				
Silver	0.800	0.00	100.0(a)	0-10
Sodium	856	1040	22.0*(b)	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	218	236	8.2	0-10
Zinc	703	810	15.1*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 04/19/19

	JC86406-10		QC
Metal	Original SDL 1:5	%DIF	Limits
Zirconium			

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/19/19

Metal	Sample ml	Final ml	JC86406-10 Raw	JC86406-10 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20	1.5	1.44375	1904	0.2	200	2000	95.1	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	19.25	20	1684	1620.85	3558	0.2	200	2000	96.9	80-120
Lithium										
Magnesium										
Manganese	19.25	20	1391	1338.838	3134	0.2	200	2000	89.8	80-120
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14400
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/19/19

Metal	Sample ml	Final ml	JC86406-10 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP14400: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG9 **Effective Date:** 01/18/19

Analyte	IDL ug/l
Mercury	.047814

The above applies to the following instrument runs:
MA46522

Instrument Detection Limits

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE5 **Effective Date:** 01/16/19

Analyte	IDL ug/l
Aluminum	13.3
Antimony	1.1
Arsenic	1.2
Barium	.2
Beryllium	.1
Bismuth	1.8
Boron	1.2
Cadmium	.2
Calcium	3.7
Chromium	.4
Cobalt	.3
Copper	1
Iron	2.4
Lead	1.5
Lithium	1.5
Magnesium	17
Manganese	.1
Molybdenum	.3
Nickel	.3
Phosphorus	2
Potassium	39.9
Selenium	1.8
Silicon	.9
Silver	.5
Sodium	13
Sulfur	3.5
Strontium	.2
Thallium	1.6
Tin	.6
Titanium	.6
Tungsten	1.1
Vanadium	.4
Zinc	.2
Zirconium	.2

The above applies to the following instrument runs:
MA46556,MA46568,MA46578

Instrument Linear Ranges

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG9 **Effective Date:** 02/26/18

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA46522

Instrument Linear Ranges

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE5 **Effective Date:** 07/16/18

Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
Chromium	8000
Cobalt	8000
Copper	8000
Iron	200000
Lead	8000
Lithium	8000
Magnesium	300000
Manganese	8000
Molybdenum	8000
Nickel	8000
Palladium	8000
Phosphorus	8000
Potassium	200000
Selenium	8000
Silicon	25000
Silver	625
Sodium	200000
Sulfur	100000
Strontium	8000
Thallium	8000
Tin	8000
Titanium	8000
Tungsten	8000
Vanadium	8000
Zinc	8000
Zirconium	8000

The above applies to the following instrument runs:
MA46556,MA46568,MA46578

Metals Analysis

Raw Data

MA46522

Method: Accutest Operator: Admin Date of Analysis: 17 Apr 2019 12:03:36

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
STDA - 1	17 Apr 2019 12:04:07	Std	ug/l	-	-1039	1.000	1.000
STDB - 1	17 Apr 2019 12:05:27	Std	ug/l	-	64	1.000	1.000
STDC - 1	17 Apr 2019 12:06:52	Std	ug/l	-	1659	1.000	1.000
STDD - 1	17 Apr 2019 12:08:26	Std	ug/l	-	4827	1.000	1.000
STDE - 1	17 Apr 2019 12:10:21	Std	ug/l	-	14371	1.000	1.000
STDF - 1	17 Apr 2019 12:12:20	Std	ug/l	-	29866	1.000	1.000
ICV - 1	17 Apr 2019 12:15:58	CK STND	ug/l	104.3% 3.1277	18209	1.000	1.000
ICB - 1	17 Apr 2019 12:17:27	CK STND	ug/l	0.0043	-1220	1.000	1.000
CCV - 1	17 Apr 2019 12:19:25	CK STND	ug/l	101.3% 2.5326	14507	1.000	1.000
CCB - 1	17 Apr 2019 12:20:48	CK STND	ug/l	0.0029	-1229	1.000	1.000
CRI - 1	17 Apr 2019 12:22:43	CK STND	ug/l	104.2% 0.2085	50	1.000	1.000
MP14310-MB1 - 1	17 Apr 2019 12:24:04	SMPL	ug/l	0.0424	-983	1.000	1.000
MP14310-B1 - 1	17 Apr 2019 12:26:05	SMPL	ug/l	1.7077	9376	1.000	1.000
JC85415-19B - 1	17 Apr 2019 12:27:25	SMPL	ug/l	0.1122	-549	1.000	1.000
CCV - 1	17 Apr 2019 12:29:32	CK STND	ug/l	97.6% 2.4403	13933	1.000	1.000
CCB - 1	17 Apr 2019 12:30:59	CK STND	ug/l	-0.0032	-1267	1.000	1.000
CCV - 1	17 Apr 2019 13:09:21	CK STND	ug/l	102.1% 2.5525	14631	1.000	1.000
CCB - 1	17 Apr 2019 13:10:54	CK STND	ug/l	-0.0103	-1311	1.000	1.000
MP14301-MB1 - 1	17 Apr 2019 13:31:15	SMPL	ug/l	0.0519	-924	1.000	1.000
MP14301-B1 - 1	17 Apr 2019 13:32:32	SMPL	ug/l	1.8378	10185	1.000	1.000
MP14301-S1 - 1	17 Apr 2019 13:34:01	SMPL	ug/l	2.6296	15111	1.000	1.000
MP14301-S2 - 1	17 Apr 2019 13:36:05	SMPL	ug/l	2.8396	16417	1.000	1.000
JC86331-1 - 1	17 Apr 2019 13:38:00	SMPL	ug/l	1.0346	5189	1.000	1.000
JC86331-2 - 1	17 Apr 2019 13:39:59	SMPL	ug/l	0.5449	2143	1.000	1.000
JC86331-3 - 1	17 Apr 2019 13:41:43	SMPL	ug/l	1.2618	6602	1.000	1.000
JC86331-4 - 1	17 Apr 2019 13:43:26	SMPL	ug/l	1.8037	9973	1.000	1.000
JC86331-5 - 1	17 Apr 2019 13:45:32	SMPL	ug/l	1.9869	11113	1.000	1.000
CCV - 1	17 Apr 2019 13:47:31	CK STND	ug/l	102.2% 2.5557	14651	1.000	1.000
CCB - 1	17 Apr 2019 13:49:25	CK STND	ug/l	-0.0106	-1313	1.000	1.000
JC86331-6 - 1	17 Apr 2019 13:51:20	SMPL	ug/l	1.3629	7231	1.000	1.000
JC86331-7 - 1	17 Apr 2019 13:52:41	SMPL	ug/l	0.5837	2384	1.000	1.000
JC86331-8 - 1	17 Apr 2019 13:54:44	SMPL	ug/l	1.9548	10913	1.000	1.000
JC86331-9 - 1	17 Apr 2019 13:56:41	SMPL	ug/l	1.0697	5407	1.000	1.000
JC86331-10 - 1	17 Apr 2019 13:58:34	SMPL	ug/l	2.2520	12762	1.000	1.000
JC86331-11 - 1	17 Apr 2019 14:00:23	SMPL	ug/l	0.5475	2159	1.000	1.000
JC86331-12 - 1	17 Apr 2019 14:02:18	SMPL	ug/l	1.3196	6962	1.000	1.000
JC86331-13 - 1	17 Apr 2019 14:03:54	SMPL	ug/l	0.3025	635	1.000	1.000
MP14302-MB1 - 1	17 Apr 2019 14:05:45	SMPL	ug/l	0.0244	-1095	1.000	1.000
CCV - 1	17 Apr 2019 14:07:29	CK STND	ug/l	97.2% 2.4310	13875	1.000	1.000
CCB - 1	17 Apr 2019 14:08:46	CK STND	ug/l	-0.0306	-1437	1.000	1.000
MP14302-B1 - 1	17 Apr 2019 14:10:37	SMPL	ug/l	1.9942	11158	1.000	1.000
SAMPLECONF - 1	17 Apr 2019 14:11:57	SMPL	ug/l	0.2588	363	1.000	1.000
SAMPLECONF - 1	17 Apr 2019 14:14:14	SMPL	ug/l	0.0421	-985	1.000	1.000
JC86406-14 - 1	17 Apr 2019 14:15:38	SMPL	ug/l	0.6694	2917	1.000	1.000
JC86406-1 - 1	17 Apr 2019 14:18:11	SMPL	ug/l	0.1241	-475	1.000	1.000
JC86406-2 - 1	17 Apr 2019 14:19:54	SMPL	ug/l	14.4013	88337	1.000	1.000
JC86406-3 - 1	17 Apr 2019 14:21:51	SMPL	ug/l	7.7797	47147	1.000	1.000
JC86406-4 - 1	17 Apr 2019 14:23:59	SMPL	ug/l	1.7505	9642	1.000	1.000
JC86406-5 - 1	17 Apr 2019 14:26:34	SMPL	ug/l	2.5915	14874	1.000	1.000
CCV - 1	17 Apr 2019 14:28:29	CK STND	ug/l	105.2% 2.6305	15116	1.000	1.000
CCB - 1	17 Apr 2019 14:30:26	CK STND	ug/l	0.0432	-978	1.000	1.000
JC86406-6 - 1	17 Apr 2019 14:32:43	SMPL	ug/l	0.2295	181	1.000	1.000
JC86406-7 - 1	17 Apr 2019 14:34:39	SMPL	ug/l	12.7117	77827	1.000	1.000
JC86406-8 - 1	17 Apr 2019 14:36:14	SMPL	ug/l	4.5158	26844	1.000	1.000
JC86406-9 - 1	17 Apr 2019 14:38:33	SMPL	ug/l	0.2038	21	1.000	1.000
JC86406-10 - 1	17 Apr 2019 14:40:41	SMPL	ug/l	2.9848	17320	1.000	1.000
JC86406-11 - 1	17 Apr 2019 14:42:19	SMPL	ug/l	3.4775	20385	1.000	1.000
JC86406-12 - 1	17 Apr 2019 14:44:22	SMPL	ug/l	10.1965	62181	1.000	1.000
JC86406-13 - 1	17 Apr 2019 14:46:18	SMPL	ug/l	0.1066	-584	1.000	1.000
JC86406-15 - 1	17 Apr 2019 14:48:53	SMPL	ug/l	1.0127	5053	1.000	1.000
CCV - 1	17 Apr 2019 14:50:30	CK STND	ug/l	103.1% 2.5763	14779	1.000	1.000
CCB - 1	17 Apr 2019 14:52:16	CK STND	ug/l	0.0461	-960	1.000	1.000
CRI - 1	17 Apr 2019 14:55:35	CK STND	ug/l	108.8% 0.2176	107	1.000	1.000
CCV - 1	17 Apr 2019 14:57:00	CK STND	ug/l	109.2% 2.7295	15732	1.000	1.000
CCB - 1	17 Apr 2019 14:58:56	CK STND	ug/l	0.0577	-888	1.000	1.000
CCV - 1	17 Apr 2019 15:33:37	CK STND	ug/l	104.1% 2.6014	14935	1.000	1.000
CCB - 1	17 Apr 2019 15:34:56	CK STND	ug/l	-0.0073	-1292	1.000	1.000
JC86406-2 - 1	17 Apr 2019 15:36:54	SMPL	ug/l	13.0831	15030	1.000	5.000
JC86406-3 - 1	17 Apr 2019 15:38:14	SMPL	ug/l	6.6875	19553	1.000	2.000
JC86406-7 - 1	17 Apr 2019 15:40:10	SMPL	ug/l	10.7409	12116	1.000	5.000
JC86406-12 - 1	17 Apr 2019 15:42:26	SMPL	ug/l	8.6478	9512	1.000	5.000
MP14302-S1 - 1	17 Apr 2019 15:44:25	SMPL	ug/l	1.0478	5271	1.000	1.000
SAMPLECONF - 1	17 Apr 2019 15:46:20	SMPL	ug/l	0.4392	1485	1.000	1.000

MA46522

Method: Accutest Operator: Admin Date of Analysis: 17 Apr 2019 12:03:36

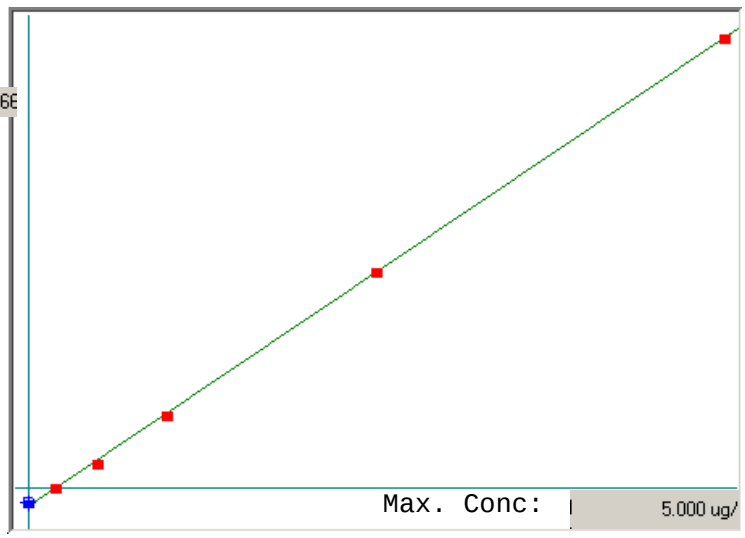
Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
MP14302-S2 - 1	17 Apr 2019 15:49:05	SMPL	ug/l	1.0150	5067	1.000	1.000
CRI - 1	17 Apr 2019 15:50:36	CK STND	ug/l	79.3% 0.1586	-260	1.000	1.000
CCV - 1	17 Apr 2019 15:52:33	CK STND	ug/l	99.7% 2.4936	14265	1.000	1.000
CCB - 1	17 Apr 2019 15:54:06	CK STND	ug/l	0.0030	-1228	1.000	1.000
JC86406-2 - 1	17 Apr 2019 16:05:45	SMPL	ug/l	13.4714	15513	1.000	5.000
JC86406-3 - 1	17 Apr 2019 16:07:05	SMPL	ug/l	6.8015	7215	1.000	5.000
JC86406-7 - 1	17 Apr 2019 16:09:11	SMPL	ug/l	10.8470	12248	1.000	5.000
JC86406-12 - 1	17 Apr 2019 16:11:03	SMPL	ug/l	8.6100	9465	1.000	5.000
CRI - 1	17 Apr 2019 16:12:56	CK STND	ug/l	97.6% 0.1951	-33	1.000	1.000
CCV - 1	17 Apr 2019 16:14:53	CK STND	ug/l	102.3% 2.5586	14669	1.000	1.000
CCB - 1	17 Apr 2019 16:16:27	CK STND	ug/l	0.0622	-860	1.000	1.000

Accutest

Linear

μ Abs.:

29866



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B= 1.6076e-004

C= 2.0044e-001

Rho= 0.9999190

Accept= Accepted

Accepted Date=

04/17/19 12:15

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.033	0.033	-1039	0.000	-1039				
STDB	0.200	0.211	0.011	64	0.0 %	64				
STDC	0.500	0.467	-0.033	1659	0.0 %	1659				
STDD	1.000	0.976	-0.024	4827	0.0 %	4827				
STDE	2.500	2.511	0.011	14371	0.0 %	14371				
STDF	5.000	5.002	0.002	29866	0.0 %	29866				

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/22/2019 12:27:22 Type: Cal
Method: SGS 3(v310) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0040**	**-.0003**	**.0001**	**-.0004**	**.0000**	**.0024**	**.0000**	**-.0001**	**-.0003**
Stddev	.0001	.0001	.0001	.0001	.0000	.0001	.0000	.0000	.0000
%RSD	3.244	49.85	61.73	15.45	150.7	3.057	85.49	18.14	7.774
#1	.0039	-.0004	.0000	-.0004	-.0000	.0024	.0000	-.0001	-.0003
#2	.0041	-.0002	.0001	-.0005	.0000	.0025	.0000	-.0001	-.0003
#3	.0039	-.0002	.0002	-.0003	.0000	.0024	.0000	-.0001	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0000**	**.0001**	**-.0002**	**-.0002**	**.0002**	**.0002**	**-.0004**	**-.0010**	**.0051**
Stddev	.0000	.0000	.0000	.0001	.0002	.0001	.0001	.0002	.0002
%RSD	338.6	31.78	19.85	47.99	118.4	35.17	33.47	22.15	3.582
#1	.0000	.0001	-.0002	-.0002	.0003	.0002	-.0006	-.0008	.0052
#2	-.0000	.0001	-.0002	-.0001	.0002	.0003	-.0005	-.0010	.0052
#3	.0000	.0002	-.0002	-.0002	-.0000	.0001	-.0003	-.0013	.0049

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0000**	**.0031**	**-.0008**	**.0002**	**.0001**	**.0027**	**.0001**	**.0006**
Stddev	.0000	.0000	.0002	.0010	.0001	.0000	.0001	.0001	.0001
%RSD	44.32	498.4	5.072	129.4	56.13	60.31	3.875	81.99	18.57
#1	.0001	.0000	.0030	-.0014	.0001	.0000	.0028	.0001	.0005
#2	.0001	-.0000	.0033	.0004	.0004	.0001	.0026	.0002	.0007
#3	.0001	.0000	.0031	-.0013	.0002	.0000	.0028	.0000	.0006

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0001**	**.0012**	**-.0001**	**-.0015**	**-.0008**	**.0008**	**-.0078**
Stddev	.0000	.0005	.0000	.0001	.0002	.0012	.0001
%RSD	69.98	38.01	6.321	4.712	25.55	166.0	1.306
#1	-.0001	.0009	-.0001	-.0014	-.0010	.0005	-.0079
#2	-.0001	.0010	-.0001	-.0015	-.0006	.0021	-.0078
#3	-.0000	.0017	-.0001	-.0015	-.0010	-.0004	-.0078

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/22/2019 12:27:22 Type: Cal
Method: SGS 3(v310) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115990.**	**8111.8**	**4342.3**	**9775.1**
Stddev	1814.	31.1	4.3	7.0
%RSD	1.5637	.38357	.09977	.07202
#1	114500.	8145.7	4345.3	9779.8
#2	115470.	8084.6	4337.3	9767.0
#3	118010.	8105.0	4344.3	9778.5

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/22/2019 12:32:50 Type: Cal
Method: SGS 3(v310) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.886**	**6.260**	**3.585**	**1.958**	**.1820**	**.6819**	**1.089**	**1.432**	**.0415**
Stddev	.005	.006	.013	.007	.0048	.0193	.028	.006	.0011
%RSD	.0798	.0946	.3663	.3589	2.619	2.826	2.532	.3989	2.717
#1	6.892	6.254	3.599	1.966	.1847	.6927	1.107	1.439	.0422
#2	6.881	6.261	3.581	1.953	.1847	.6934	1.103	1.429	.0422
#3	6.885	6.266	3.574	1.954	.1765	.6596	1.057	1.429	.0402

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3612**	**4.795**	**.4875**	**.2471**	**.6807**	**.3901**	**.6946**	**2.588**	**3.647**
Stddev	.0096	.020	.0016	.0008	.0020	.0017	.0029	.005	.004
%RSD	2.668	.4154	.3330	.3185	.2893	.4279	.4134	.1889	.1108
#1	.3672	4.817	.4892	.2479	.6829	.3916	.6979	2.592	3.643
#2	.3662	4.788	.4875	.2470	.6792	.3903	.6932	2.588	3.648
#3	.3500	4.779	.4859	.2464	.6798	.3883	.6928	2.582	3.651

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.453**	**.2832**	**2.288**	**6.925**	**.8655**	**3.523**	**2.282**	**.7952**	**13.31**
Stddev	.001	.0014	.002	.003	.0027	.015	.009	.0037	.01
%RSD	.0459	.5062	.0870	.0358	.3131	.4249	.4177	.4599	.0374
#1	1.452	.2817	2.286	6.928	.8686	3.540	2.293	.7992	13.31
#2	1.453	.2845	2.289	6.923	.8645	3.518	2.277	.7941	13.30
#3	1.453	.2834	2.290	6.923	.8635	3.511	2.275	.7921	13.31

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4480**	**1.756**	**1.172**	**.2096**	**.8299**	**2.343**	**.4822**
Stddev	.0118	.006	.032	.0011	.0032	.004	.0024
%RSD	2.636	.3637	2.701	.5270	.3898	.1533	.4975
#1	.4551	1.763	1.191	.2105	.8333	2.347	.4845
#2	.4545	1.753	1.190	.2098	.8297	2.341	.4823
#3	.4344	1.751	1.136	.2084	.8268	2.341	.4797

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/22/2019 12:32:50 Type: Cal
Method: SGS 3(v310) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108530.**	**8007.1**	**4062.3**	**8358.4**
Stddev	2191.	39.0	12.0	23.2
%RSD	2.0191	.48761	.29449	.27747
#1	107240.	8051.5	4049.6	8332.1
#2	107300.	7978.1	4064.2	8367.5
#3	111060.	7991.7	4073.3	8375.7

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 4/22/2019 12:37:50 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.018**	**2.044**	**2.014**	**1.995**	**2.049**	**1.990**	**2.065**	**2.020**	**.2522**
Stddev	.001	.008	.002	.002	.004	.003	.002	.002	.0002
%RSD	.0550	.3903	.1138	.1146	.1736	.1513	.0818	.0958	.0935
#1	2.019	2.047	2.014	1.996	2.049	1.991	2.067	2.021	.2523
#2	2.017	2.035	2.016	1.996	2.045	1.987	2.065	2.021	.2523
#3	2.019	2.050	2.011	1.992	2.052	1.993	2.064	2.018	.2519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.037**	**2.040**	**1.992**	**2.064**	**2.025**	**1.997**	**2.006**	**39.73**	**40.32**
Stddev	.002	.001	.005	.003	.003	.001	.004	.04	.16
%RSD	.0797	.0642	.2545	.1366	.1664	.0359	.2081	.1114	.3873
#1	2.037	2.040	1.989	2.065	2.022	1.997	2.003	39.78	40.35
#2	2.038	2.041	1.998	2.066	2.029	1.996	2.011	39.69	40.16
#3	2.035	2.038	1.989	2.061	2.023	1.997	2.004	39.72	40.47
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.88**	**40.27**	**39.97**	**39.95**	**2.030**	**2.034**	**5.244**	**2.061**	**2.020**
Stddev	.13	.27	.12	.06	.006	.003	.003	.002	.003
%RSD	.3068	.6721	.3112	.1568	.3051	.1308	.0609	.0719	.1339
#1	40.90	40.37	40.03	39.99	2.033	2.034	5.244	2.060	2.022
#2	40.75	39.97	39.83	39.88	2.035	2.037	5.247	2.063	2.017
#3	41.00	40.48	40.07	39.99	2.023	2.032	5.241	2.061	2.020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 4/22/2019 12:37:50 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**2.012**	**2.033**	**1.979**	**2.023**	**1.997**	**2.001**
Stddev	.001	.003	.001	.003	.007	.003	.007
%RSD	.0678	.1534	.0553	.1319	.3324	.1288	.3445
#1	2.043	2.013	2.035	1.978	2.022	2.000	2.006
#2	2.040	2.014	2.033	1.976	2.030	1.996	2.004
#3	2.040	2.008	2.032	1.981	2.017	1.995	1.993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110270.**	**8012.4**	**4181.4**	**8731.8**
Stddev	202.	56.6	3.7	10.7
%RSD	.18359	.70601	.08769	.12256
#1	110040.	7989.8	4178.7	8721.2
#2	110380.	8076.7	4179.9	8731.5
#3	110400.	7970.5	4185.6	8742.6

Zoom In Zoom Out

Sample Name: ccbconf Acquired: 4/22/2019 12:42:53 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0001**	**.0003**	**-.0002**	**-.0000**	**.0000**	**-.0001**	**.0003**
Stddev	.0001	.0001	.0001	.0001	.0002	.0002	.0000	.0001	.0004
%RSD	51.49	70.06	116.4	45.12	89.98	580.8	35.04	103.2	154.0
#1	.0001	-.0001	.0000	.0002	-.0003	-.0003	.0000	.0000	.0008
#2	.0002	-.0000	-.0001	.0003	.0000	.0001	.0001	-.0002	.0003
#3	.0001	-.0001	-.0001	.0004	-.0004	.0001	.0001	-.0002	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0005**	**-.0000**	**-.0008**	**.0018**	**-.0009**	**-.0060**	**-.0008**
Stddev	.0002	.0001	.0005	.0010	.0006	.0019	.0002	.0058	.0031
%RSD	544.2	417.4	104.3	2139.	69.66	108.2	20.13	97.06	388.2
#1	.0003	.0000	.0005	-.0000	-.0014	.0032	-.0011	-.0030	-.0042
#2	-.0002	-.0001	.0011	-.0010	-.0002	.0026	-.0009	-.0127	-.0003
#3	-.0000	.0002	-.0000	.0009	-.0009	-.0004	-.0007	-.0023	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0313**	**.0478**	**.0202**	**.0032**	**.0005**	**-.0008**	**.0001**	**.0001**
Stddev	.0030	.0311	.0298	.0054	.0005	.0001	.0003	.0007	.0001
%RSD	6664.	99.32	62.36	27.02	16.63	17.52	43.04	1127.	94.00
#1	.0027	-.0084	.0821	.0234	.0036	.0005	-.0006	-.0007	.0001
#2	.0005	-.0188	.0339	.0139	.0026	.0004	-.0006	.0008	.0000
#3	-.0033	-.0667	.0275	.0232	.0034	.0005	-.0012	.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccbconf Acquired: 4/22/2019 12:42:53 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0004**	**.0000**	**.0007**	**.0004**	**-.0001**	**.0017**
Stddev	.0001	.0003	.0001	.0021	.0005	.0014	.0004
%RSD	65.54	91.77	514.4	282.8	131.3	2559.	25.74
#1	.0003	.0005	-.0001	-.0016	.0002	-.0014	.0017
#2	.0001	-.0000	.0001	.0025	-.0000	-.0001	.0021
#3	.0001	.0007	.0001	.0013	.0009	.0014	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115320.**	**8111.7**	**4349.4**	**9789.5**
Stddev	248.	24.0	63.2	141.1
%RSD	.21524	.29613	1.4530	1.4413
#1	115530.	8084.1	4291.2	9657.0
#2	115380.	8128.4	4340.3	9773.7
#3	115050.	8122.5	4416.6	9937.8

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 4/22/2019 12:48:26 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.002**	**2.003**	**1.988**	**1.991**	**1.988**	**1.958**	**2.018**	**1.980**	**.2571**
Stddev	.002	.004	.002	.002	.007	.002	.004	.002	.0011
%RSD	.1175	.1733	.1086	.0982	.3706	.0904	.2110	.1161	.4258
#1	2.004	2.007	1.988	1.993	1.997	1.959	2.022	1.982	.2584
#2	2.003	2.003	1.990	1.989	1.982	1.956	2.015	1.977	.2564
#3	2.000	2.000	1.985	1.992	1.986	1.958	2.015	1.981	.2567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.004**	**1.982**	**1.976**	**2.016**	**1.972**	**1.954**	**1.972**	**39.70**	**39.76**
Stddev	.003	.005	.001	.002	.004	.008	.002	.06	.10
%RSD	.1595	.2415	.0574	.1032	.2163	.3926	.1096	.1555	.2413
#1	2.008	1.985	1.976	2.018	1.977	1.946	1.971	39.77	39.86
#2	2.003	1.983	1.977	2.017	1.971	1.961	1.975	39.68	39.74
#3	2.001	1.976	1.975	2.014	1.969	1.953	1.970	39.65	39.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.54**	**39.95**	**39.98**	**39.94**	**2.009**	**2.001**	F **5.289**	**2.018**	**1.991**
Stddev	.10	.14	.03	.10	.000	.001	.004	.003	.002
%RSD	.2468	.3459	.0750	.2383	.0034	.0235	.0698	.1475	.1116
#1	40.61	40.07	40.00	40.04	2.009	2.000	5.290	2.014	1.993
#2	40.57	39.99	39.98	39.93	2.009	2.001	5.291	2.019	1.992
#3	40.42	39.80	39.94	39.85	2.009	2.001	5.284	2.019	1.988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							5.000		
Range							5.000%		

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 4/22/2019 12:48:26 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.023**	**1.969**	**1.999**	**1.999**	**1.981**	**2.022**	**2.003**
Stddev	.004	.001	.002	.008	.005	.005	.005
%RSD	.1793	.0399	.0753	.4159	.2624	.2559	.2602
#1	2.027	1.969	2.001	1.996	1.978	2.028	1.999
#2	2.022	1.968	1.999	2.009	1.987	2.018	2.009
#3	2.020	1.970	1.998	1.993	1.978	2.021	2.002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110340.**	**8054.4**	**4172.7**	**8731.6**
Stddev	368.	14.2	3.4	7.4
%RSD	.33388	.17607	.08155	.08445
#1	109920.	8064.1	4171.2	8723.3
#2	110590.	8038.2	4170.3	8734.3
#3	110520.	8061.0	4176.6	8737.3

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 4/22/2019 12:53:28 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0000**	**.0000**	**.0003**	**-.0003**	**-.0002**	**.0001**	**-.0001**	**.0000**
Stddev	.0001	.0001	.0001	.0001	.0005	.0004	.0001	.0001	.0001
%RSD	552700.	130.7	4858.	43.72	152.5	175.8	77.74	79.89	494.4
#1	-.0000	.0001	.0000	.0004	.0002	-.0002	.0000	-.0000	.0002
#2	.0001	.0001	-.0001	.0002	-.0005	-.0006	.0002	-.0000	-.0001
#3	-.0000	-.0000	.0001	.0005	-.0007	.0002	.0001	-.0002	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**-.0006**	**-.0004**	**.0002**	**.0022**	**-.0008**	**.0000**	**.0021**
Stddev	.0003	.0000	.0002	.0005	.0007	.0007	.0011	.0083	.0028
%RSD	147.3	86.02	25.96	134.7	283.7	34.45	134.8	20530.	132.7
#1	-.0000	.0000	-.0006	-.0007	.0010	.0015	.0004	-.0074	.0005
#2	.0001	.0000	-.0007	-.0007	.0001	.0020	-.0010	.0089	.0005
#3	.0006	.0000	-.0004	.0002	-.0004	.0029	-.0019	-.0014	.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**-.0143**	**.0450**	**.0161**	**.0028**	**.0005**	**.0009**	**.0002**	**.0001**
Stddev	.0021	.0234	.0287	.0110	.0006	.0001	.0016	.0005	.0000
%RSD	301.9	163.5	63.80	68.44	20.76	29.57	174.4	326.3	74.65
#1	-.0006	-.0396	.0777	.0263	.0032	.0004	.0018	.0007	.0001
#2	-.0028	-.0100	.0238	.0044	.0022	.0007	.0018	.0001	.0001
#3	.0014	.0067	.0335	.0177	.0031	.0004	-.0009	-.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 4/22/2019 12:53:28 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0023**	**.0001**	**.0010**	**.0008**	**-.0010**	**.0012**
Stddev	.0002	.0005	.0001	.0013	.0003	.0012	.0008
%RSD	94.09	21.84	151.4	130.0	33.87	116.0	66.01
#1	.0002	.0026	.0001	.0004	.0008	-.0023	.0013
#2	.0004	.0027	-.0000	.0001	.0005	-.0008	.0019
#3	.0000	.0017	.0002	.0025	.0011	.0001	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**117490.**	**8117.0**	**4327.1**	**9741.5**
Stddev	5689.	30.8	26.1	57.7
%RSD	4.8426	.37909	.60412	.59193
#1	115580.	8089.1	4305.2	9684.5
#2	123880.	8150.0	4356.0	9799.9
#3	113000.	8111.9	4320.0	9740.2

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/22/2019 13:00:29 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028**	**2.048**	**2.023**	**1.996**	**2.053**	**2.000**	**2.069**	**2.023**	**.2527**
Stddev	.002	.006	.003	.002	.004	.003	.006	.003	.0006
%RSD	.1025	.2712	.1394	.1149	.1803	.1270	.2976	.1266	.2483
#1	2.025	2.048	2.020	1.993	2.053	1.996	2.076	2.020	.2529
#2	2.029	2.041	2.024	1.994	2.051	2.000	2.067	2.024	.2523
#3	2.027	2.049	2.024	1.997	2.058	2.000	2.071	2.024	.2536
#4	2.029	2.055	2.027	1.998	2.050	2.002	2.062	2.026	.2522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.042**	**2.044**	**1.999**	**2.070**	**2.030**	**2.002**	**2.015**	**39.86**	**40.40**
Stddev	.006	.001	.003	.004	.001	.004	.003	.05	.10
%RSD	.3041	.0546	.1541	.2142	.0636	.2204	.1694	.1217	.2364
#1	2.049	2.044	1.996	2.068	2.030	1.996	2.012	39.89	40.45
#2	2.041	2.044	1.997	2.066	2.031	2.006	2.012	39.80	40.27
#3	2.044	2.042	2.003	2.076	2.029	2.005	2.015	39.85	40.39
#4	2.034	2.045	1.999	2.071	2.032	2.003	2.019	39.91	40.49
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/22/2019 13:00:29 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.03**	**40.33**	**40.11**	**40.09**	**2.038**	**2.038**	F **5.255**	**2.066**	**2.027**
Stddev	.07	.24	.05	.03	.004	.002	.002	.003	.003
%RSD	.1746	.5895	.1277	.0687	.1847	.1059	.0395	.1481	.1412
#1	40.98	40.41	40.05	40.09	2.036	2.038	5.255	2.063	2.024
#2	40.96	40.21	40.14	40.07	2.035	2.035	5.252	2.067	2.025
#3	41.05	40.09	40.09	40.08	2.038	2.040	5.256	2.070	2.029
#4	41.12	40.63	40.16	40.13	2.043	2.040	5.255	2.066	2.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							5.000		
Range							5.000%		

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.047**	**2.016**	**2.038**	**1.983**	**2.031**	**2.006**	**2.007**
Stddev	.002	.002	.003	.005	.004	.004	.002
%RSD	.1171	.0975	.1314	.2354	.2128	.1893	.1000
#1	2.050	2.018	2.042	1.980	2.029	2.007	2.005
#2	2.045	2.013	2.037	1.979	2.028	2.006	2.010
#3	2.048	2.016	2.038	1.988	2.029	2.001	2.008
#4	2.045	2.016	2.036	1.986	2.037	2.010	2.006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/22/2019 13:00:29 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110030.**	**8023.8**	**4167.1**	**8714.1**
Stddev	386.	42.6	3.6	4.1
%RSD	.35105	.53071	.08591	.04738
#1	109630.	8019.8	4170.3	8719.5
#2	110180.	8077.9	4170.1	8715.0
#3	109830.	8023.4	4164.0	8711.2
#4	110500.	7973.9	4164.0	8710.6

Zoom In Zoom Out

Sample Name: CCB 7 Acquired: 4/22/2019 13:08:06 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0000**	**.0000**	**.0001**	**-.0001**	**-.0002**	**.0000**	**-.0002**	**-.0004**
Stddev	.0001	.0000	.0002	.0003	.0002	.0001	.0000	.0002	.0003
%RSD	33.16	165.3	421.0	229.3	214.9	50.12	44.68	102.2	82.23
#1	-.0002	.0000	-.0001	.0001	.0001	-.0003	.0001	-.0003	-.0005
#2	-.0001	-.0001	-.0000	.0004	-.0001	-.0001	.0001	.0000	-.0006
#3	-.0002	-.0000	.0002	-.0002	-.0003	-.0002	.0000	-.0003	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0002**	**.0005**	**-.0002**	**.0010**	**-.0018**	**-.0075**	**-.0035**
Stddev	.0002	.0002	.0005	.0005	.0008	.0014	.0003	.0100	.0070
%RSD	139.0	208.8	261.5	111.9	460.0	146.4	15.41	133.9	201.2
#1	.0003	.0002	.0007	.0007	-.0009	.0015	-.0016	-.0051	.0045
#2	.0000	-.0001	-.0002	-.0001	-.0003	.0020	-.0021	.0012	-.0085
#3	.0000	.0002	.0000	.0009	.0006	-.0006	-.0017	-.0185	-.0065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0020**	**.0408**	**.0202**	**.0029**	**.0001**	**-.0006**	**-.0000**	**.0000**
Stddev	.0046	.0096	.0194	.0042	.0007	.0001	.0003	.0003	.0001
%RSD	1070.	478.4	47.48	20.96	23.37	99.48	46.87	1018.	169.3
#1	-.0039	.0074	.0283	.0155	.0036	.0002	-.0006	.0003	-.0000
#2	.0052	-.0118	.0310	.0236	.0022	-.0000	-.0008	-.0004	.0001
#3	-.0000	-.0016	.0631	.0215	.0029	.0003	-.0003	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB 7 Acquired: 4/22/2019 13:08:06 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0005**	**-.0001**	**-.0005**	**-.0000**	**.0011**	**.0007**
Stddev	.0002	.0003	.0002	.0018	.0004	.0027	.0008
%RSD	81.16	52.48	120.4	386.4	1562.	242.7	124.7
#1	.0005	.0005	-.0003	.0016	-.0004	.0042	.0003
#2	.0000	.0008	-.0002	-.0015	.0004	-.0008	.0017
#3	.0004	.0002	.0000	-.0015	-.0000	-.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114570.**	**8086.4**	**4397.5**	**9890.6**
Stddev	4716.	82.0	110.1	240.8
%RSD	4.1161	1.0140	2.5027	2.4351
#1	119810.	8002.8	4523.7	10165.
#2	113210.	8089.6	4347.2	9789.9
#3	110680.	8166.7	4321.6	9716.4

Zoom In Zoom Out

Sample Name: cri Acquired: 4/22/2019 13:12:40 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2086**	**.0021**	**.0032**	**.0499**	**.0107**	**.0099**	**.0164**	**.0098**	**.0050**
Stddev	.0005	.0001	.0001	.0002	.0003	.0004	.0000	.0001	.0000
%RSD	.2482	3.036	2.853	.4446	2.649	3.764	.0648	1.037	.3014
#1	.2087	.0022	.0033	.0498	.0109	.0097	.0164	.0097	.0050
#2	.2090	.0021	.0031	.0497	.0104	.0098	.0164	.0097	.0050
#3	.2080	.0021	.0032	.0501	.0109	.0104	.0164	.0099	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0525**	**.0220**	**.0082**	**.0093**	**.0026**	**.0116**	**.0060**	**.2114**	**5.379**
Stddev	.0004	.0001	.0007	.0002	.0006	.0007	.0015	.0122	.016
%RSD	.7400	.3180	8.527	2.213	21.99	5.821	24.54	5.772	.3055
#1	.0521	.0221	.0081	.0091	.0023	.0112	.0043	.2177	5.380
#2	.0525	.0220	.0075	.0095	.0032	.0112	.0071	.1973	5.362
#3	.0529	.0219	.0089	.0094	.0022	.0124	.0064	.2192	5.395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1143**	**5.364**	**5.267**	**5.275**	**.1049**	**.0220**	**.2172**	**.0116**	**.0103**
Stddev	.0032	.040	.066	.003	.0004	.0003	.0007	.0006	.0001
%RSD	2.769	.7441	1.259	.0520	.3767	1.329	.3420	4.792	1.077
#1	.1108	5.320	5.198	5.274	.1050	.0223	.2174	.0111	.0104
#2	.1153	5.396	5.330	5.273	.1052	.0218	.2178	.0116	.0103
#3	.1169	5.377	5.274	5.278	.1044	.0218	.2164	.0122	.0102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: cri Acquired: 4/22/2019 13:12:40 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104**	**.0532**	**.0103**	**.0552**	**.0218**	**.0557**	**.0523**
Stddev	.0003	.0007	.0001	.0030	.0013	.0008	.0009
%RSD	2.579	1.235	.9280	5.517	5.789	1.419	1.704
#1	.0104	.0527	.0102	.0585	.0227	.0565	.0519
#2	.0106	.0539	.0103	.0525	.0224	.0550	.0516
#3	.0101	.0530	.0104	.0546	.0204	.0555	.0533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113580.**	**8037.4**	**4242.6**	**9405.3**
Stddev	308.	16.2	2.7	10.3
%RSD	.27129	.20113	.06432	.10900
#1	113820.	8054.8	4239.9	9416.8
#2	113690.	8022.8	4242.5	9396.9
#3	113230.	8034.4	4245.3	9402.3

Zoom In Zoom Out

Sample Name: crid Acquired: 4/22/2019 13:18:08 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**.0012**	F **.0013**	**.0033**	**.0022**	F **-.0003**	**.0036**	**.0044**
Stddev	.0002	.0000	.0001	.0003	.0002	.0004	.0000	.0002
%RSD	4.155	2.178	8.910	7.934	7.336	135.2	1.199	4.368
#1	.0043	.0011	.0013	.0033	.0024	-.0005	.0036	.0042
#2	.0047	.0012	.0015	.0030	.0021	.0002	.0036	.0046
#3	.0046	.0012	.0012	.0035	.0021	-.0005	.0037	.0043
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			.0010			.0020		
Range			30.00%			-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0000**	**.0023**	**.0122**	**.0034**	F **.0011**	F **-.0003**	F **.0070**	F **-.0009**
Stddev	.0005	.0001	.0001	.0008	.0005	.0007	.0009	.0010
%RSD	2188.	4.792	1.042	24.34	45.93	269.0	12.29	105.0
#1	.0004	.0023	.0122	.0025	.0011	-.0011	.0080	-.0011
#2	-.0006	.0022	.0120	.0042	.0016	.0001	.0067	-.0019
#3	.0001	.0024	.0123	.0035	.0006	.0002	.0063	.0001
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0020				.0020	.0025	.0050	.0030
Range	-30.00%				-20.00%	-30.00%	30.00%	-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1170**	**1.198**	**-.0002**	**.1008**	**2.339**	**1.175**	F **.0015**	**.0000**
Stddev	.0071	.003	.0021	.0462	.020	.014	.0005	.0001
%RSD	6.031	.2298	902.6	45.78	.8515	1.145	30.50	1062.
#1	.1161	1.198	.0019	.1385	2.327	1.168	.0019	-.0001
#2	.1244	1.195	-.0004	.0493	2.362	1.190	.0016	.0002
#3	.1104	1.201	-.0022	.1147	2.328	1.167	.0010	-.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None
Value							.0100	
Range							-30.00%	

Zoom In Zoom Out

Sample Name: crid Acquired: 4/22/2019 13:18:08 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**-.0001**	**.0000**	**.0003**	F **.0001**	F **-.0000**	F **-.0005**	F **-.0005**
Stddev	.0006	.0001	.0001	.0002	.0006	.0001	.0020	.0009
%RSD	13.56	81.37	217.5	76.07	677.8	487.5	435.2	160.5
#1	.0040	-.0002	.0000	.0003	.0002	.0000	.0016	-.0000
#2	.0047	-.0002	.0001	.0001	-.0006	.0001	-.0023	-.0001
#3	.0036	-.0000	-.0000	.0006	.0006	-.0001	-.0007	-.0015
Check ?	None	None	None	None	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value					.0040	.0040	.0040	.0040
Range					-30.00%	-30.00%	-30.00%	-30.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **.0008**	F **.0025**
Stddev	.0014	.0007
%RSD	172.0	28.89
#1	.0010	.0018
#2	-.0007	.0032
#3	.0022	.0024
Check ?	Chk Fail	Chk Fail
Value	.0040	.0040
Range	-30.00%	-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115350.**	**8081.2**	**4322.6**	**9682.3**
Stddev	68.	55.1	6.2	14.4
%RSD	.05933	.68200	.14426	.14877
#1	115390.	8129.0	4329.8	9697.4
#2	115270.	8020.9	4318.8	9680.7
#3	115390.	8093.7	4319.1	9668.7

Zoom In Zoom Out

Sample Name: icsa Acquired: 4/22/2019 13:23:39 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0006**	**.0003**	**-.0004**	**.0008**	**.0001**	**.0026**	**-.0005**	**-.0004**
Stddev	.0003	.0001	.0002	.0003	.0003	.0001	.0000	.0004	.0005
%RSD	1055.	18.21	73.23	79.50	42.05	55.63	1.558	93.74	154.5
#1	-.0002	.0005	.0001	-.0001	.0011	.0001	.0027	-.0008	.0001
#2	.0000	.0006	.0005	-.0003	.0007	.0001	.0026	-.0006	-.0002
#3	.0003	.0007	.0004	-.0007	.0005	.0002	.0026	.0000	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**-.0014**	**.0020**	**.0003**	**.0023**	**.0073**	**-.0060**	**511.9**	**384.7**
Stddev	.0004	.0002	.0008	.0015	.0015	.0010	.0027	.7	.4
%RSD	25.50	16.54	39.79	440.8	66.06	14.24	45.76	.1338	.1146
#1	.0019	-.0016	.0018	.0001	.0006	.0061	-.0044	512.1	384.2
#2	.0011	-.0013	.0014	-.0010	.0033	.0078	-.0091	512.4	384.7
#3	.0014	-.0012	.0029	.0019	.0031	.0080	-.0043	511.1	385.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.3**	**503.4**	**-.3799**	**.0248**	**-.0029**	**-.0010**	**-.0139**	**-.0019**	**-.0028**
Stddev	.1	.6	.0143	.0037	.0013	.0006	.0002	.0004	.0001
%RSD	.0588	.1221	3.774	14.84	46.16	60.39	1.445	19.31	2.034
#1	189.2	502.7	-.3740	.0290	-.0037	-.0016	-.0139	-.0016	-.0028
#2	189.2	503.4	-.3962	.0231	-.0013	-.0009	-.0137	-.0023	-.0028
#3	189.4	504.0	-.3694	.0222	-.0037	-.0004	-.0141	-.0019	-.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icsa Acquired: 4/22/2019 13:23:39 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0059**	**-.0015**	**-.0309**	**.0075**	**-.0123**	**.0021**
Stddev	.0000	.0004	.0001	.0029	.0015	.0009	.0018
%RSD	12.67	7.180	8.704	9.410	20.50	7.102	87.43
#1	-.0002	.0064	-.0014	-.0324	.0068	-.0113	.0013
#2	-.0002	.0059	-.0014	-.0327	.0064	-.0126	.0008
#3	-.0003	.0055	-.0016	-.0275	.0093	-.0130	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102450.**	**7753.4**	**3855.4**	**7636.7**
Stddev	140.	18.1	5.6	10.1
%RSD	.13682	.23384	.14581	.13284
#1	102610.	7764.1	3854.2	7632.8
#2	102420.	7763.6	3861.5	7648.2
#3	102340.	7732.5	3850.4	7629.0

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/22/2019 13:29:00 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5077**	**.4975**	**1.010**	**.4841**	**.4841**	**.5056**	**.5010**	**.9698**	**1.114**
Stddev	.0009	.0012	.001	.0006	.0007	.0007	.0003	.0020	.001
%RSD	.1728	.2361	.0628	.1242	.1535	.1367	.0505	.2095	.0422
#1	.5083	.4982	1.011	.4835	.4841	.5060	.5008	.9675	1.114
#2	.5082	.4982	1.010	.4847	.4834	.5060	.5013	.9703	1.113
#3	.5067	.4961	1.009	.4840	.4849	.5048	.5010	.9715	1.114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4954**	**.9388**	**1.053**	**.9567**	**.9615**	**1.033**	**1.064**	**508.6**	**382.2**
Stddev	.0007	.0011	.002	.0026	.0017	.004	.006	.4	1.0
%RSD	.1506	.1201	.1662	.2749	.1816	.4337	.5331	.0720	.2631
#1	.4949	.9379	1.055	.9546	.9600	1.034	1.069	509.0	383.3
#2	.4962	.9401	1.053	.9560	.9612	1.028	1.065	508.3	381.3
#3	.4951	.9385	1.051	.9597	.9634	1.037	1.058	508.6	382.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**195.0**	**508.9**	**-.3522**	**.0301**	**.4732**	**.4806**	**.5113**	**.4667**	**.5050**
Stddev	.5	2.1	.0113	.0044	.0009	.0004	.0017	.0008	.0009
%RSD	.2363	.4148	3.204	14.71	.1903	.0894	.3379	.1670	.1847
#1	195.5	511.1	-.3652	.0344	.4725	.4810	.5098	.4661	.5048
#2	194.9	508.7	-.3443	.0302	.4729	.4802	.5132	.4676	.5060
#3	194.6	506.9	-.3472	.0255	.4742	.4805	.5110	.4664	.5042
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/22/2019 13:29:00 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5015**	**.4801**	**.4874**	**.4771**	**.5149**	**.5274**	**.5101**
Stddev	.0008	.0019	.0002	.0025	.0007	.0008	.0035
%RSD	.1648	.3910	.0431	.5283	.1450	.1601	.6797
#1	.5006	.4794	.4874	.4789	.5149	.5266	.5136
#2	.5021	.4787	.4876	.4781	.5141	.5283	.5067
#3	.5020	.4822	.4872	.4742	.5156	.5272	.5101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102120.**	**7793.4**	**3845.4**	**7639.9**
Stddev	155.	42.2	3.9	4.9
%RSD	.15194	.54157	.10164	.06404
#1	102240.	7747.1	3841.3	7637.7
#2	102180.	7803.3	3849.0	7645.5
#3	101940.	7829.8	3846.0	7636.4

Zoom In Zoom Out

Sample Name: hstd 7 Acquired: 4/22/2019 13:34:03 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.099**	**8.187**	**7.804**	**7.906**	**8.300**	**8.229**	**8.065**	**7.853**	**.6713**
Stddev	.019	.026	.008	.007	.026	.009	.009	.013	.0001
%RSD	.2325	.3188	.1036	.0939	.3157	.1048	.1153	.1668	.0132
#1	8.114	8.216	7.810	7.909	8.274	8.227	8.055	7.865	.6714
#2	8.104	8.182	7.807	7.912	8.300	8.238	8.073	7.856	.6712
#3	8.078	8.164	7.794	7.898	8.326	8.221	8.067	7.839	.6714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.263**	**8.179**	**8.126**	**8.182**	**8.005**	**7.995**	**8.334**	**.1243**	**-.1308**
Stddev	.008	.016	.005	.014	.005	.009	.016	.0086	.0040
%RSD	.0988	.1915	.0677	.1677	.0602	.1159	.1893	6.932	3.072
#1	8.259	8.196	8.127	8.188	8.005	8.006	8.339	.1320	-.1346
#2	8.257	8.178	8.131	8.192	8.010	7.988	8.316	.1150	-.1266
#3	8.272	8.164	8.120	8.167	8.001	7.992	8.346	.1260	-.1313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0284**	**-.0299**	**.2802**	**.0868**	**8.069**	**8.374**	**26.15**	**8.569**	**8.053**
Stddev	.0025	.0423	.0219	.0042	.009	.006	.02	.012	.020
%RSD	8.799	141.8	7.817	4.892	.1125	.0674	.0876	.1397	.2523
#1	.0313	-.0695	.2957	.0885	8.080	8.381	26.15	8.583	8.069
#2	.0267	-.0349	.2898	.0900	8.063	8.370	26.13	8.566	8.060
#3	.0272	.0148	.2551	.0820	8.065	8.373	26.18	8.559	8.030
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: hstd 7 Acquired: 4/22/2019 13:34:03 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.442**	**8.553**	**8.180**	**100.6**	**8.440**	**8.155**	**7.834**
Stddev	.006	.004	.022	.1	.017	.015	.019
%RSD	.0714	.0466	.2638	.0698	.2006	.1781	.2427
#1	8.437	8.557	8.163	100.6	8.448	8.171	7.812
#2	8.440	8.552	8.172	100.7	8.420	8.151	7.846
#3	8.449	8.549	8.204	100.7	8.450	8.143	7.844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112360.**	**8023.5**	**4222.2**	**9343.5**
Stddev	329.	74.4	6.1	9.2
%RSD	.29236	.92786	.14531	.09883
#1	112660.	7942.0	4216.3	9333.0
#2	112410.	8088.0	4228.5	9347.0
#3	112010.	8040.3	4221.7	9350.4

Zoom In Zoom Out

Sample Name: hstd Acquired: 4/22/2019 13:39:24 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0009**	**.0004**	**-.0010**	**.0003**	**.0001**	**.0025**	**-.0000**	**.0165**
Stddev	.0003	.0001	.0002	.0005	.0003	.0003	.0000	.0004	.0005
%RSD	146.4	11.56	51.04	46.60	72.45	286.2	.9168	893.5	2.755
#1	.0001	.0008	.0004	-.0008	.0006	-.0002	.0024	-.0005	.0162
#2	.0005	.0011	.0003	-.0007	.0003	.0001	.0025	.0002	.0162
#3	-.0000	.0009	.0007	-.0016	.0002	.0005	.0025	.0002	.0170
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0003**	**.0020**	**.0001**	**.0003**	**.0090**	**-.0015**	**317.9**	**203.0**
Stddev	.0002	.0002	.0004	.0008	.0009	.0036	.0016	.2	.4
%RSD	9.356	70.05	21.31	599.5	267.9	40.40	102.2	.0766	.1962
#1	.0017	.0005	.0021	-.0008	.0001	.0048	-.0033	318.1	202.9
#2	.0016	.0002	.0016	.0006	-.0004	.0107	-.0005	317.7	202.7
#3	.0020	.0001	.0024	.0006	.0013	.0115	-.0008	318.0	203.4
Check ?	None	None	None	None	None	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**199.3**	**311.0**	**207.4**	**205.2**	**.0007**	**-.0000**	**-.0033**	**-.0005**	**-.0019**
Stddev	.3	1.4	.1	.2	.0012	.0004	.0010	.0007	.0001
%RSD	.1584	.4346	.0364	.1192	172.8	3060.	31.55	137.4	3.811
#1	199.2	310.9	207.4	205.5	.0016	.0003	-.0044	.0003	-.0018
#2	199.0	309.8	207.4	205.0	-.0007	.0001	-.0025	-.0007	-.0019
#3	199.6	312.5	207.5	205.2	.0012	-.0004	-.0029	-.0011	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: hstd Acquired: 4/22/2019 13:39:24 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0053**	**-.0012**	**-.0180**	**.0071**	**.0089**	**.0057**
Stddev	.0002	.0007	.0001	.0030	.0024	.0003	.0016
%RSD	51.18	12.91	7.795	16.56	34.21	3.135	28.36
#1	-.0002	.0053	-.0011	-.0191	.0077	.0090	.0073
#2	-.0004	.0060	-.0013	-.0147	.0045	.0091	.0041
#3	-.0007	.0046	-.0013	-.0203	.0093	.0086	.0055
Check ?	None	None	None	None	None	None	None
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102790.**	**7768.3**	**3842.0**	**7605.9**
Stddev	161.	50.3	2.9	8.8
%RSD	.15655	.64692	.07568	.11506
#1	102840.	7778.3	3841.8	7598.8
#2	102610.	7812.8	3839.2	7603.2
#3	102920.	7713.8	3845.0	7615.7

Zoom In Zoom Out

Sample Name: feconf Acquired: 4/22/2019 13:44:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0004**	**.0002**	**-.0006**	**-.0004**	**-.0023**	**.0029**	**.0001**
Stddev	.0001	.0002	.0002	.0002	.0004	.0004	.0001	.0002
%RSD	72.06	49.60	94.56	36.04	96.80	15.62	2.179	168.1
#1	.0003	.0003	.0003	-.0006	-.0000	-.0019	.0029	-.0001
#2	.0000	.0003	.0004	-.0004	-.0004	-.0024	.0028	.0002
#3	.0003	.0007	-.0000	-.0008	-.0008	-.0027	.0030	.0003

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0022**	**.0001**	**-.0016**	**-.0002**	**-.0018**	**.0052**	**-.0020**
Stddev	.0007	.0001	.0001	.0003	.0018	.0003	.0011	.0007
%RSD	959.6	3.288	55.56	15.71	829.0	17.61	20.46	34.19
#1	.0003	.0022	.0001	-.0018	.0001	-.0016	.0057	-.0020
#2	-.0007	.0023	.0002	-.0018	.0014	-.0021	.0060	-.0027
#3	.0006	.0022	.0001	-.0013	-.0022	-.0016	.0040	-.0013

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0071**	**-.0263**	F **217.6**	**-.0076**	**.2120**	**.0691**	**.0007**	**.0008**
Stddev	.0057	.0031	.5	.0402	.0246	.0075	.0010	.0001
%RSD	79.41	11.81	.2502	532.3	11.59	10.84	151.3	14.64
#1	.0115	-.0282	217.7	-.0473	.2310	.0770	.0008	.0009
#2	.0007	-.0227	217.0	.0331	.2208	.0621	.0016	.0008
#3	.0092	-.0279	218.0	-.0085	.1842	.0681	-.0004	.0007

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**.0007**	**-.0006**	**.0000**	**.0025**	W **-.0014**	**-.0065**	**.0089**
Stddev	.0013	.0005	.0001	.0002	.0003	.0001	.0014	.0011
%RSD	97.88	74.75	10.08	743.7	11.40	8.529	21.83	11.95
#1	.0002	.0007	-.0007	-.0002	.0023	-.0014	-.0051	.0095
#2	-.0021	.0011	-.0006	.0003	.0028	-.0015	-.0080	.0096
#3	-.0021	.0001	-.0005	.0000	.0024	-.0013	-.0065	.0077

Zoom In Zoom Out

Sample Name: feconf Acquired: 4/22/2019 13:44:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0017**	**.0038**
Stddev	.0011	.0002
%RSD	62.94	6.122
#1	.0018	.0038
#2	.0027	.0041
#3	.0006	.0037

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113920.**	**8094.7**	**4232.1**	**9541.1**
Stddev	65.	54.2	7.3	3.7
%RSD	.05671	.67004	.17200	.03881
#1	113980.	8133.8	4223.8	9537.4
#2	113920.	8117.5	4235.2	9541.0
#3	113850.	8032.7	4237.4	9544.8

Zoom In Zoom Out

Sample Name: crconf Acquired: 4/22/2019 13:50:20 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0000**	**.0010**	F **10.16**	**-.0003**	**-.0001**	**-.0001**	**.0002**
Stddev	.0000	.0000	.0000	.0001	.01	.0001	.0000	.0001	.0003
%RSD	31.45	55.85	51.37	12.08	.1032	24.04	25.42	135.4	131.1
#1	.0001	.0000	-.0000	.0012	10.16	-.0003	-.0001	-.0002	-.0001
#2	.0001	.0001	-.0001	.0010	10.18	-.0003	-.0001	.0001	.0004
#3	.0001	.0001	-.0000	.0010	10.16	-.0004	-.0001	-.0002	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0025**	**.0002**	**.0003**	**-.0006**	**.0008**	**.0021**	**.0015**	**-.0040**	**-.0004**
Stddev	.0003	.0001	.0008	.0014	.0008	.0015	.0008	.0037	.0020
%RSD	11.99	92.12	306.9	243.9	98.89	72.23	55.97	93.67	527.7
#1	-.0026	.0001	-.0007	.0009	.0014	.0039	.0025	-.0044	-.0018
#2	-.0021	.0003	.0006	-.0020	.0012	.0016	.0010	-.0075	-.0012
#3	-.0026	.0001	.0009	-.0007	-.0001	.0010	.0011	-.0000	.0019

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0141**	**-.0125**	**.0752**	**.0258**	**.0020**	**.0006**	**.0098**	**-.0002**	**.0001**
Stddev	.0018	.0093	.0527	.0062	.0008	.0001	.0006	.0003	.0001
%RSD	12.42	74.19	70.00	24.15	39.57	15.66	5.606	162.2	81.13
#1	.0161	-.0159	.0145	.0204	.0028	.0007	.0102	-.0003	.0000
#2	.0128	-.0197	.1027	.0244	.0021	.0005	.0101	.0001	.0001
#3	.0135	-.0020	.1086	.0326	.0012	.0007	.0092	-.0003	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0037**	**.0060**	**.0021**	**-.0016**	**.0019**	**.0021**
Stddev	.0001	.0004	.0001	.0006	.0007	.0016	.0007
%RSD	5.995	10.13	1.748	29.01	43.68	82.82	33.25
#1	.0011	.0036	.0058	.0027	-.0009	.0015	.0013
#2	.0013	.0041	.0060	.0015	-.0022	.0036	.0027
#3	.0013	.0033	.0060	.0021	-.0016	.0006	.0021

Zoom In Zoom Out

Sample Name: crconf Acquired: 4/22/2019 13:50:20 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115730.**	**8123.6**	**4240.9**	**9672.1**
Stddev	227.	29.3	4.6	8.5
%RSD	.19621	.36125	.10794	.08743
#1	115720.	8126.3	4235.9	9662.4
#2	115520.	8093.0	4241.7	9677.8
#3	115970.	8151.5	4244.9	9676.2

Zoom In Zoom Out

Sample Name: asconf Acquired: 4/22/2019 13:55:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**-.0008**	**-.0007**	**-.0004**	**-.0001**	**.0001**	**-.0001**	**-.0003**
Stddev	.0002	.0001	.0001	.0001	.0002	.0000	.0000	.0001	.0005
%RSD	752.6	131.9	13.04	13.03	46.96	34.32	29.18	84.38	183.2
#1	-.0000	.0001	-.0008	-.0008	-.0003	-.0001	.0001	-.0000	.0003
#2	-.0002	.0001	-.0006	-.0007	-.0006	-.0001	.0000	-.0001	-.0003
#3	.0003	-.0000	-.0008	-.0006	-.0003	-.0001	.0001	-.0002	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0006**	**5.424**	**-.0011**	**-.0011**	**.0015**	**-.0006**	**-.0009**	**-.0014**
Stddev	.0003	.0001	.017	.0006	.0006	.0006	.0011	.0088	.0023
%RSD	214.8	11.07	.3147	56.34	60.77	41.39	187.2	1002.	166.7
#1	.0002	.0007	5.407	-.0018	-.0005	.0011	-.0017	.0025	.0013
#2	-.0002	.0007	5.425	-.0008	-.0010	.0022	.0005	-.0109	-.0024
#3	.0004	.0005	5.441	-.0007	-.0018	.0012	-.0006	.0057	-.0030

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0006**	**.0940**	**.0187**	**.0018**	**.0001**	**.0061**	**-.0001**	**-.0000**
Stddev	.0039	.0379	.0110	.0066	.0002	.0000	.0005	.0006	.0000
%RSD	1297.	6639.	11.76	35.25	10.57	20.73	7.968	553.0	71.00
#1	.0049	.0249	.0974	.0201	.0020	.0001	.0063	.0005	-.0000
#2	-.0021	-.0441	.1029	.0244	.0016	.0001	.0064	-.0008	-.0001
#3	-.0019	.0175	.0816	.0115	.0017	.0001	.0055	-.0001	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0002**	**.0000**	**.0016**	**-.0015**	**.0012**	**.0021**
Stddev	.0001	.0002	.0001	.0005	.0002	.0011	.0002
%RSD	45.77	126.1	1957.	29.20	12.16	93.30	8.159
#1	.0003	.0004	.0001	.0013	-.0014	.0018	.0023
#2	.0001	.0002	-.0001	.0021	-.0014	.0019	.0020
#3	.0002	-.0001	.0000	.0013	-.0017	-.0001	.0021

Zoom In Zoom Out

Sample Name: asconf Acquired: 4/22/2019 13:55:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115610.**	**8051.6**	**4315.8**	**9700.2**
Stddev	315.	27.5	4.5	15.5
%RSD	.27269	.34201	.10528	.15974
#1	115930.	8033.7	4316.4	9685.7
#2	115300.	8037.8	4320.0	9716.5
#3	115590.	8083.3	4310.9	9698.5

Zoom In Zoom Out

Sample Name: ccv Acquired: 4/22/2019 14:01:22 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.031**	**2.053**	**2.029**	**2.014**	**2.060**	**2.003**	**2.080**	**2.031**	**.2523**
Stddev	.009	.008	.001	.003	.011	.007	.012	.004	.0017
%RSD	.4295	.4087	.0341	.1437	.5371	.3671	.5564	.1860	.6687
#1	2.041	2.063	2.029	2.017	2.050	2.000	2.071	2.035	.2516
#2	2.028	2.049	2.029	2.012	2.057	1.997	2.076	2.029	.2510
#3	2.024	2.048	2.028	2.012	2.072	2.011	2.093	2.029	.2542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.052**	**2.051**	**2.014**	**2.074**	**2.040**	**2.012**	**2.033**	**39.82**	**40.47**
Stddev	.011	.002	.005	.006	.006	.004	.003	.08	.11
%RSD	.5185	.0895	.2519	.2677	.2781	.1852	.1210	.2111	.2693
#1	2.043	2.052	2.010	2.071	2.046	2.010	2.032	39.91	40.59
#2	2.049	2.052	2.011	2.071	2.035	2.017	2.035	39.76	40.38
#3	2.064	2.049	2.020	2.081	2.038	2.010	2.030	39.78	40.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.21**	**40.44**	**40.46**	**40.29**	**2.052**	**2.054**	**5.288**	**2.075**	**2.030**
Stddev	.22	.15	.17	.14	.005	.001	.006	.002	.008
%RSD	.5243	.3730	.4301	.3523	.2438	.0263	.1144	.1048	.3743
#1	41.44	40.61	40.66	40.45	2.057	2.055	5.292	2.075	2.038
#2	41.17	40.38	40.37	40.20	2.053	2.054	5.291	2.072	2.028
#3	41.02	40.32	40.34	40.22	2.047	2.053	5.281	2.076	2.023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 4/22/2019 14:01:22 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.052**	**2.024**	**2.046**	**1.993**	**2.051**	**2.022**	**2.011**
Stddev	.010	.003	.011	.002	.000	.006	.006
%RSD	.4762	.1260	.5248	.0879	.0217	.3026	.3165
#1	2.045	2.024	2.039	1.991	2.051	2.029	2.007
#2	2.048	2.027	2.041	1.994	2.050	2.018	2.009
#3	2.063	2.022	2.059	1.995	2.051	2.019	2.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109630.**	**7921.7**	**4148.6**	**8671.6**
Stddev	462.	27.6	7.1	13.0
%RSD	.42116	.34883	.17179	.14954
#1	110040.	7891.0	4147.3	8657.2
#2	109710.	7944.6	4142.3	8675.2
#3	109130.	7929.6	4156.3	8682.4

Zoom In Zoom Out

Sample Name: ccb Acquired: 4/22/2019 14:06:24 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0001**	**.0002**	**-.0002**	**.0001**	**.0000**	**-.0002**	**-.0000**
Stddev	.0000	.0001	.0001	.0002	.0005	.0002	.0001	.0004	.0004
%RSD	41.87	266.0	90.54	104.9	236.4	184.1	178.5	236.1	926.7
#1	.0001	.0001	.0002	.0000	.0004	-.0001	.0001	-.0004	-.0004
#2	.0002	.0001	-.0000	.0002	-.0005	.0002	-.0000	-.0003	.0004
#3	.0001	-.0001	.0001	.0005	-.0006	.0002	.0001	.0003	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0005**	**.0001**	**.0002**	**.0014**	**-.0013**	**-.0027**	**.0023**
Stddev	.0001	.0001	.0011	.0007	.0008	.0007	.0008	.0148	.0041
%RSD	169.1	187.1	209.8	546.9	347.9	50.32	64.35	548.6	175.7
#1	.0001	.0001	-.0002	-.0006	-.0001	.0019	-.0022	-.0196	.0023
#2	.0001	.0001	.0000	.0001	.0012	.0006	-.0009	.0079	-.0017
#3	-.0001	-.0001	.0017	.0008	-.0004	.0016	-.0006	.0036	.0064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**-.0302**	**.0843**	**.0271**	**.0024**	**.0002**	**.0010**	**.0007**	**.0000**
Stddev	.0038	.0299	.0046	.0040	.0006	.0003	.0005	.0006	.0001
%RSD	127.2	99.23	5.441	14.83	25.54	116.3	49.51	93.05	248.1
#1	-.0010	-.0647	.0860	.0317	.0019	.0003	.0013	.0014	.0001
#2	.0035	-.0148	.0879	.0242	.0022	.0005	.0004	.0003	.0000
#3	.0065	-.0110	.0792	.0255	.0030	-.0001	.0014	.0003	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 4/22/2019 14:06:24 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0001**	**.0002**	**.0007**	**.0019**	**.0006**
Stddev	.0003	.0007	.0003	.0014	.0014	.0012	.0003
%RSD	269.9	1585.	347.6	601.9	198.6	67.39	55.65
#1	.0005	.0004	.0002	-.0003	.0017	.0033	.0010
#2	-.0001	.0005	.0003	.0018	.0014	.0009	.0004
#3	-.0001	-.0008	-.0002	-.0008	-.0009	.0014	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115020.**	**8006.0**	**4292.9**	**9654.6**
Stddev	95.	44.8	9.4	16.0
%RSD	.08227	.55960	.21982	.16543
#1	114920.	8057.5	4292.3	9669.3
#2	115100.	7976.1	4283.8	9637.6
#3	115050.	7984.5	4302.7	9657.0

Zoom In Zoom Out

Sample Name: MP14344-MB1CONF Acquired: 4/22/2019 14:11:55 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0000**	**-.0000**	**.0002**	**.0008**	**.0009**	**.0004**	**.0002**	**.0000**
Stddev	.0002	.0001	.0000	.0001	.0003	.0002	.0000	.0003	.0005
%RSD	179.4	503.8	95.70	54.25	37.42	23.33	13.01	119.8	5326.
#1	-.0001	-.0001	-.0000	.0001	.0007	.0010	.0004	.0000	-.0005
#2	.0002	-.0001	-.0000	.0003	.0006	.0006	.0003	.0001	.0000
#3	.0002	.0001	.0000	.0003	.0011	.0010	.0004	.0006	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0340**	**.0009**	**-.0002**	**.0000**	**.0008**	**.0000**	**.0218**	**.0641**
Stddev	.0001	.0009	.0009	.0007	.0003	.0012	.0006	.0066	.0044
%RSD	31.66	2.542	103.3	449.0	824.2	147.5	1456.	30.14	6.837
#1	-.0004	.0346	.0005	.0001	.0002	-.0004	.0007	.0157	.0591
#2	-.0002	.0345	.0020	-.0010	.0001	.0020	-.0001	.0287	.0667
#3	-.0003	.0330	.0002	.0004	-.0003	.0008	-.0005	.0209	.0666

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0231**	**.0081**	**.0584**	**.0631**	**.0026**	**.0002**	**.0072**	**.0213**	**.0001**
Stddev	.0056	.0200	.0255	.0112	.0007	.0002	.0009	.0010	.0000
%RSD	24.23	248.1	43.73	17.74	28.20	92.63	11.99	4.755	19.00
#1	.0169	.0262	.0730	.0577	.0034	.0000	.0080	.0219	.0001
#2	.0245	.0113	.0289	.0555	.0024	.0004	.0072	.0219	.0001
#3	.0278	-.0134	.0733	.0759	.0019	.0002	.0063	.0202	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0005**	**.0001**	**.0091**	**.0015**	**.0013**	**.0229**
Stddev	.0003	.0003	.0001	.0017	.0020	.0010	.0011
%RSD	48.20	54.90	84.70	18.74	128.4	76.46	4.680
#1	.0008	-.0004	.0001	.0110	-.0006	.0020	.0231
#2	.0010	-.0009	.0001	.0076	.0020	.0017	.0239
#3	.0003	-.0003	.0002	.0088	.0033	.0002	.0218

Zoom In Zoom Out

Sample Name: MP14344-MB1CONF Acquired: 4/22/2019 14:11:55 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116100.**	**8168.2**	**4367.8**	**9873.5**
Stddev	155.	62.4	86.8	165.2
%RSD	.13327	.76416	1.9866	1.6733
#1	116050.	8161.9	4312.7	9776.9
#2	115980.	8233.5	4322.7	9779.4
#3	116280.	8109.1	4467.8	10064.

Zoom In Zoom Out

Sample Name: MP14344-B1CONF Acquired: 4/22/2019 14:17:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.941**	**1.963**	**1.940**	**1.893**	**1.944**	**1.909**	**1.970**	**1.912**
Stddev	.003	.002	.004	.005	.007	.001	.002	.004
%RSD	.1732	.1214	.2298	.2635	.3511	.0674	.1119	.2142
#1	1.942	1.964	1.944	1.898	1.952	1.908	1.973	1.917
#2	1.943	1.965	1.940	1.893	1.941	1.910	1.968	1.911
#3	1.937	1.961	1.935	1.888	1.939	1.910	1.970	1.909

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2557**	**1.928**	**1.961**	**1.950**	**2.019**	**1.944**	**1.919**	**1.990**
Stddev	.0002	.001	.007	.006	.005	.006	.001	.006
%RSD	.0673	.0700	.3570	.2877	.2645	.3090	.0571	.3204
#1	.2557	1.930	1.969	1.955	2.025	1.950	1.920	1.990
#2	.2559	1.927	1.958	1.950	2.016	1.943	1.920	1.996
#3	.2555	1.928	1.956	1.944	2.016	1.938	1.918	1.983

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.09**	**24.54**	**25.09**	**24.30**	**24.47**	**24.51**	**1.911**	**1.966**
Stddev	.06	.09	.07	.11	.05	.06	.003	.004
%RSD	.2625	.3470	.2799	.4645	.2177	.2421	.1778	.1915
#1	24.14	24.63	25.16	24.43	24.53	24.57	1.914	1.969
#2	24.12	24.53	25.08	24.27	24.46	24.51	1.911	1.966
#3	24.02	24.46	25.02	24.21	24.42	24.45	1.907	1.962

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0611**	**2.051**	**1.936**	**1.977**	**1.186**	**1.977**	F **-.0552**	**.0018**
Stddev	.0010	.007	.005	.004	.007	.001	.0020	.0017
%RSD	1.615	.3562	.2474	.2261	.6108	.0439	3.709	94.80
#1	.0615	2.059	1.939	1.982	1.178	1.977	-.0562	.0008
#2	.0618	2.048	1.939	1.974	1.189	1.978	-.0529	.0008
#3	.0599	2.045	1.931	1.976	1.191	1.977	-.0566	.0037

Zoom In Zoom Out

Sample Name: MP14344-B1CONF Acquired: 4/22/2019 14:17:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0006**	**1.947**
Stddev	.0005	.011
%RSD	92.19	.5408
#1	.0002	1.951
#2	.0004	1.954
#3	.0011	1.935

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112840.**	**8134.0**	**4228.8**	**9009.9**
Stddev	229.	62.0	9.8	20.5
%RSD	.20334	.76192	.23084	.22724
#1	112580.	8062.6	4220.4	8993.1
#2	113000.	8166.0	4226.5	9003.9
#3	112950.	8173.6	4239.5	9032.7

Zoom In Zoom Out

Sample Name: MP14344-S1 7 Acquired: 4/22/2019 14:22:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.275**	**2.011**	**1.953**	**2.007**	**2.314**	**2.183**	**3.688**	**2.148**	**.2682**
Stddev	.011	.007	.004	.004	.005	.002	.007	.007	.0007
%RSD	.3250	.3620	.1966	.2218	.2362	.0750	.1882	.3121	.2599
#1	3.284	2.019	1.956	2.012	2.319	2.183	3.696	2.154	.2689
#2	3.277	2.007	1.954	2.005	2.315	2.181	3.685	2.148	.2675
#3	3.263	2.007	1.949	2.003	2.308	2.184	3.684	2.141	.2681

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.502**	**2.912**	**2.086**	**2.000**	**2.151**	**1.898**	**.7622**	**302.3**	**35.93**
Stddev	.003	.013	.007	.003	.006	.015	.0049	.5	.16
%RSD	.1049	.4301	.3277	.1529	.2664	.8027	.6380	.1817	.4367
#1	2.504	2.924	2.094	2.004	2.156	1.912	.7589	302.9	36.09
#2	2.501	2.915	2.082	2.000	2.152	1.901	.7678	301.8	35.77
#3	2.499	2.899	2.083	1.998	2.144	1.882	.7599	302.3	35.93

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**374.4**	**102.7**	**104.6**	**27.43**	**1.872**	**1.960**	**3.120**	**1.868**	**2.029**
Stddev	1.4	.7	.3	.07	.008	.008	.008	.010	.005
%RSD	.3761	.6832	.2765	.2626	.4443	.3941	.2545	.5279	.2665
#1	376.0	103.1	104.9	27.51	1.881	1.969	3.129	1.878	2.035
#2	373.4	101.9	104.4	27.37	1.873	1.958	3.115	1.869	2.025
#3	373.9	103.2	104.6	27.42	1.864	1.954	3.115	1.858	2.027

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.44**	**1.273**	**1.953**	**.5331**	**.0050**	**.2505**	**6.017**
Stddev	.02	.012	.001	.0027	.0035	.0051	.035
%RSD	.0775	.9188	.0261	.5049	69.01	2.019	.5778
#1	20.46	1.287	1.954	.5341	.0072	.2540	6.052
#2	20.43	1.269	1.953	.5351	.0069	.2447	6.017
#3	20.44	1.265	1.953	.5300	.0010	.2529	5.982

Zoom In Zoom Out

Sample Name: MP14344-S1 7 Acquired: 4/22/2019 14:22:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114670.**	**8276.0**	**4327.7**	**9057.2**
Stddev	335.	46.5	9.7	17.9
%RSD	.29190	.56229	.22484	.19819
#1	114370.	8255.6	4317.7	9038.4
#2	114620.	8329.2	4328.1	9059.0
#3	115030.	8243.1	4337.2	9074.1

Zoom In Zoom Out

Sample Name: MP14344-S2 Acquired: 4/22/2019 14:27:29 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.226**	**1.997**	**1.948**	**2.004**	**2.299**	**2.129**	**3.568**	**2.142**	**.2659**
Stddev	.002	.002	.006	.007	.003	.004	.002	.007	.0012
%RSD	.0625	.0952	.2983	.3464	.1464	.1950	.0599	.3365	.4643
#1	3.228	1.997	1.954	2.012	2.302	2.133	3.571	2.150	.2668
#2	3.227	1.995	1.949	2.001	2.298	2.131	3.567	2.138	.2665
#3	3.224	1.999	1.942	1.999	2.296	2.125	3.567	2.138	.2645

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.480**	**2.865**	**2.058**	**1.999**	**2.157**	**1.893**	**.7562**	**295.6**	**36.31**
Stddev	.001	.010	.016	.007	.009	.007	.0055	.3	.03
%RSD	.0582	.3486	.7827	.3478	.3942	.3555	.7208	.0871	.0725
#1	2.478	2.876	2.077	2.007	2.167	1.900	.7582	295.7	36.31
#2	2.481	2.859	2.046	1.997	2.152	1.889	.7500	295.8	36.28
#3	2.480	2.858	2.052	1.994	2.154	1.888	.7603	295.3	36.33

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**368.7**	**102.5**	**100.8**	**27.14**	**1.870**	**1.957**	**3.313**	**1.856**	**2.025**
Stddev	.6	.2	.4	.09	.009	.007	.041	.005	.002
%RSD	.1593	.1970	.3635	.3273	.4591	.3735	1.242	.2807	.0825
#1	368.3	102.3	101.1	27.19	1.879	1.965	3.359	1.856	2.027
#2	369.4	102.7	101.0	27.04	1.869	1.955	3.281	1.850	2.024
#3	368.5	102.5	100.4	27.20	1.862	1.951	3.299	1.861	2.024

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.40**	**1.252**	**1.929**	**.6094**	**.0036**	**.2400**	**5.694**
Stddev	.02	.005	.001	.0067	.0033	.0017	.014
%RSD	.0928	.4062	.0388	1.096	93.02	.7057	.2465
#1	20.42	1.257	1.930	.6032	.0013	.2391	5.709
#2	20.39	1.247	1.928	.6164	.0021	.2420	5.681
#3	20.39	1.252	1.929	.6086	.0074	.2391	5.693

Zoom In Zoom Out

Sample Name: MP14344-S2 Acquired: 4/22/2019 14:27:29 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114360.**	**8206.4**	**4291.7**	**8976.8**
Stddev	121.	37.5	12.1	19.1
%RSD	.10550	.45652	.28112	.21262
#1	114220.	8235.6	4278.6	8955.8
#2	114420.	8164.2	4294.0	8981.5
#3	114440.	8219.5	4302.4	8993.1

Zoom In Zoom Out

Sample Name: JC86547-9 Acquired: 4/22/2019 14:32:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.315**	**.0080**	**.0021**	**.0961**	**.3466**	**.2351**	**1.580**	**.1998**	**.0088**
Stddev	.002	.0006	.0006	.0002	.0012	.0017	.005	.0012	.0005
%RSD	.1734	7.039	26.79	.2424	.3476	.7426	.3084	.5778	5.463
#1	1.318	.0078	.0017	.0964	.3463	.2342	1.585	.2000	.0088
#2	1.315	.0075	.0017	.0961	.3480	.2371	1.580	.2008	.0083
#3	1.313	.0086	.0027	.0960	.3456	.2339	1.575	.1985	.0093

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5337**	**.9445**	**.1432**	**.0071**	**.2081**	**.0178**	**-.0013**	**239.9**	**13.23**
Stddev	.0020	.0051	.0035	.0042	.0041	.0048	.0016	.7	.02
%RSD	.3691	.5419	2.416	58.71	1.954	27.10	120.5	.2730	.1255
#1	.5351	.9490	.1423	.0109	.2064	.0123	-.0018	240.0	13.23
#2	.5345	.9455	.1404	.0077	.2051	.0207	.0005	240.5	13.25
#3	.5314	.9390	.1471	.0026	.2127	.0205	-.0026	239.2	13.22

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**344.3**	**81.78**	**80.02**	**2.560**	**.0137**	**.0145**	**1.955**	**.0429**	**.1402**
Stddev	.7	.28	.25	.019	.0011	.0006	.037	.0025	.0007
%RSD	.2151	.3364	.3090	.7293	8.170	4.463	1.918	5.890	.5270
#1	344.4	81.52	79.80	2.581	.0127	.0148	1.995	.0454	.1395
#2	345.0	82.07	80.29	2.553	.0135	.0149	1.949	.0403	.1402
#3	343.6	81.77	79.97	2.546	.0149	.0137	1.921	.0430	.1409

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.48**	**.0177**	**.0425**	**.7938**	**.0043**	**.2407**	**3.843**
Stddev	.06	.0020	.0006	.0042	.0027	.0017	.014
%RSD	.3274	11.47	1.472	.5323	62.13	.6934	.3522
#1	17.53	.0200	.0424	.7919	.0071	.2390	3.845
#2	17.49	.0162	.0432	.7909	.0018	.2407	3.856
#3	17.42	.0168	.0420	.7987	.0040	.2423	3.829

Zoom In Zoom Out

Sample Name: JC86547-9 Acquired: 4/22/2019 14:32:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116570.**	**8295.6**	**4395.3**	**9260.6**
Stddev	438.	27.9	17.1	35.5
%RSD	.37568	.33611	.38929	.38320
#1	116310.	8327.8	4378.4	9233.3
#2	116330.	8278.4	4394.9	9247.9
#3	117080.	8280.6	4412.6	9300.7

Zoom In Zoom Out

Sample Name: MP14344-SD1 Acquired: 4/22/2019 14:37:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 15.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.325**	**.0083**	**.0051**	**.0969**	**.3556**	**.2356**	**1.635**	**.2013**	**.0080**
Stddev	.008	.0007	.0015	.0016	.0063	.0034	.004	.0044	.0078
%RSD	.6100	8.133	29.81	1.611	1.775	1.432	.2298	2.177	96.74
#1	1.329	.0080	.0034	.0952	.3614	.2394	1.633	.2062	.0156
#2	1.330	.0091	.0059	.0983	.3489	.2330	1.632	.1976	.0001
#3	1.316	.0079	.0061	.0973	.3565	.2343	1.639	.2003	.0083

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5372**	**.9618**	**.1362**	**.0003**	**.2013**	**.0146**	**-.0005**	**242.1**	**13.66**
Stddev	.0057	.0066	.0088	.0079	.0066	.0232	.0148	.4	.05
%RSD	1.052	.6902	6.451	2268.	3.293	159.1	2878.	.1521	.3842
#1	.5309	.9665	.1370	-.0085	.1957	.0032	-.0071	242.5	13.68
#2	.5418	.9648	.1446	.0029	.2086	.0412	.0164	241.9	13.60
#3	.5390	.9542	.1270	.0067	.1997	-.0007	-.0108	241.9	13.70

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**357.9**	**81.46**	**80.62**	**2.689**	**.0272**	**.0131**	**1.941**	**.0490**	**.1401**
Stddev	.6	.67	.36	.059	.0089	.0008	.051	.0026	.0015
%RSD	.1812	.8271	.4497	2.202	32.86	6.264	2.654	5.404	1.083
#1	357.3	81.66	80.64	2.674	.0370	.0138	1.949	.0506	.1384
#2	358.6	80.71	80.24	2.639	.0194	.0133	1.988	.0459	.1413
#3	357.9	82.01	80.97	2.754	.0252	.0122	1.886	.0504	.1404

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.72**	**.0544**	**.0431**	**.7772**	**.0011**	**.2458**	**3.893**
Stddev	.03	.0048	.0008	.0287	.0208	.0194	.032
%RSD	.1602	8.805	1.743	3.689	1904.	7.892	.8296
#1	17.73	.0545	.0424	.7525	-.0107	.2352	3.914
#2	17.68	.0591	.0431	.8086	-.0111	.2682	3.910
#3	17.73	.0495	.0439	.7703	.0251	.2340	3.856

Zoom In Zoom Out

Sample Name: MP14344-SD1 Acquired: 4/22/2019 14:37:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 15.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118270.**	**8324.3**	**4462.8**	**9684.9**
Stddev	45.	37.3	13.2	25.7
%RSD	.03833	.44842	.29592	.26546
#1	118220.	8308.9	4452.2	9666.1
#2	118290.	8366.9	4458.7	9674.5
#3	118300.	8297.2	4477.6	9714.2

Zoom In Zoom Out

Sample Name: JC86542-1 Acquired: 4/22/2019 14:43:14 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7179**	**.0103**	**.0016**	**.1180**	**.2359**	**.1913**	**2.772**	**.2656**	**.0055**
Stddev	.0047	.0000	.0005	.0004	.0018	.0011	.013	.0007	.0005
%RSD	.6599	.2646	27.83	.3549	.7482	.5505	.4644	.2718	8.927
#1	.7206	.0103	.0018	.1184	.2340	.1903	2.769	.2648	.0055
#2	.7206	.0103	.0011	.1176	.2361	.1912	2.761	.2656	.0059
#3	.7124	.0103	.0020	.1179	.2376	.1924	2.786	.2663	.0050

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2951**	**.6391**	**.0496**	**.0080**	**.1360**	**.0064**	**-.0040**	**234.7**	**10.69**
Stddev	.0019	.0007	.0010	.0008	.0019	.0006	.0028	.9	.04
%RSD	.6446	.1115	2.002	10.38	1.426	9.396	68.89	.3789	.3482
#1	.2957	.6385	.0507	.0070	.1339	.0063	-.0009	235.4	10.73
#2	.2930	.6399	.0491	.0084	.1363	.0071	-.0050	234.9	10.69
#3	.2967	.6390	.0489	.0085	.1378	.0059	-.0061	233.7	10.66

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**220.6**	**72.15**	**54.25**	**1.009**	**.0104**	**.0022**	**2.574**	**.0306**	**.0801**
Stddev	1.0	.41	.25	.006	.0009	.0007	.030	.0007	.0005
%RSD	.4464	.5739	.4625	.6027	8.809	32.49	1.160	2.204	.5623
#1	221.7	72.54	54.48	1.002	.0113	.0030	2.608	.0307	.0802
#2	220.3	72.20	54.29	1.013	.0106	.0020	2.551	.0299	.0804
#3	219.8	71.72	53.98	1.011	.0094	.0016	2.565	.0312	.0796

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.44**	**.0100**	**.0513**	**.4505**	**-.0011**	**.2354**	**4.364**
Stddev	.04	.0010	.0004	.0031	.0021	.0013	.007
%RSD	.3842	10.33	.6992	.6877	192.0	.5626	.1509
#1	10.42	.0089	.0515	.4505	-.0027	.2351	4.371
#2	10.41	.0101	.0515	.4474	-.0017	.2369	4.358
#3	10.48	.0109	.0509	.4536	.0012	.2343	4.363

Zoom In / Zoom Out

Sample Name: JC86542-1 Acquired: 4/22/2019 14:43:14 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**117750.**	**8432.6**	**4442.8**	**9175.5**
Stddev	466.	38.3	2.4	11.9
%RSD	.39609	.45474	.05332	.12918
#1	117910.	8389.1	4443.8	9165.9
#2	118120.	8461.2	4440.1	9171.9
#3	117230.	8447.6	4444.6	9188.8

Zoom In / Zoom Out

Sample Name: JC86542-4 Acquired: 4/22/2019 14:48:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7630**	**.0077**	**.0010**	**.0774**	**.2535**	**.1831**	**2.735**	**.1695**	**.0026**
Stddev	.0554	.0002	.0004	.0039	.0036	.0021	.017	.0080	.0051
%RSD	7.256	2.565	41.17	4.990	1.417	1.147	.6239	4.747	197.4
#1	.6996	.0075	.0005	.0798	.2574	.1807	2.753	.1740	-.0032
#2	.7876	.0077	.0013	.0794	.2527	.1845	2.733	.1742	.0046
#3	.8017	.0079	.0010	.0729	.2503	.1842	2.719	.1602	.0064

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3631**	**.6115**	**.0308**	**.0015**	**.1884**	**.0077**	**-.0024**	**147.8**	**43.87**
Stddev	.0017	.0258	.0008	.0016	.0093	.0106	.0006	11.2	3.19
%RSD	.4688	4.212	2.662	103.8	4.945	137.8	27.24	7.571	7.274
#1	.3649	.6269	.0318	.0031	.1940	-.0027	-.0021	135.0	40.22
#2	.3627	.6257	.0306	-.0001	.1936	.0073	-.0019	152.6	45.30
#3	.3616	.5817	.0302	.0016	.1777	.0186	-.0031	155.7	46.10

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**230.4**	**47.31**	**37.72**	**6.013**	**.0145**	**.0050**	**2.443**	**.0275**	**.1499**
Stddev	16.8	3.56	2.57	.433	.0005	.0001	.078	.0019	.0109
%RSD	7.297	7.525	6.825	7.197	3.286	1.596	3.204	6.737	7.293
#1	211.2	43.22	34.76	5.517	.0150	.0049	2.486	.0297	.1375
#2	238.1	49.03	38.97	6.210	.0141	.0051	2.489	.0267	.1545
#3	242.1	49.69	39.42	6.313	.0143	.0050	2.352	.0262	.1579

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.259**	**.0095**	**.0471**	**.8155**	**.0030**	**.1441**	**2.594**
Stddev	.045	.0011	.0008	.0303	.0036	.0098	.106
%RSD	.7145	11.49	1.738	3.712	120.5	6.811	4.094
#1	6.307	.0107	.0463	.8290	.0072	.1328	2.648
#2	6.252	.0085	.0472	.8368	.0008	.1494	2.662
#3	6.218	.0092	.0479	.7809	.0010	.1503	2.471

Zoom In / Zoom Out

Sample Name: JC86542-4 Acquired: 4/22/2019 14:48:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118890.**	**8723.2**	**4552.6**	**9490.1**
Stddev	764.	515.6	159.6	322.4
%RSD	.64251	5.9111	3.5052	3.3970
#1	118050.	9318.4	4466.4	9316.6
#2	119080.	8437.9	4454.6	9291.7
#3	119540.	8413.2	4736.7	9862.1

Zoom In / Zoom Out

Sample Name: JC86547-3 Acquired: 4/22/2019 14:53:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7061**	**.0057**	**.0012**	**.0454**	**.2559**	**.2088**	**5.592**	**.1797**	**.0031**
Stddev	.0020	.0002	.0002	.0004	.0006	.0008	.014	.0007	.0006
%RSD	.2778	3.374	13.11	.8029	.2233	.3984	.2526	.3954	18.36
#1	.7084	.0055	.0010	.0450	.2559	.2097	5.599	.1790	.0031
#2	.7052	.0059	.0013	.0457	.2553	.2081	5.600	.1804	.0037
#3	.7049	.0058	.0012	.0456	.2565	.2087	5.575	.1798	.0025

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2647**	**.2647**	**.2214**	**.0040**	**.1623**	**.0163**	**.0034**	**40.09**	**21.92**
Stddev	.0005	.0011	.0019	.0015	.0016	.0011	.0016	.02	.01
%RSD	.1753	.4162	.8503	36.65	.9733	6.473	45.38	.0540	.0254
#1	.2643	.2652	.2221	.0049	.1637	.0166	.0041	40.12	21.91
#2	.2652	.2654	.2228	.0023	.1606	.0151	.0017	40.07	21.92
#3	.2647	.2634	.2192	.0048	.1627	.0171	.0045	40.09	21.91

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**272.3**	**9.004**	**6.259**	**.9551**	**.0118**	**.0399**	**2.672**	**.0378**	**.4576**
Stddev	.5	.068	.066	.0164	.0005	.0002	.031	.0012	.0007
%RSD	.1860	.7585	1.055	1.713	4.128	.4405	1.166	3.198	.1464
#1	272.8	9.054	6.271	.9728	.0124	.0401	2.708	.0385	.4582
#2	272.3	8.927	6.187	.9520	.0115	.0399	2.657	.0364	.4569
#3	271.8	9.033	6.317	.9405	.0116	.0398	2.651	.0385	.4577

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.273**	**.0570**	**.0403**	**8.791**	**.0093**	**.0834**	**4.268**
Stddev	.018	.0008	.0001	.014	.0012	.0025	.011
%RSD	.4132	1.390	.3132	.1608	13.23	3.029	.2596
#1	4.284	.0578	.0402	8.805	.0106	.0837	4.280
#2	4.281	.0562	.0402	8.792	.0090	.0858	4.266
#3	4.252	.0569	.0404	8.777	.0082	.0808	4.258

Zoom In Zoom Out

Sample Name: JC86547-3 Acquired: 4/22/2019 14:53:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118980.**	**8439.8**	**4458.9**	**9694.8**
Stddev	343.	20.2	12.0	23.8
%RSD	.28821	.23920	.27009	.24545
#1	118880.	8462.2	4453.5	9685.9
#2	118700.	8434.2	4450.4	9676.7
#3	119360.	8423.0	4472.6	9721.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 14:59:10 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.968**	**1.984**	**1.955**	**1.946**	**1.966**	**1.929**	**1.990**	**1.962**	**.2435**
Stddev	.006	.007	.034	.032	.008	.003	.005	.031	.0011
%RSD	.2876	.3309	1.756	1.635	.4205	.1553	.2360	1.585	.4606
#1	1.966	1.984	1.956	1.946	1.960	1.933	1.989	1.962	.2444
#2	1.964	1.977	1.920	1.913	1.962	1.928	1.987	1.931	.2422
#3	1.974	1.990	1.989	1.977	1.975	1.928	1.996	1.994	.2439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.966**	**1.977**	**1.944**	**2.015**	**1.973**	**1.945**	**1.966**	**38.41**	**39.04**
Stddev	.004	.035	.035	.029	.028	.036	.034	.07	.07
%RSD	.2304	1.777	1.790	1.425	1.437	1.831	1.717	.1854	.1884
#1	1.967	1.976	1.943	2.013	1.975	1.949	1.962	38.47	39.11
#2	1.961	1.942	1.910	1.987	1.943	1.908	1.934	38.33	38.96
#3	1.970	2.013	1.979	2.044	2.000	1.979	2.001	38.44	39.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.72**	**38.97**	**39.26**	**39.05**	**1.983**	**1.983**	**5.110**	**2.007**	**1.966**
Stddev	.08	.23	.08	.04	.034	.035	.087	.036	.006
%RSD	.1984	.5984	.2123	.0987	1.730	1.764	1.699	1.775	.3289
#1	39.72	39.14	39.32	39.02	1.980	1.980	5.102	2.001	1.965
#2	39.65	38.71	39.16	39.03	1.951	1.949	5.028	1.974	1.961
#3	39.81	39.08	39.29	39.09	2.019	2.019	5.201	2.045	1.973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 14:59:10 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.966**	**1.955**	**1.966**	**1.935**	**1.983**	**1.958**	**1.969**
Stddev	.005	.033	.002	.031	.034	.006	.037
%RSD	.2541	1.661	.1204	1.600	1.704	.3242	1.904
#1	1.964	1.949	1.969	1.930	1.979	1.952	1.958
#2	1.962	1.925	1.965	1.906	1.951	1.957	1.937
#3	1.972	1.989	1.964	1.967	2.018	1.964	2.010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114020.**	**8150.6**	**4262.7**	**8892.1**
Stddev	489.	77.3	61.0	110.8
%RSD	.42899	.94885	1.4313	1.2456
#1	114150.	8069.7	4265.6	8891.6
#2	114440.	8223.8	4322.1	9003.2
#3	113480.	8158.4	4200.2	8781.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 15:04:12 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**.0001**	**.0001**	**-.0000**	**-.0001**	**.0000**	**-.0003**	**-.0002**
Stddev	.0002	.0000	.0001	.0000	.0003	.0004	.0000	.0001	.0000
%RSD	109.6	52.90	52.17	46.14	10770.	379.5	101.0	36.45	11.20
#1	.0001	.0001	.0001	.0001	-.0003	.0001	.0001	-.0002	-.0002
#2	.0004	.0001	.0002	.0000	.0002	-.0005	.0000	-.0004	-.0002
#3	.0000	.0000	.0000	.0001	.0001	.0001	.0000	-.0002	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0000**	**.0002**	**-.0005**	**.0014**	**-.0010**	**-.0015**	**.0014**
Stddev	.0004	.0001	.0003	.0005	.0008	.0006	.0006	.0275	.0030
%RSD	278.0	95.19	2061.	275.3	171.8	45.46	60.89	1806.	218.5
#1	.0003	.0000	-.0001	.0003	.0002	.0008	-.0017	.0245	-.0013
#2	-.0003	.0000	.0003	.0007	-.0014	.0021	-.0010	-.0304	.0046
#3	.0004	.0001	-.0003	-.0004	-.0002	.0013	-.0004	.0013	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0128**	**.0830**	**.0187**	**.0015**	**.0002**	**-.0003**	**.0005**	**.0001**
Stddev	.0029	.0210	.0261	.0085	.0008	.0001	.0005	.0005	.0001
%RSD	94.38	164.6	31.48	45.32	50.27	56.48	177.1	97.87	152.3
#1	.0004	.0115	.0702	.0282	.0018	.0003	.0001	.0011	.0001
#2	.0027	-.0256	.1131	.0119	.0021	.0001	-.0008	.0004	-.0000
#3	.0062	-.0241	.0658	.0161	.0007	.0003	-.0001	.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 15:04:12 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0012**	**.0002**	**.0007**	**-.0010**	**.0014**	**.0014**
Stddev	.0001	.0007	.0001	.0033	.0012	.0014	.0008
%RSD	31.68	57.43	53.67	454.1	119.0	97.07	58.02
#1	.0003	.0019	.0002	-.0003	-.0008	.0017	.0007
#2	.0002	.0006	.0003	.0045	.0001	.0026	.0013
#3	.0003	.0010	.0001	-.0020	-.0023	-.0001	.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114380.**	**7933.0**	**4247.3**	**9563.0**
Stddev	374.	72.2	3.5	3.3
%RSD	.32672	.91007	.08157	.03490
#1	114710.	7939.8	4244.7	9561.9
#2	113970.	7857.7	4251.2	9560.4
#3	114440.	8001.6	4245.9	9566.8

Zoom In Zoom Out

Sample Name: JC86547-7 Acquired: 4/22/2019 15:09:44 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7102**	**.0071**	**.0036**	**.0552**	**.3358**	**.2183**	**1.404**	**.1470**	**.0026**
Stddev	.0034	.0002	.0003	.0002	.0021	.0007	.006	.0003	.0005
%RSD	.4782	3.234	9.488	.2809	.6273	.3383	.4006	.2054	18.90
#1	.7090	.0074	.0038	.0554	.3345	.2190	1.402	.1473	.0022
#2	.7076	.0069	.0038	.0551	.3382	.2175	1.410	.1467	.0031
#3	.7140	.0071	.0032	.0552	.3346	.2185	1.399	.1469	.0024

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4910**	**1.287**	**.2081**	**.0026**	**.7351**	**.0144**	**-.0013**	**237.2**	**6.464**
Stddev	.0015	.005	.0023	.0008	.0033	.0032	.0009	.5	.043
%RSD	.3032	.4238	1.083	29.16	.4502	22.11	71.08	.1982	.6579
#1	.4926	1.290	.2088	.0031	.7371	.0180	-.0008	236.8	6.415
#2	.4896	1.290	.2099	.0018	.7369	.0118	-.0023	237.1	6.493
#3	.4907	1.281	.2055	.0031	.7313	.0135	-.0007	237.7	6.484

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**261.1**	**17.59**	**12.87**	**12.49**	**.0389**	**.0122**	**2.493**	**.0454**	**.1399**
Stddev	.7	.13	.09	.03	.0010	.0005	.008	.0013	.0002
%RSD	.2845	.7363	.6872	.2022	2.626	4.082	.3314	2.924	.1517
#1	260.2	17.49	12.77	12.48	.0395	.0121	2.503	.0464	.1397
#2	261.7	17.74	12.93	12.48	.0394	.0127	2.488	.0439	.1399
#3	261.3	17.55	12.92	12.52	.0377	.0117	2.489	.0460	.1402

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.562**	**.0086**	**.1057**	**1.342**	**-.0008**	**.1702**	**3.824**
Stddev	.012	.0016	.0002	.004	.0015	.0006	.012
%RSD	.3288	18.00	.2109	.3129	189.8	.3573	.3065
#1	3.567	.0070	.1054	1.347	-.0025	.1709	3.832
#2	3.571	.0087	.1058	1.339	-.0004	.1699	3.828
#3	3.549	.0101	.1058	1.341	.0005	.1699	3.810

Zoom In Zoom Out

Sample Name: JC86547-7 Acquired: 4/22/2019 15:09:44 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114410.**	**8245.0**	**4334.2**	**9017.4**
Stddev	469.	63.0	7.5	16.3
%RSD	.41025	.76458	.17371	.18056
#1	114590.	8316.5	4334.0	9002.8
#2	113870.	8197.3	4326.7	9014.4
#3	114760.	8221.3	4341.8	9035.0

Zoom In Zoom Out

Sample Name: JC86547-10 Acquired: 4/22/2019 15:15:04 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.423**	**.0066**	**.0093**	**.1134**	**.3414**	**.2140**	**2.044**	**.2457**	**.0073**
Stddev	.011	.0002	.0003	.0029	.0035	.0011	.011	.0062	.0010
%RSD	.7600	2.368	3.115	2.521	1.015	.4937	.5471	2.541	13.43
#1	1.414	.0064	.0090	.1109	.3378	.2128	2.032	.2406	.0075
#2	1.421	.0065	.0093	.1165	.3447	.2148	2.053	.2527	.0063
#3	1.435	.0067	.0096	.1127	.3416	.2144	2.049	.2440	.0082

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5122**	**1.508**	**.5380**	**.0048**	**.4155**	**.0051**	**-.0032**	**214.9**	**14.92**
Stddev	.0009	.031	.0072	.0026	.0076	.0004	.0056	1.3	.16
%RSD	.1803	2.061	1.332	54.69	1.825	8.819	179.1	.5886	1.066
#1	.5131	1.483	.5349	.0030	.4094	.0046	.0016	213.8	14.76
#2	.5123	1.543	.5461	.0036	.4240	.0051	-.0017	214.8	14.92
#3	.5112	1.497	.5328	.0077	.4132	.0055	-.0094	216.3	15.08

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**320.7**	**76.61**	**81.82**	**2.629**	**.0147**	**.0069**	**2.503**	**.0401**	**.0594**
Stddev	1.4	.63	.26	.019	.0016	.0003	.046	.0021	.0003
%RSD	.4463	.8284	.3183	.7226	11.23	4.062	1.839	5.217	.4544
#1	319.3	75.88	81.52	2.650	.0129	.0067	2.479	.0399	.0592
#2	320.7	76.93	81.96	2.613	.0161	.0072	2.556	.0424	.0595
#3	322.1	77.03	81.98	2.624	.0150	.0067	2.475	.0382	.0597

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.95**	**.0121**	**.0345**	**1.118**	**-.0005**	**.2458**	**4.273**
Stddev	.09	.0023	.0004	.033	.0037	.0024	.097
%RSD	.5094	19.27	1.180	2.952	680.0	.9924	2.264
#1	17.85	.0124	.0341	1.083	.0036	.2447	4.195
#2	17.99	.0143	.0349	1.149	-.0019	.2442	4.381
#3	18.01	.0096	.0344	1.121	-.0033	.2486	4.244

Zoom In Zoom Out

Sample Name: JC86547-10 Acquired: 4/22/2019 15:15:04 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113010.**	**8091.1**	**4192.4**	**8854.5**
Stddev	512.	35.4	66.2	133.0
%RSD	.45329	.43745	1.5781	1.5022
#1	112770.	8050.8	4230.0	8932.1
#2	112660.	8105.4	4116.0	8700.9
#3	113600.	8117.2	4231.1	8930.5

Zoom In Zoom Out

Sample Name: JC86547-12 Acquired: 4/22/2019 15:20:22 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.177**	**.0064**	**.0025**	**.0883**	**.3149**	**.2739**	**2.590**	**.1954**	**.0066**
Stddev	.002	.0003	.0002	.0008	.0018	.0005	.004	.0002	.0011
%RSD	.1785	5.205	6.571	.9348	.5654	.1933	.1485	.0863	17.39
#1	1.177	.0063	.0025	.0877	.3152	.2736	2.591	.1956	.0067
#2	1.175	.0067	.0027	.0879	.3165	.2745	2.594	.1952	.0054
#3	1.179	.0061	.0024	.0892	.3130	.2735	2.586	.1953	.0076

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4828**	**1.746**	**.3374**	**.0019**	**.5175**	**.0170**	**-.0002**	**184.2**	**14.74**
Stddev	.0029	.002	.0039	.0021	.0014	.0014	.0006	.5	.04
%RSD	.5972	.1208	1.166	110.6	.2791	8.335	301.8	.2659	.2445
#1	.4859	1.747	.3340	-.0002	.5183	.0154	-.0002	184.5	14.74
#2	.4824	1.747	.3417	.0019	.5184	.0172	.0004	183.6	14.71
#3	.4802	1.743	.3366	.0041	.5159	.0182	-.0008	184.5	14.78

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**292.0**	**53.53**	**54.84**	**1.654**	**.0120**	**.0166**	**1.919**	**.0369**	**.0796**
Stddev	.4	.20	.08	.031	.0022	.0004	.017	.0003	.0002
%RSD	.1442	.3683	.1536	1.856	18.54	2.436	.8764	.8139	.2326
#1	292.4	53.65	54.93	1.662	.0145	.0163	1.938	.0366	.0794
#2	292.0	53.30	54.81	1.620	.0102	.0171	1.913	.0371	.0796
#3	291.6	53.64	54.77	1.679	.0115	.0165	1.906	.0371	.0798

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.87**	**.0109**	**.0270**	**2.241**	**.0007**	**.1639**	**5.452**
Stddev	.01	.0012	.0003	.000	.0002	.0021	.008
%RSD	.1065	11.03	1.061	.0080	35.30	1.266	.1477
#1	12.87	.0101	.0267	2.241	.0008	.1642	5.449
#2	12.88	.0123	.0272	2.241	.0008	.1617	5.461
#3	12.85	.0104	.0271	2.241	.0004	.1659	5.446

Zoom In Zoom Out

Sample Name: JC86547-12 Acquired: 4/22/2019 15:20:22 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113660.**	**8112.5**	**4250.2**	**8925.4**
Stddev	80.	46.8	8.3	10.7
%RSD	.07041	.57629	.19589	.12019
#1	113600.	8073.4	4251.1	8923.5
#2	113630.	8099.9	4241.5	8915.8
#3	113750.	8164.3	4258.0	8937.0

Zoom In Zoom Out

Sample Name: MP14333-MB1CONF Acquired: 4/22/2019 15:25:37 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0000**	**.0002**	**.0002**	**-.0003**	**.0000**	**.0001**	**-.0003**	**-.0002**
Stddev	.0000	.0001	.0002	.0001	.0002	.0004	.0000	.0002	.0002
%RSD	15.88	233.6	87.42	77.37	84.99	2812.	20.28	84.90	124.3
#1	.0003	-.0001	.0004	.0000	-.0001	-.0004	.0001	-.0006	-.0003
#2	.0002	.0000	.0001	.0003	-.0005	.0000	.0001	-.0003	.0001
#3	.0003	.0000	.0001	.0002	-.0002	.0004	.0000	-.0001	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0016**	**-.0006**	**-.0013**	**-.0003**	**.0008**	**-.0001**	**.0071**	**.0028**
Stddev	.0003	.0001	.0004	.0010	.0007	.0018	.0007	.0134	.0013
%RSD	903.1	6.994	65.06	78.65	238.3	215.8	1186.	188.0	46.12
#1	.0004	.0017	-.0004	-.0004	-.0006	.0027	-.0009	.0217	.0016
#2	.0000	.0016	-.0011	-.0011	-.0008	.0005	.0001	-.0048	.0041
#3	-.0003	.0015	-.0003	-.0025	.0005	-.0008	.0006	.0046	.0026

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**-.0247**	**.0850**	**.0108**	**.0007**	**.0002**	**.0095**	**-.0008**	**-.0001**
Stddev	.0033	.0336	.0280	.0121	.0003	.0002	.0007	.0003	.0001
%RSD	151.2	136.1	32.95	111.9	46.53	83.32	7.442	30.63	114.1
#1	.0006	-.0550	.1026	.0226	.0007	.0003	.0088	-.0007	-.0001
#2	.0000	-.0306	.0527	-.0015	.0003	.0000	.0097	-.0011	.0000
#3	.0059	.0115	.0996	.0113	.0009	.0002	.0101	-.0007	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0014**	**.0004**	**.0026**	**.0002**	**.0013**	**.0028**
Stddev	.0003	.0006	.0002	.0008	.0017	.0001	.0007
%RSD	59.28	43.38	44.40	31.00	705.7	8.232	25.92
#1	.0002	.0019	.0006	.0034	.0002	.0013	.0022
#2	.0008	.0007	.0003	.0018	-.0015	.0012	.0036
#3	.0006	.0016	.0003	.0027	.0020	.0014	.0025

Zoom In Zoom Out

Sample Name: MP14333-MB1CONF Acquired: 4/22/2019 15:25:37 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116210.**	**8066.0**	**4289.3**	**9676.5**
Stddev	27.	49.8	1.0	7.6
%RSD	.02329	.61686	.02382	.07813
#1	116190.	8040.6	4288.1	9668.3
#2	116190.	8034.0	4289.7	9678.0
#3	116240.	8123.3	4290.0	9683.1

Zoom In Zoom Out

Sample Name: MP14333-B1CONF Acquired: 4/22/2019 15:31:06 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.057**	**2.072**	**2.028**	**2.005**	**2.029**	**2.004**	**2.057**	**2.017**
Stddev	.004	.003	.004	.003	.037	.037	.036	.004
%RSD	.1843	.1186	.1799	.1382	1.805	1.858	1.748	.1799
#1	2.061	2.075	2.032	2.008	1.987	1.961	2.016	2.020
#2	2.058	2.072	2.025	2.006	2.052	2.025	2.079	2.019
#3	2.053	2.070	2.026	2.002	2.049	2.027	2.077	2.013

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2661**	**2.035**	**2.046**	**2.039**	**2.105**	**2.036**	**2.007**	**2.087**
Stddev	.0041	.035	.005	.004	.003	.003	.005	.008
%RSD	1.530	1.738	.2549	.1915	.1413	.1676	.2660	.3939
#1	.2614	1.994	2.050	2.043	2.108	2.037	2.013	2.097
#2	.2681	2.057	2.048	2.039	2.107	2.040	2.006	2.082
#3	.2687	2.054	2.040	2.035	2.102	2.033	2.003	2.083

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.53**	**25.97**	**26.55**	**25.68**	**26.01**	**25.95**	**2.043**	**2.111**
Stddev	.01	.03	.05	.06	.02	.05	.006	.005
%RSD	.0302	.1145	.1990	.2271	.0844	.1877	.3091	.2479
#1	25.53	26.01	26.58	25.73	26.02	26.00	2.051	2.117
#2	25.54	25.95	26.58	25.70	26.01	25.93	2.039	2.109
#3	25.52	25.97	26.49	25.62	25.98	25.90	2.040	2.107

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1559**	**2.135**	**2.050**	**2.066**	**1.952**	**2.062**	F **-.1007**	**.0021**
Stddev	.0015	.005	.002	.037	.003	.037	.0008	.0009
%RSD	.9426	.2396	.1183	1.805	.1263	1.817	.8260	44.80
#1	.1545	2.139	2.051	2.023	1.951	2.019	-.1014	.0021
#2	.1574	2.136	2.051	2.089	1.955	2.083	-.0998	.0011
#3	.1557	2.129	2.047	2.087	1.950	2.085	-.1009	.0030

Zoom In Zoom Out

Sample Name: MP14333-B1CONF Acquired: 4/22/2019 15:31:06 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0012**	**2.037**
Stddev	.0005	.006
%RSD	42.89	.3037
#1	.0007	2.043
#2	.0011	2.037
#3	.0017	2.030

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112820.**	**8012.2**	**4172.3**	**8866.3**
Stddev	1725.	21.6	3.6	5.4
%RSD	1.5291	.26923	.08718	.06090
#1	114810.	7987.4	4168.2	8865.2
#2	111850.	8023.1	4173.8	8861.6
#3	111800.	8026.2	4175.0	8872.2

Zoom In Zoom Out

Sample Name: JC86380-2 7 Acquired: 4/22/2019 15:36:06 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0377**	**-.0001**	**.0015**	**.0069**	**.0007**	**.0127**	**.0602**	**.1678**	**.0118**
Stddev	.0006	.0003	.0005	.0004	.0015	.0017	.0005	.0020	.0016
%RSD	1.575	305.3	32.44	6.267	209.7	13.71	.8680	1.193	13.43
#1	.0383	-.0004	.0010	.0073	-.0002	.0120	.0608	.1698	.0106
#2	.0376	-.0001	.0019	.0064	.0024	.0147	.0599	.1658	.0112
#3	.0371	.0002	.0017	.0071	-.0001	.0114	.0599	.1679	.0136

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0151**	**.0991**	**.0023**	**-.0022**	**.0031**	**.0049**	**-.0114**	**.1848**	**146.9**
Stddev	.0007	.0002	.0031	.0042	.0028	.0090	.0053	.0626	.1
%RSD	4.785	.2256	135.5	192.6	87.65	183.3	46.13	33.88	.0822
#1	.0153	.0991	.0002	.0026	.0052	.0046	-.0054	.2090	147.0
#2	.0157	.0993	.0058	-.0049	.0042	-.0039	-.0137	.2316	146.8
#3	.0143	.0988	.0008	-.0042	.0000	.0140	-.0151	.1137	146.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.408**	**452.6**	**135.5**	F **3270.**	**1.365**	**.0062**	**4.368**	**-.0028**	**2.435**
Stddev	.037	1.1	.1	23.	.002	.0005	.015	.0035	.004
%RSD	1.550	.2329	.0539	.7176	.1482	8.525	.3448	126.2	.1603
#1	2.386	451.9	135.4	3281.	1.367	.0063	4.383	-.0046	2.438
#2	2.386	452.0	135.5	3286.	1.365	.0056	4.368	.0013	2.436
#3	2.451	453.8	135.5	3243.	1.363	.0067	4.353	-.0050	2.431

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0407**	**.0011**	**295.5**	**.0024**	**.1527**	**.0328**
Stddev	.0021	.0082	.0006	.4	.0129	.0049	.0046
%RSD	344.3	20.22	52.53	.1403	536.4	3.214	14.15
#1	.0029	.0451	.0015	296.0	.0115	.1495	.0369
#2	.0002	.0458	.0004	295.4	.0080	.1504	.0278
#3	-.0013	.0312	.0013	295.1	-.0123	.1584	.0338

Zoom In Zoom Out

Sample Name: JC86380-2 7 Acquired: 4/22/2019 15:36:06 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**101170.**	**7660.2**	**3789.0**	**7687.6**
Stddev	158.	25.3	6.9	9.5
%RSD	.15627	.33033	.18208	.12302
#1	101000.	7663.2	3784.5	7690.0
#2	101180.	7683.8	3785.5	7677.1
#3	101320.	7633.5	3796.9	7695.6

Zoom In Zoom Out

Sample Name: JC86380-5 Acquired: 4/22/2019 15:41:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0489**	**.0000**	**.0002**	**.0002**	**.0009**	**.0038**	**.0500**	**.0014**
Stddev	.0003	.0001	.0000	.0003	.0005	.0002	.0001	.0001
%RSD	.5500	1312.	9.708	109.5	51.02	5.570	.1766	4.886
#1	.0487	.0001	.0002	.0005	.0008	.0041	.0499	.0015
#2	.0492	-.0001	.0003	.0002	.0015	.0036	.0501	.0013
#3	.0488	.0000	.0002	.0000	.0006	.0038	.0501	.0014

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0083**	**.0016**	**.0094**	**-.0018**	F **-.0037**	**.0009**	**.0050**	**-.0040**
Stddev	.0001	.0001	.0002	.0020	.0013	.0009	.0023	.0011
%RSD	1.476	8.226	2.514	107.1	34.44	104.9	45.47	28.34
#1	.0082	.0016	.0097	-.0014	-.0044	.0007	.0035	-.0053
#2	.0085	.0015	.0092	-.0001	-.0045	.0000	.0077	-.0034
#3	.0082	.0017	.0094	-.0040	-.0022	.0019	.0040	-.0033

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1185**	**85.17**	**.6304**	F **301.9**	**104.9**	F **1720.**	**1.391**	**.0014**
Stddev	.0065	.19	.0041	.9	.2	39.	.006	.0003
%RSD	5.523	.2234	.6474	.2908	.1543	2.260	.4694	23.97
#1	.1111	85.36	.6351	302.5	105.0	1764.	1.399	.0017
#2	.1233	84.98	.6284	300.9	104.7	1707.	1.386	.0014
#3	.1212	85.17	.6278	302.3	104.9	1690.	1.389	.0010

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.994**	**-.0018**	**1.418**	**.0058**	**.0150**	**-.0002**	F **197.8**	**.0025**
Stddev	.023	.0006	.000	.0003	.0006	.0001	.5	.0007
%RSD	.3281	32.04	.0082	4.364	4.123	42.88	.2289	27.65
#1	7.020	-.0023	1.418	.0058	.0145	-.0001	198.3	.0024
#2	6.984	-.0020	1.418	.0056	.0157	-.0002	197.6	.0032
#3	6.978	-.0012	1.418	.0061	.0149	-.0003	197.4	.0018

Zoom In Zoom Out

Sample Name: JC86380-5 Acquired: 4/22/2019 15:41:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0776**	**.2303**
Stddev	.0025	.0018
%RSD	3.172	.7961
#1	.0791	.2320
#2	.0789	.2284
#3	.0747	.2305

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**91650.**	**7428.1**	**3410.5**	**6688.5**
Stddev	16.	45.4	6.9	7.7
%RSD	.01784	.61126	.20309	.11438
#1	91656.	7391.6	3403.3	6679.7
#2	91631.	7478.9	3411.3	6693.5
#3	91662.	7413.6	3417.0	6692.4

Zoom In Zoom Out

Sample Name: JC86380-5 Acquired: 4/22/2019 15:47:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0489**	**-.0001**	**-.0002**	**-.0002**	**.0010**	**.0051**	**.0501**	**.0021**
Stddev	.0008	.0002	.0002	.0004	.0004	.0003	.0004	.0005
%RSD	1.617	239.1	107.3	178.0	40.17	6.179	.7161	26.20
#1	.0497	-.0002	.0000	-.0005	.0014	.0054	.0505	.0018
#2	.0481	-.0001	-.0003	-.0004	.0010	.0048	.0500	.0027
#3	.0488	.0001	-.0003	.0002	.0006	.0050	.0498	.0017

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0080**	**.0011**	**.0114**	**-.0009**	F **-.0049**	**.0013**	**.0079**	**-.0037**
Stddev	.0002	.0003	.0001	.0021	.0018	.0010	.0018	.0017
%RSD	2.447	26.83	1.226	243.4	37.84	74.89	22.59	45.94
#1	.0080	.0011	.0112	.0004	-.0049	.0016	.0058	-.0021
#2	.0078	.0008	.0115	.0003	-.0030	.0022	.0087	-.0035
#3	.0082	.0014	.0114	-.0033	-.0067	.0002	.0091	-.0055

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1237**	**86.24**	**.6446**	**302.6**	**103.3**	F **1975.**	**1.398**	**.0015**
Stddev	.0199	.22	.0049	1.6	.3	11.	.003	.0002
%RSD	16.08	.2522	.7657	.5269	.3085	.5443	.1981	10.66
#1	.1402	86.44	.6389	304.3	103.5	1987.	1.401	.0014
#2	.1294	86.01	.6479	301.2	102.9	1972.	1.398	.0017
#3	.1016	86.27	.6470	302.1	103.4	1967.	1.395	.0014

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.883**	**-.0025**	**1.417**	**.0060**	**.0138**	**-.0004**	**196.8**	**.0018**
Stddev	.010	.0011	.003	.0005	.0014	.0003	.3	.0005
%RSD	.1472	42.59	.2281	8.444	9.872	58.30	.1576	30.55
#1	6.886	-.0015	1.421	.0062	.0123	-.0007	196.5	.0012
#2	6.871	-.0023	1.416	.0063	.0150	-.0003	196.7	.0020
#3	6.891	-.0036	1.415	.0054	.0140	-.0003	197.1	.0022

Zoom In Zoom Out

Sample Name: JC86380-5 Acquired: 4/22/2019 15:47:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0674**	**.2335**
Stddev	.0027	.0008
%RSD	3.950	.3419
#1	.0679	.2326
#2	.0645	.2342
#3	.0697	.2337

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**97216.**	**7588.7**	**3632.4**	**7264.9**
Stddev	146.	73.9	3.4	4.4
%RSD	.15013	.97382	.09269	.06080
#1	97048.	7556.3	3632.3	7269.9
#2	97316.	7673.2	3635.8	7263.4
#3	97283.	7536.4	3629.1	7261.5

Zoom In Zoom Out

Sample Name: JC86380-6 Acquired: 4/22/2019 15:52:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0426**	**-.0003**	**.0011**	**-.0002**	**-.0006**	**.0089**	**.0228**	**.0047**	**.0130**
Stddev	.0001	.0005	.0017	.0008	.0014	.0019	.0002	.0006	.0017
%RSD	.1516	151.8	163.3	423.0	223.2	20.95	.9463	12.22	12.95
#1	.0426	-.0003	.0027	.0007	-.0017	.0073	.0227	.0049	.0116
#2	.0425	-.0008	-.0008	-.0007	.0010	.0085	.0230	.0052	.0149
#3	.0426	.0001	.0013	-.0005	-.0011	.0110	.0226	.0041	.0126

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0164**	**.0007**	**-.0080**	**.0046**	**.0424**	**-.0034**	**.0190**	**182.7**
Stddev	.0008	.0011	.0027	.0057	.0040	.0078	.0064	.0694	.6
%RSD	213.2	6.727	387.2	71.43	87.15	18.36	185.6	364.5	.3012
#1	-.0004	.0155	-.0021	-.0042	.0000	.0344	.0032	-.0480	183.1
#2	.0004	.0162	.0009	-.0145	.0064	.0427	-.0095	.0905	182.1
#3	-.0012	.0177	.0034	-.0052	.0074	.0500	-.0040	.0147	183.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.070**	**554.8**	**177.0**	F **3666.**	**1.823**	**.0098**	**9.200**	**-.0046**	**3.521**
Stddev	.009	3.0	.0	41.	.006	.0005	.020	.0053	.008
%RSD	.8621	.5487	.0124	1.128	.3486	5.579	.2192	114.6	.2156
#1	1.067	558.2	177.0	3623.	1.829	.0103	9.214	.0013	3.528
#2	1.081	552.4	177.0	3672.	1.817	.0098	9.176	-.0064	3.523
#3	1.063	553.7	177.0	3705.	1.822	.0092	9.208	-.0088	3.513

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0229**	**.0001**	**401.0**	**-.0010**	**.1423**	**.1015**
Stddev	.0023	.0030	.0009	.6	.0098	.0085	.0037
%RSD	47570.	12.96	664.4	.1544	962.3	5.990	3.667
#1	.0019	.0264	-.0008	401.3	.0022	.1337	.0978
#2	.0007	.0209	.0010	401.4	-.0121	.1507	.1052
#3	-.0026	.0216	.0002	400.3	.0068	.1425	.1014

Zoom In Zoom Out

Sample Name: JC86380-6 Acquired: 4/22/2019 15:52:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**99208.**	**7607.5**	**3717.0**	**7501.8**
Stddev	161.	25.4	4.3	8.6
%RSD	.16210	.33330	.11583	.11511
#1	99287.	7630.2	3713.6	7494.2
#2	99314.	7612.2	3721.8	7511.2
#3	99023.	7580.2	3715.5	7500.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 15:58:12 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.051**	**2.062**	**2.039**	**2.029**	**2.062**	**2.016**	**2.081**	**2.044**	**.2543**
Stddev	.003	.003	.002	.003	.007	.002	.002	.002	.0004
%RSD	.1431	.1375	.0769	.1415	.3259	.1007	.0815	.0912	.1623
#1	2.054	2.065	2.040	2.030	2.067	2.016	2.083	2.044	.2539
#2	2.049	2.062	2.038	2.026	2.054	2.014	2.080	2.042	.2547
#3	2.050	2.059	2.040	2.031	2.064	2.018	2.081	2.045	.2544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.054**	**2.065**	**2.031**	**2.098**	**2.056**	**2.031**	**2.055**	**40.01**	**40.62**
Stddev	.002	.002	.001	.001	.004	.004	.005	.04	.07
%RSD	.1149	.1045	.0459	.0588	.1898	.1910	.2611	.0979	.1688
#1	2.057	2.067	2.031	2.097	2.060	2.035	2.060	39.97	40.56
#2	2.054	2.064	2.031	2.099	2.053	2.027	2.056	40.01	40.69
#3	2.052	2.063	2.033	2.097	2.056	2.033	2.049	40.05	40.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.30**	**40.46**	**40.89**	**39.99**	**2.074**	**2.070**	**5.332**	**2.092**	**2.049**
Stddev	.05	.14	.05	.06	.002	.001	.006	.002	.003
%RSD	.1286	.3463	.1166	.1552	.0861	.0610	.1158	.0915	.1573
#1	41.35	40.34	40.93	40.04	2.076	2.071	5.339	2.094	2.053
#2	41.29	40.61	40.84	40.02	2.074	2.069	5.327	2.091	2.047
#3	41.25	40.44	40.89	39.92	2.072	2.071	5.332	2.091	2.048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 15:58:12 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.055**	**2.038**	**2.055**	**2.022**	**2.071**	**2.044**	**2.061**
Stddev	.003	.003	.002	.008	.002	.006	.005
%RSD	.1280	.1424	.1024	.4029	.1018	.2783	.2212
#1	2.058	2.040	2.058	2.027	2.073	2.047	2.060
#2	2.054	2.035	2.053	2.012	2.070	2.048	2.066
#3	2.054	2.040	2.056	2.026	2.069	2.038	2.057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109700.**	**7842.4**	**4106.5**	**8584.1**
Stddev	69.	25.8	4.9	8.2
%RSD	.06297	.32867	.12052	.09611
#1	109620.	7848.0	4101.9	8576.4
#2	109760.	7814.3	4105.9	8583.2
#3	109720.	7864.9	4111.7	8592.8

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 16:03:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0002**	**.0002**	**.0000**	**-.0001**	**.0001**	**.0001**	**-.0001**
Stddev	.0002	.0001	.0001	.0001	.0002	.0003	.0000	.0002	.0003
%RSD	154.8	134.3	76.15	41.43	2859.	372.3	28.02	203.1	242.5
#1	.0001	-.0000	.0003	.0002	-.0001	-.0000	.0001	.0002	.0001
#2	-.0001	.0000	.0000	.0001	.0003	.0002	.0001	.0003	-.0004
#3	.0004	.0001	.0002	.0002	-.0002	-.0005	.0001	-.0002	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0001**	**-.0010**	**-.0003**	**.0006**	**.0015**	**-.0002**	**.0031**	**.0038**
Stddev	.0004	.0000	.0004	.0004	.0002	.0001	.0004	.0035	.0009
%RSD	132.4	31.96	43.17	147.1	40.83	6.978	265.8	112.6	24.47
#1	.0006	.0001	-.0007	-.0005	.0006	.0014	.0003	-.0007	.0033
#2	-.0001	.0001	-.0015	.0002	.0003	.0016	-.0004	.0061	.0033
#3	.0003	.0001	-.0009	-.0005	.0008	.0014	-.0004	.0038	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**-.0303**	**.1500**	**.2845**	**.0020**	**.0003**	**.0007**	**.0001**	**.0000**
Stddev	.0049	.0042	.0323	.0066	.0006	.0003	.0012	.0005	.0001
%RSD	254.1	14.02	21.53	2.323	30.48	96.28	163.8	434.6	140.9
#1	-.0050	-.0349	.1143	.2909	.0028	.0000	-.0003	.0006	.0001
#2	-.0046	-.0295	.1772	.2849	.0016	.0007	.0020	-.0004	.0001
#3	.0038	-.0265	.1585	.2777	.0018	.0003	.0004	.0002	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 16:03:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0011**	**.0002**	**.0011**	**-.0003**	**.0035**	**.0019**
Stddev	.0003	.0004	.0000	.0018	.0004	.0005	.0004
%RSD	233.6	39.23	17.78	159.6	169.7	15.03	19.94
#1	.0002	.0015	.0002	-.0004	-.0004	.0038	.0015
#2	.0003	.0008	.0003	.0031	.0002	.0039	.0023
#3	-.0002	.0008	.0002	.0007	-.0006	.0029	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114460.**	**7974.3**	**4267.7**	**9614.3**
Stddev	84.	45.5	2.2	4.5
%RSD	.07317	.57088	.05081	.04731
#1	114530.	7963.8	4268.3	9616.1
#2	114470.	7934.9	4269.5	9609.1
#3	114370.	8024.1	4265.3	9617.7

Zoom In Zoom Out

Sample Name: JC86380-12 Acquired: 4/22/2019 16:08:47 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0156**	**.0000**	**-.0001**	**-.0001**	**.0011**	**.0028**	**.0018**	**.0006**
Stddev	.0004	.0001	.0001	.0001	.0006	.0004	.0001	.0001
%RSD	2.407	317.5	120.9	55.30	55.53	12.80	4.534	18.38
#1	.0158	.0000	.0000	-.0002	.0015	.0031	.0017	.0005
#2	.0157	-.0001	-.0003	-.0001	.0004	.0030	.0019	.0007
#3	.0151	.0001	-.0001	-.0001	.0015	.0024	.0018	.0005

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0134**	**.0000**	**.0031**	**-.0024**	F **-.0044**	**.0017**	**.0087**	**-.0025**
Stddev	.0007	.0005	.0001	.0004	.0010	.0014	.0003	.0005
%RSD	5.416	44660.	4.351	15.37	22.27	79.52	3.631	21.85
#1	.0128	-.0006	.0032	-.0020	-.0056	.0014	.0083	-.0028
#2	.0142	.0005	.0029	-.0024	-.0038	.0032	.0090	-.0019
#3	.0131	.0001	.0031	-.0028	-.0039	.0005	.0088	-.0029

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1294**	**175.7**	**.1474**	F **507.8**	**161.6**	F **2004.**	**1.403**	**.0052**
Stddev	.0193	.2	.0018	1.1	.6	58.	.004	.0003
%RSD	14.92	.1039	1.194	.2254	.3728	2.892	.2473	5.941
#1	.1080	175.9	.1473	509.0	162.3	2053.	1.400	.0049
#2	.1349	175.8	.1492	507.6	161.5	2018.	1.407	.0055
#3	.1454	175.5	.1456	506.8	161.1	1940.	1.402	.0052

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.929**	**.0002**	**2.972**	**.0038**	**.0084**	**.0000**	F **381.9**	**.0024**
Stddev	.006	.0004	.003	.0002	.0005	.0001	.3	.0011
%RSD	.3368	205.9	.0833	5.456	6.339	289.3	.0906	44.48
#1	1.933	.0004	2.974	.0036	.0089	.0002	382.2	.0012
#2	1.931	-.0002	2.970	.0039	.0084	-.0001	381.8	.0031
#3	1.921	.0004	2.971	.0040	.0079	-.0000	381.6	.0029

Zoom In Zoom Out

Sample Name: JC86380-12 Acquired: 4/22/2019 16:08:47 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0898**	**.0233**
Stddev	.0045	.0007
%RSD	4.981	3.050
#1	.0933	.0231
#2	.0915	.0226
#3	.0848	.0240

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**85795.**	**7194.8**	**3171.4**	**6144.2**
Stddev	11.	15.7	.9	6.7
%RSD	.01307	.21823	.02783	.10863
#1	85788.	7177.8	3171.2	6141.5
#2	85808.	7208.6	3170.6	6139.4
#3	85790.	7198.2	3172.4	6151.8

Zoom In Zoom Out

Sample Name: JC86380-12 Acquired: 4/22/2019 16:14:18 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0164**	**.0001**	**.0010**	**-.0004**	**-.0006**	**.0078**	**.0026**	**-.0004**	**.0131**
Stddev	.0004	.0005	.0018	.0019	.0024	.0014	.0003	.0008	.0018
%RSD	2.397	480.6	183.9	553.7	402.6	18.31	9.710	203.2	14.09
#1	.0162	.0004	-.0000	.0010	-.0022	.0063	.0025	.0005	.0117
#2	.0161	-.0005	.0031	.0006	.0021	.0081	.0029	-.0010	.0152
#3	.0168	.0004	-.0001	-.0026	-.0017	.0091	.0024	-.0006	.0125

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**.0182**	**-.0017**	**-.0065**	**.0017**	**.0142**	**-.0079**	**.1538**	**185.1**
Stddev	.0006	.0007	.0007	.0095	.0030	.0061	.0071	.0274	2.6
%RSD	25.67	3.711	40.08	145.6	178.5	42.91	89.89	17.82	1.413
#1	-.0023	.0182	-.0012	.0042	.0040	.0191	-.0069	.1677	183.9
#2	-.0018	.0188	-.0025	-.0137	.0027	.0161	-.0155	.1222	183.3
#3	-.0030	.0175	-.0015	-.0101	-.0017	.0074	-.0014	.1714	188.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1906**	**525.7**	**158.9**	F **3346.**	**1.417**	**.0062**	**1.861**	**-.0057**	**2.997**
Stddev	.0117	8.9	1.8	46.	.001	.0005	.009	.0015	.045
%RSD	6.147	1.688	1.101	1.376	.0839	7.525	.4877	26.61	1.493
#1	.2040	520.3	158.3	3333.	1.418	.0057	1.867	-.0039	2.976
#2	.1850	520.9	157.5	3307.	1.416	.0063	1.866	-.0066	2.967
#3	.1827	536.0	160.8	3397.	1.416	.0066	1.851	-.0065	3.049

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**.0104**	**.0001**	**383.9**	**.0018**	**.0754**	**.0405**
Stddev	.0009	.0025	.0009	1.2	.0012	.0138	.0058
%RSD	24.06	24.00	652.6	.3114	69.23	18.25	14.23
#1	.0028	.0076	.0011	382.9	.0024	.0860	.0456
#2	.0045	.0113	-.0007	385.2	.0026	.0803	.0416
#3	.0042	.0124	.0000	383.6	.0004	.0598	.0342

Zoom In Zoom Out

Sample Name: JC86380-12 Acquired: 4/22/2019 16:14:18 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**99987.**	**7541.1**	**3741.6**	**7561.7**
Stddev	213.	80.7	5.4	3.4
%RSD	.21306	1.0695	.14471	.04436
#1	100040.	7599.4	3747.7	7561.1
#2	100170.	7574.9	3737.4	7565.3
#3	99751.	7449.1	3739.7	7558.7

Zoom In Zoom Out

Sample Name: JC86380-13 Acquired: 4/22/2019 16:19:52 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0080**	**.0328**	**.0049**	**.2372**	**.0299**	**.2535**	**1.538**	**.8287**
Stddev	.0002	.0003	.0008	.0006	.0004	.0007	.003	.0022
%RSD	2.250	.9331	16.30	.2524	1.287	.2598	.1647	.2607
#1	.0078	.0331	.0044	.2375	.0300	.2540	1.541	.8312
#2	.0081	.0325	.0045	.2377	.0295	.2538	1.536	.8272
#3	.0081	.0327	.0059	.2366	.0303	.2528	1.538	.8278

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0520**	**.6141**	**.0037**	**-.0003**	**.0060**	**.0099**	**-.0056**
Stddev	.0006	.0004	.0010	.0009	.0027	.0013	.0034	.0009
%RSD	120.2	.8163	.1674	24.38	891.3	21.56	34.49	15.38
#1	.0002	.0517	.6153	.0034	.0024	.0050	.0068	-.0061
#2	-.0008	.0525	.6135	.0048	-.0031	.0056	.0136	-.0061
#3	-.0007	.0518	.6135	.0030	-.0003	.0075	.0094	-.0046

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**223.7**	**80.08**	**388.1**	**26.17**	**8.590**	**33.68**	**.3310**	**.0049**
Stddev	.2	.25	1.0	.05	.059	.06	.0007	.0004
%RSD	.0975	.3119	.2610	.1908	.6856	.1878	.2112	7.799
#1	223.9	80.34	389.2	26.12	8.559	33.75	.3303	.0048
#2	223.5	80.05	387.8	26.22	8.553	33.63	.3309	.0046
#3	223.7	79.84	387.3	26.18	8.658	33.65	.3317	.0053

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.61**	**-.0053**	**2.063**	**-.0015**	**.0512**	W **-.0029**	F **679.5**	**.0081**
Stddev	.07	.0011	.001	.0003	.0010	.0002	.5	.0019
%RSD	.1466	21.18	.0516	17.47	1.969	7.829	.0799	23.13
#1	49.53	-.0063	2.064	-.0017	.0501	-.0028	680.0	.0063
#2	49.68	-.0055	2.062	-.0012	.0518	-.0028	679.7	.0079
#3	49.62	-.0041	2.063	-.0016	.0518	-.0032	678.9	.0100

Zoom In Zoom Out

Sample Name: JC86380-13 Acquired: 4/22/2019 16:19:52 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.5675**	**.0501**
Stddev	.0035	.0006
%RSD	.6185	1.285
#1	.5639	.0508
#2	.5678	.0496
#3	.5709	.0498

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**117310.**	**8456.8**	**4427.1**	**8915.3**
Stddev	138.	67.1	5.7	2.9
%RSD	.11754	.79388	.12779	.03210
#1	117150.	8379.4	4429.3	8916.3
#2	117390.	8491.7	4420.7	8912.1
#3	117400.	8499.3	4431.4	8917.6

Zoom In Zoom Out

Sample Name: JC86380-14 Acquired: 4/22/2019 16:25:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0388**	**.0029**	**.0021**	**.0260**	**.0005**	**.1638**	**.1623**	**.0673**
Stddev	.0004	.0001	.0002	.0004	.0010	.0007	.0008	.0007
%RSD	1.105	3.384	11.56	1.365	217.0	.3989	.4899	1.014
#1	.0387	.0030	.0022	.0265	.0014	.1639	.1630	.0667
#2	.0393	.0029	.0023	.0258	-.0006	.1643	.1624	.0680
#3	.0384	.0028	.0018	.0258	.0005	.1631	.1614	.0671

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0099**	**.1298**	**.0413**	**.0053**	**-.0001**	**.0110**	**-.0021**
Stddev	.0003	.0002	.0007	.0022	.0012	.0006	.0019	.0016
%RSD	181.4	1.510	.5550	5.301	22.57	701.1	17.13	74.39
#1	.0004	.0098	.1297	.0408	.0049	-.0006	.0131	-.0004
#2	-.0002	.0099	.1305	.0394	.0067	-.0002	.0104	-.0025
#3	.0003	.0101	.1291	.0437	.0044	.0005	.0095	-.0034

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.140**	**15.70**	**1.687**	**5.165**	**12.37**	**17.61**	**.1556**	**.0038**
Stddev	.007	.02	.019	.051	.01	.04	.0011	.0007
%RSD	.2262	.1498	1.136	.9819	.0814	.2314	.7190	19.13
#1	3.145	15.73	1.702	5.124	12.37	17.65	.1567	.0047
#2	3.143	15.70	1.665	5.221	12.39	17.62	.1557	.0034
#3	3.132	15.68	1.693	5.149	12.37	17.57	.1545	.0035

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.46**	**-.0028**	**1.524**	**-.0004**	**.0266**	W **-.0021**	**32.70**	**-.0021**
Stddev	.07	.0010	.004	.0007	.0004	.0002	.10	.0040
%RSD	.2472	35.91	.2766	160.4	1.578	10.77	.2983	191.8
#1	28.54	-.0038	1.529	.0002	.0262	-.0019	32.80	-.0039
#2	28.42	-.0018	1.523	-.0011	.0267	-.0023	32.61	.0025
#3	28.43	-.0029	1.520	-.0003	.0270	-.0021	32.67	-.0048

Zoom In Zoom Out

Sample Name: JC86380-14 Acquired: 4/22/2019 16:25:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1341**	**.0153**
Stddev	.0017	.0029
%RSD	1.268	19.09
#1	.1354	.0147
#2	.1322	.0185
#3	.1346	.0127

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115810.**	**8036.9**	**4293.7**	**9414.1**
Stddev	566.	46.7	8.4	20.3
%RSD	.48874	.58049	.19549	.21519
#1	115440.	8033.9	4284.2	9392.3
#2	115520.	7991.8	4296.9	9417.7
#3	116460.	8085.0	4300.1	9432.3

Zoom In Zoom Out

Sample Name: JC86380-19 Acquired: 4/22/2019 16:30:34 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0741**	**.0107**	**.0012**	**.0494**	**.0099**	**.0327**	**.3340**	**.1792**	**.0005**
Stddev	.0007	.0002	.0004	.0008	.0004	.0005	.0003	.0033	.0010
%RSD	.9912	1.973	31.56	1.650	3.696	1.451	.0938	1.832	209.6
#1	.0743	.0105	.0014	.0493	.0100	.0330	.3342	.1765	.0000
#2	.0734	.0107	.0015	.0487	.0096	.0330	.3341	.1782	-.0002
#3	.0748	.0109	.0008	.0503	.0103	.0322	.3336	.1828	.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0295**	**.3048**	**.0737**	**-.0001**	**.0141**	**.0129**	**-.0001**	**52.68**	**69.76**
Stddev	.0004	.0057	.0009	.0017	.0016	.0011	.0031	.51	.71
%RSD	1.365	1.861	1.167	2941.	11.18	8.716	2999.	.9688	1.017
#1	.0291	.3018	.0733	-.0019	.0143	.0136	.0034	53.01	70.27
#2	.0299	.3012	.0731	.0005	.0156	.0136	-.0025	52.10	68.95
#3	.0295	.3113	.0747	.0013	.0125	.0116	-.0012	52.95	70.07

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.131**	**35.75**	**13.11**	**52.75**	**.2121**	**.0352**	**34.59**	**-.0041**	**2.055**
Stddev	.066	.42	.15	.45	.0054	.0006	.60	.0010	.018
%RSD	1.287	1.181	1.128	.8609	2.551	1.748	1.725	24.19	.8541
#1	5.156	35.74	13.15	53.10	.2098	.0349	34.26	-.0036	2.063
#2	5.056	35.34	12.94	52.23	.2082	.0347	34.22	-.0036	2.035
#3	5.181	36.18	13.23	52.90	.2183	.0359	35.27	-.0053	2.067

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4524**	**.0388**	**.0096**	**115.1**	**-.0046**	**.2107**	**.3007**
Stddev	.0012	.0018	.0002	1.9	.0001	.0035	.0019
%RSD	.2676	4.675	1.772	1.655	2.896	1.682	.6350
#1	.4538	.0382	.0094	114.1	-.0045	.2083	.2997
#2	.4517	.0408	.0097	113.9	-.0047	.2090	.2996
#3	.4517	.0374	.0098	117.3	-.0047	.2148	.3029

Zoom In Zoom Out

Sample Name: JC86380-19 Acquired: 4/22/2019 16:30:34 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116690.**	**8259.7**	**4341.8**	**8871.8**
Stddev	64.	64.0	67.8	129.8
%RSD	.05446	.77500	1.5604	1.4628
#1	116740.	8195.8	4376.5	8938.4
#2	116620.	8323.9	4385.1	8954.8
#3	116720.	8259.5	4263.7	8722.3

Zoom In Zoom Out

Sample Name: MP14374-MB1CONF Acquired: 4/22/2019 16:35:56 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**.0002**	**.0001**	**.0008**	**.0007**	**.0006**	**.0002**	**-.0001**
Stddev	.0002	.0000	.0002	.0001	.0003	.0004	.0000	.0001	.0004
%RSD	49.18	38.93	125.0	90.91	32.51	49.37	3.833	33.69	256.8
#1	.0004	.0001	-.0000	.0000	.0009	.0010	.0006	.0003	.0002
#2	.0002	.0001	.0003	.0002	.0005	.0009	.0005	.0001	-.0002
#3	.0006	.0001	.0002	.0001	.0010	.0003	.0006	.0002	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0117**	**.0003**	**-.0002**	**.0002**	**.0009**	**.0003**	**.0100**	**.0850**
Stddev	.0002	.0001	.0005	.0005	.0003	.0012	.0003	.0037	.0016
%RSD	954.7	1.267	170.7	348.6	162.5	121.8	99.87	37.56	1.900
#1	.0000	.0115	.0003	-.0003	-.0001	.0016	.0003	.0088	.0834
#2	.0002	.0116	.0008	-.0006	.0005	-.0004	.0006	.0070	.0866
#3	-.0002	.0118	-.0002	.0005	.0002	.0016	.0000	.0142	.0851

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0239**	**.0034**	**.1390**	**.3204**	**.0017**	**.0006**	**.0337**	**.0277**	**.0004**
Stddev	.0054	.0324	.0360	.0057	.0001	.0000	.0027	.0007	.0000
%RSD	22.50	943.4	25.87	1.786	6.547	3.891	7.948	2.438	11.29
#1	.0188	.0163	.1092	.3233	.0016	.0006	.0358	.0271	.0004
#2	.0233	.0274	.1789	.3138	.0018	.0006	.0346	.0277	.0003
#3	.0295	-.0334	.1289	.3242	.0018	.0006	.0307	.0284	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0018**	**.0006**	**.0189**	**-.0000**	**.0013**	**.0308**
Stddev	.0002	.0009	.0002	.0032	.0010	.0013	.0012
%RSD	26.50	50.94	27.09	17.13	3168.	103.4	3.852
#1	.0009	.0014	.0007	.0226	-.0010	.0016	.0304
#2	.0009	.0011	.0004	.0177	.0000	.0025	.0321
#3	.0006	.0028	.0007	.0165	.0009	-.0002	.0298

Zoom In Zoom Out

Sample Name: MP14374-MB1CONF Acquired: 4/22/2019 16:35:56 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115420.**	**7927.6**	**4287.1**	**9678.3**
Stddev	352.	42.2	2.9	8.4
%RSD	.30533	.53241	.06735	.08656
#1	115040.	7976.0	4289.3	9672.1
#2	115740.	7908.8	4283.8	9675.0
#3	115480.	7898.1	4288.1	9687.8

Zoom In Zoom Out

Sample Name: MP14374-B1CONF Acquired: 4/22/2019 16:41:26 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.970**	**1.986**	**1.956**	**1.930**	**1.988**	**1.938**	**2.005**	**1.940**
Stddev	.004	.007	.008	.004	.007	.002	.006	.007
%RSD	.1828	.3355	.4248	.2267	.3525	.1010	.3034	.3745
#1	1.973	1.993	1.963	1.935	1.997	1.940	2.010	1.948
#2	1.966	1.981	1.947	1.926	1.984	1.936	2.007	1.933
#3	1.971	1.983	1.959	1.930	1.984	1.938	1.998	1.939

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2594**	**1.963**	**1.997**	**1.980**	**2.041**	**1.975**	**1.935**	**2.010**
Stddev	.0001	.005	.005	.008	.006	.007	.009	.007
%RSD	.0452	.2532	.2746	.4218	.3165	.3382	.4448	.3670
#1	.2594	1.965	2.002	1.989	2.046	1.982	1.943	2.017
#2	.2595	1.966	1.991	1.972	2.033	1.969	1.926	2.002
#3	.2592	1.957	1.999	1.981	2.042	1.974	1.936	2.012

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.56**	**25.12**	**25.36**	**24.70**	**25.09**	**24.85**	**1.931**	**2.017**
Stddev	.05	.04	.10	.05	.15	.07	.006	.009
%RSD	.1844	.1691	.4121	.2116	.5810	.2843	.3338	.4225
#1	24.59	25.17	25.48	24.76	25.26	24.93	1.936	2.023
#2	24.58	25.11	25.32	24.67	24.98	24.82	1.924	2.007
#3	24.51	25.09	25.28	24.68	25.04	24.80	1.933	2.020

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0844**	**2.096**	**1.961**	**2.015**	**1.452**	**2.062**	F **-.0657**	**.0029**
Stddev	.0011	.005	.004	.004	.006	.004	.0028	.0018
%RSD	1.307	.2403	.2140	.2211	.4030	.1886	4.190	61.58
#1	.0832	2.100	1.964	2.020	1.452	2.066	-.0642	.0040
#2	.0845	2.090	1.956	2.015	1.446	2.061	-.0640	.0008
#3	.0854	2.097	1.963	2.011	1.458	2.058	-.0689	.0038

Zoom In Zoom Out

Sample Name: MP14374-B1CONF Acquired: 4/22/2019 16:41:26 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0009**	**1.986**
Stddev	.0019	.008
%RSD	213.3	.4180
#1	.0028	1.994
#2	-.0010	1.978
#3	.0009	1.988

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111320.**	**7936.1**	**4181.6**	**8887.2**
Stddev	383.	72.2	8.6	15.7
%RSD	.34384	.91030	.20614	.17688
#1	110950.	7853.0	4180.0	8880.3
#2	111290.	7970.7	4190.9	8905.2
#3	111710.	7984.5	4173.8	8876.1

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/22/2019 16:46:28 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0007**	**.0004**	**-.0006**	**.0003**	**.0004**	**.0021**	**.0004**	**-.0019**
Stddev	.0002	.0001	.0003	.0004	.0001	.0003	.0003	.0004	.0009
%RSD	68.90	13.32	80.61	70.24	37.36	68.27	16.65	99.70	47.25
#1	.0003	.0008	.0005	-.0009	.0004	.0004	.0017	.0001	-.0028
#2	.0000	.0007	.0000	-.0001	.0002	.0002	.0021	.0009	-.0017
#3	.0003	.0007	.0005	-.0008	.0004	.0008	.0024	.0003	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**-.0011**	**-.0000**	**-.0012**	**.0012**	**.0038**	**-.0024**	**507.3**	**380.9**
Stddev	.0003	.0001	.0021	.0019	.0008	.0017	.0008	4.1	3.4
%RSD	16.70	8.394	38780.	159.9	66.59	45.47	34.73	.8079	.8914
#1	.0015	-.0011	-.0006	-.0033	.0018	.0058	-.0015	502.6	377.2
#2	.0020	-.0011	-.0018	.0005	.0003	.0028	-.0027	509.3	381.6
#3	.0020	-.0012	.0023	-.0008	.0016	.0028	-.0030	510.0	383.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**185.8**	**494.8**	**-.2911**	**.3833**	**-.0021**	**-.0011**	**-.0054**	**-.0014**	**-.0027**
Stddev	1.9	5.1	.0163	.0175	.0012	.0001	.0007	.0002	.0000
%RSD	.9998	1.040	5.604	4.570	55.04	12.21	12.79	13.00	.9984
#1	183.8	489.7	-.3065	.3640	-.0019	-.0012	-.0051	-.0013	-.0027
#2	186.2	494.8	-.2928	.3877	-.0011	-.0010	-.0049	-.0016	-.0027
#3	187.4	500.0	-.2740	.3982	-.0034	-.0011	-.0062	-.0013	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/22/2019 16:46:28 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0141**	**-.0012**	**-.0248**	**.0080**	**-.0095**	**.0036**
Stddev	.0001	.0026	.0001	.0026	.0021	.0002	.0014
%RSD	2069.	18.45	10.79	10.68	25.69	2.088	38.46
#1	.0000	.0167	-.0013	-.0230	.0072	-.0093	.0049
#2	.0001	.0142	-.0013	-.0235	.0065	-.0096	.0039
#3	-.0001	.0115	-.0011	-.0278	.0104	-.0096	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102290.**	**7643.3**	**3822.2**	**7556.5**
Stddev	218.	94.8	9.1	11.4
%RSD	.21266	1.2400	.23692	.15094
#1	102320.	7727.1	3812.6	7544.0
#2	102060.	7662.3	3830.6	7566.3
#3	102490.	7540.4	3823.4	7559.4

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/22/2019 16:51:49 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5046**	**.4917**	**1.016**	**.4908**	**.4884**	**.5092**	**.5030**	**.9784**	**1.117**
Stddev	.0048	.0044	.006	.0022	.0020	.0016	.0007	.0034	.003
%RSD	.9460	.8923	.5669	.4513	.4138	.3114	.1434	.3465	.2743
#1	.4996	.4885	1.021	.4919	.4890	.5095	.5021	.9803	1.115
#2	.5051	.4898	1.009	.4882	.4861	.5106	.5034	.9745	1.120
#3	.5091	.4967	1.017	.4922	.4900	.5075	.5034	.9805	1.116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4973**	**.9484**	**1.069**	**.9645**	**.9736**	**1.041**	**1.079**	**504.3**	**380.3**
Stddev	.0013	.0042	.007	.0019	.0048	.010	.010	4.2	3.2
%RSD	.2526	.4409	.6163	.1958	.4909	.9602	.9672	.8313	.8290
#1	.4987	.9502	1.074	.9660	.9747	1.049	1.089	500.0	377.4
#2	.4962	.9436	1.062	.9651	.9684	1.030	1.069	504.5	379.8
#3	.4970	.9513	1.072	.9624	.9777	1.043	1.078	508.3	383.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**192.3**	**502.1**	**-.3330**	**.3586**	**.4772**	**.4863**	**.5229**	**.4730**	**.5002**
Stddev	1.8	5.1	.0161	.0081	.0016	.0026	.0049	.0027	.0045
%RSD	.9118	1.023	4.848	2.262	.3293	.5377	.9428	.5617	.8995
#1	190.7	498.0	-.3366	.3519	.4776	.4882	.5281	.4742	.4954
#2	191.9	500.5	-.3471	.3564	.4754	.4833	.5183	.4700	.5008
#3	194.2	507.9	-.3154	.3676	.4785	.4875	.5221	.4749	.5043
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/22/2019 16:51:49 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5033**	**.4879**	**.4906**	**.4813**	**.5188**	**.5321**	**.5214**
Stddev	.0008	.0024	.0006	.0017	.0038	.0050	.0023
%RSD	.1620	.5012	.1242	.3564	.7319	.9306	.4460
#1	.5024	.4890	.4899	.4819	.5232	.5264	.5239
#2	.5036	.4851	.4911	.4794	.5166	.5341	.5211
#3	.5039	.4897	.4907	.4827	.5166	.5356	.5193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**101380.**	**7646.4**	**3795.5**	**7526.4**
Stddev	22.	76.1	20.7	29.4
%RSD	.02138	.99521	.54531	.39089
#1	101400.	7687.6	3775.1	7497.6
#2	101360.	7693.1	3816.5	7556.4
#3	101390.	7558.6	3794.7	7525.3

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 16:56:52 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.110**	**2.123**	**2.049**	**2.055**	**2.059**	**2.021**	**2.091**	**2.064**	**.2549**
Stddev	.075	.074	.001	.001	.007	.003	.002	.001	.0008
%RSD	3.551	3.468	.0579	.0700	.3652	.1527	.1120	.0648	.3079
#1	2.196	2.208	2.049	2.057	2.064	2.022	2.093	2.065	.2558
#2	2.064	2.079	2.051	2.056	2.062	2.018	2.091	2.064	.2544
#3	2.069	2.081	2.048	2.054	2.050	2.024	2.088	2.063	.2545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.066**	**2.080**	**2.053**	**2.121**	**2.077**	**2.051**	**2.075**	**41.02**	**41.73**
Stddev	.001	.003	.004	.004	.003	.003	.004	1.53	1.45
%RSD	.0610	.1315	.1886	.1948	.1550	.1364	.1870	3.738	3.479
#1	2.066	2.082	2.057	2.119	2.078	2.052	2.079	42.79	43.41
#2	2.068	2.081	2.054	2.118	2.080	2.052	2.075	40.05	40.84
#3	2.065	2.077	2.049	2.125	2.073	2.047	2.071	40.23	40.95
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**42.40**	**41.80**	**42.25**	**41.28**	**2.092**	**2.088**	**5.378**	**2.107**	**2.109**
Stddev	1.50	1.26	1.39	1.38	.001	.000	.007	.005	.075
%RSD	3.533	3.021	3.292	3.334	.0570	.0095	.1314	.2299	3.556
#1	44.13	43.26	43.86	42.86	2.093	2.088	5.382	2.112	2.196
#2	41.48	41.05	41.42	40.44	2.093	2.088	5.383	2.107	2.064
#3	41.59	41.10	41.47	40.52	2.091	2.088	5.370	2.103	2.067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 16:56:52 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.058**	**2.058**	**2.064**	**2.045**	**2.086**	**2.098**	**2.078**
Stddev	.002	.004	.001	.002	.004	.072	.004
%RSD	.1158	.1798	.0354	.1056	.2154	3.448	.2141
#1	2.061	2.060	2.065	2.047	2.090	2.181	2.080
#2	2.058	2.061	2.063	2.043	2.087	2.054	2.080
#3	2.056	2.054	2.064	2.045	2.081	2.058	2.072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109800.**	**7660.1**	**4104.1**	**8555.7**
Stddev	347.	212.2	4.9	7.6
%RSD	.31599	2.7699	.11951	.08879
#1	109520.	7416.1	4105.2	8555.6
#2	109690.	7800.9	4098.8	8548.1
#3	110190.	7763.3	4108.4	8563.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 17:01:54 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**.0002**	**.0001**	**-.0004**	**.0003**	**.0003**	**.0003**	**-.0006**
Stddev	.0002	.0000	.0001	.0001	.0004	.0002	.0001	.0002	.0003
%RSD	104.5	22.76	33.49	82.27	96.28	58.31	33.17	95.15	40.48
#1	.0004	.0001	.0001	.0002	-.0007	.0004	.0003	.0005	-.0009
#2	-.0000	.0001	.0002	.0003	.0000	.0001	.0002	.0002	-.0005
#3	.0003	.0001	.0003	.0000	-.0006	.0003	.0004	.0000	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0001**	**.0005**	**-.0002**	**.0003**	**.0012**	**-.0001**	**.0050**	**.0038**
Stddev	.0003	.0001	.0003	.0003	.0003	.0004	.0006	.0008	.0034
%RSD	882.3	52.40	58.75	167.9	106.1	30.23	570.0	16.25	90.60
#1	-.0000	.0002	.0006	.0001	.0002	.0008	-.0002	.0048	.0005
#2	-.0002	.0001	.0002	-.0002	-.0000	.0015	-.0007	.0059	.0035
#3	.0003	.0002	.0007	-.0004	.0006	.0014	.0006	.0044	.0073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0044**	**.0532**	**.1580**	**.0019**	**.0006**	**.0051**	**.0006**	**.0001**
Stddev	.0015	.0339	.0181	.0093	.0004	.0002	.0014	.0002	.0001
%RSD	80.52	777.2	34.01	5.876	18.53	26.56	28.26	38.05	39.04
#1	.0034	-.0043	.0663	.1488	.0021	.0004	.0067	.0009	.0002
#2	.0005	-.0244	.0608	.1578	.0021	.0006	.0043	.0004	.0001
#3	.0015	.0417	.0326	.1674	.0015	.0007	.0042	.0006	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 17:01:54 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0018**	**.0003**	**-.0002**	**.0001**	**.0010**	**.0026**
Stddev	.0001	.0007	.0002	.0039	.0005	.0004	.0006
%RSD	13.86	38.43	67.77	2365.	381.9	41.10	24.36
#1	.0005	.0026	.0001	-.0028	.0005	.0007	.0031
#2	.0004	.0012	.0005	-.0021	.0003	.0015	.0019
#3	.0004	.0018	.0003	.0044	-.0004	.0008	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114960.**	**7821.0**	**4267.3**	**9580.9**
Stddev	165.	34.3	4.8	7.7
%RSD	.14379	.43916	.11312	.08015
#1	114890.	7787.4	4264.8	9572.8
#2	115150.	7856.1	4264.3	9581.8
#3	114850.	7819.5	4272.9	9588.1

Zoom In Zoom Out

Sample Name: JC86284-1 7 Acquired: 4/22/2019 17:07:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2277**	**.0004**	**.0017**	**.0032**	**.0295**	**.3013**	**.1110**	**.0161**	**.0003**
Stddev	.0008	.0002	.0004	.0005	.0003	.0019	.0011	.0007	.0009
%RSD	.3416	68.21	20.69	16.48	1.183	.6279	.9684	4.230	289.7
#1	.2280	.0001	.0020	.0037	.0294	.3006	.1113	.0161	.0000
#2	.2282	.0005	.0013	.0032	.0292	.2998	.1098	.0168	.0014
#3	.2268	.0005	.0018	.0026	.0299	.3034	.1118	.0155	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0070**	**21.03**	**.0033**	**-.0037**	**.0257**	**.0114**	**.0284**	**3.573**	**29.96**
Stddev	.0015	.04	.0017	.0015	.0025	.0018	.0021	.021	.06
%RSD	20.67	.1896	53.45	41.06	9.538	15.68	7.261	.5936	.2164
#1	.0062	21.03	.0049	-.0031	.0257	.0102	.0293	3.564	30.02
#2	.0062	21.06	.0035	-.0026	.0281	.0106	.0298	3.558	29.89
#3	.0087	20.98	.0014	-.0055	.0232	.0135	.0260	3.598	29.98

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.561**	**6.127**	**2.384**	**4.598**	**.0591**	**.0066**	**2.843**	**.0482**	**.1118**
Stddev	.047	.120	.070	.042	.0010	.0004	.023	.0006	.0003
%RSD	.7109	1.964	2.919	.9124	1.697	6.249	.8180	1.266	.2946
#1	6.577	6.143	2.336	4.645	.0598	.0070	2.868	.0479	.1117
#2	6.509	5.999	2.351	4.584	.0596	.0065	2.839	.0489	.1116
#3	6.598	6.238	2.464	4.566	.0579	.0062	2.821	.0478	.1122

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2345**	**.0104**	**.0406**	**6.935**	**.0027**	**.0081**	**.8747**
Stddev	.0033	.0021	.0010	.008	.0007	.0033	.0043
%RSD	1.407	20.10	2.376	.1102	25.88	40.81	.4928
#1	.2310	.0096	.0415	6.929	.0035	.0090	.8794
#2	.2349	.0128	.0396	6.943	.0023	.0045	.8739
#3	.2376	.0089	.0406	6.933	.0024	.0109	.8709

Zoom In Zoom Out

Sample Name: JC86284-1 7 Acquired: 4/22/2019 17:07:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114720.**	**7864.9**	**4249.4**	**9456.2**
Stddev	938.	31.8	3.3	1.1
%RSD	.81770	.40388	.07787	.01159
#1	114180.	7866.0	4246.3	9455.3
#2	115810.	7896.1	4248.9	9457.4
#3	114180.	7832.6	4252.9	9455.9

Zoom In Zoom Out

Sample Name: MP14374-SD1 Acquired: 4/22/2019 17:12:45 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 15.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2325**	**-.0006**	**.0018**	**.0039**	**.0279**	**.2980**	**.1150**	**.0166**	**-.0101**
Stddev	.0047	.0015	.0011	.0007	.0065	.0014	.0008	.0027	.0027
%RSD	2.038	247.1	65.00	19.34	23.17	.4577	.6646	16.03	26.48
#1	.2379	-.0018	.0023	.0032	.0232	.2993	.1145	.0136	-.0090
#2	.2295	-.0011	.0004	.0047	.0352	.2966	.1147	.0176	-.0082
#3	.2300	.0011	.0025	.0038	.0252	.2982	.1159	.0186	-.0132

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064**	**21.62**	**-.0087**	**-.0009**	**.0247**	**.0143**	**.0155**	**3.628**	**30.95**
Stddev	.0034	.06	.0275	.0044	.0047	.0059	.0133	.087	.19
%RSD	53.55	.2853	316.5	476.8	18.84	41.30	85.46	2.401	.6054
#1	.0078	21.55	.0107	-.0060	.0301	.0207	.0282	3.614	30.96
#2	.0025	21.62	-.0401	.0014	.0220	.0090	.0166	3.721	31.13
#3	.0089	21.68	.0033	.0018	.0221	.0133	.0018	3.549	30.76

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.649**	**6.143**	**3.404**	**6.227**	**.0696**	**.0075**	**2.951**	**.0593**	**.1137**
Stddev	.056	.307	.501	.207	.0098	.0025	.040	.0084	.0008
%RSD	.8377	4.994	14.71	3.327	14.04	33.54	1.358	14.21	.6794
#1	6.590	5.836	2.983	6.081	.0778	.0093	2.994	.0634	.1129
#2	6.655	6.450	3.958	6.136	.0721	.0046	2.944	.0648	.1139
#3	6.701	6.143	3.272	6.464	.0588	.0085	2.915	.0496	.1144

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2395**	**.0230**	**.0383**	**7.079**	**.0051**	**.0097**	**.9203**
Stddev	.0045	.0233	.0024	.079	.0111	.0197	.0174
%RSD	1.890	101.4	6.213	1.111	218.4	202.6	1.896
#1	.2429	.0490	.0356	7.026	-.0063	.0087	.9043
#2	.2344	.0156	.0393	7.170	.0057	-.0094	.9178
#3	.2413	.0043	.0401	7.042	.0158	.0300	.9389

Zoom In Zoom Out

Sample Name: MP14374-SD1 Acquired: 4/22/2019 17:12:45 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 15.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115190.**	**7856.6**	**4262.9**	**9508.0**
Stddev	103.	29.2	14.8	22.9
%RSD	.08981	.37178	.34740	.24047
#1	115170.	7851.4	4276.7	9530.6
#2	115090.	7830.3	4264.6	9508.6
#3	115300.	7888.0	4247.3	9484.9

Zoom In Zoom Out

Sample Name: JC86284-4 Acquired: 4/22/2019 17:18:11 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.303**	**.0003**	**.0290**	**.0115**	**.0803**	**1.020**	**.5644**	**.0870**	**.0037**
Stddev	.004	.0009	.0015	.0007	.0022	.006	.0009	.0035	.0032
%RSD	.2731	305.9	5.218	6.430	2.799	.5998	.1604	3.992	87.09
#1	1.300	-.0001	.0280	.0122	.0782	1.020	.5642	.0900	.0048
#2	1.307	.0012	.0307	.0116	.0827	1.014	.5636	.0877	.0062
#3	1.303	-.0003	.0282	.0107	.0799	1.027	.5653	.0832	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0373**	**56.36**	**.0261**	**-.0056**	**1.011**	**.0267**	**.0888**	**17.55**	**143.0**
Stddev	.0028	.08	.0064	.0025	.014	.0125	.0069	.15	.7
%RSD	7.420	.1367	24.68	44.57	1.370	47.01	7.810	.8467	.4558
#1	.0401	56.44	.0208	-.0034	1.002	.0123	.0912	17.70	143.7
#2	.0372	56.35	.0332	-.0083	1.005	.0355	.0943	17.54	143.0
#3	.0346	56.28	.0242	-.0050	1.027	.0321	.0810	17.40	142.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.80**	**29.08**	**7.850**	**15.53**	**.0901**	**.0262**	**4.392**	**.1430**	**.6200**
Stddev	.09	.37	.172	.12	.0037	.0015	.023	.0041	.0029
%RSD	.3165	1.263	2.198	.7654	4.068	5.548	.5200	2.862	.4605
#1	27.90	29.23	7.656	15.64	.0940	.0245	4.374	.1410	.6233
#2	27.77	29.36	7.904	15.55	.0895	.0272	4.385	.1477	.6178
#3	27.74	28.67	7.988	15.40	.0867	.0268	4.417	.1403	.6190

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9892**	**.0220**	**.1707**	**25.88**	**.0069**	**.0396**	**1.736**
Stddev	.0058	.0024	.0016	.04	.0100	.0098	.008
%RSD	.5881	10.88	.9595	.1640	145.9	24.71	.4357
#1	.9826	.0222	.1688	25.84	-.0030	.0417	1.728
#2	.9911	.0243	.1717	25.88	.0171	.0289	1.743
#3	.9938	.0195	.1716	25.92	.0065	.0482	1.738

Zoom In Zoom Out

Sample Name: JC86284-4 Acquired: 4/22/2019 17:18:11 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114660.**	**7804.1**	**4250.1**	**9357.8**
Stddev	223.	18.4	1.9	8.4
%RSD	.19416	.23592	.04415	.09017
#1	114510.	7803.9	4250.9	9354.4
#2	114920.	7785.8	4251.3	9351.5
#3	114560.	7822.7	4247.9	9367.4

Zoom In Zoom Out

Sample Name: JC86284-5 Acquired: 4/22/2019 17:23:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8819**	**.0012**	**.0219**	**.0233**	**3.017**	**.5587**	**.6625**	**1.298**	**.0044**
Stddev	.0007	.0005	.0005	.0003	.003	.0025	.0010	.002	.0006
%RSD	.0835	39.72	2.110	1.205	.1099	.4543	.1543	.1580	14.14
#1	.8823	.0017	.0217	.0235	3.017	.5566	.6616	1.299	.0046
#2	.8823	.0008	.0215	.0233	3.013	.5615	.6636	1.298	.0037
#3	.8810	.0011	.0224	.0230	3.020	.5580	.6624	1.295	.0049

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0380**	**23.70**	**.0148**	**-.0047**	**1.015**	**.0121**	**.1653**	**18.72**	**163.6**
Stddev	.0016	.09	.0068	.0050	.001	.0037	.0031	.15	.3
%RSD	4.126	.3738	46.35	106.0	.0922	30.29	1.846	.8124	.1873
#1	.0382	23.66	.0163	-.0104	1.016	.0104	.1618	18.67	164.0
#2	.0363	23.80	.0207	-.0011	1.014	.0096	.1672	18.60	163.4
#3	.0394	23.64	.0073	-.0026	1.014	.0163	.1669	18.89	163.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.87**	**33.64**	**7.674**	**13.43**	**.0815**	**.0404**	**6.394**	**.2344**	**.7540**
Stddev	.04	.45	.095	.03	.0026	.0002	.043	.0038	.0013
%RSD	.1272	1.340	1.241	.2087	3.138	.4733	.6804	1.613	.1686
#1	33.92	33.56	7.784	13.42	.0830	.0405	6.363	.2386	.7540
#2	33.83	34.12	7.625	13.41	.0829	.0402	6.443	.2314	.7527
#3	33.86	33.23	7.613	13.46	.0785	.0405	6.375	.2332	.7553

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.565**	**.0443**	**.6408**	**41.71**	**.0010**	**.0304**	**2.672**
Stddev	.015	.0002	.0011	.09	.0036	.0027	.007
%RSD	.9369	.4922	.1657	.2257	361.9	8.849	.2645
#1	1.581	.0445	.6397	41.82	.0036	.0293	2.678
#2	1.552	.0444	.6419	41.65	.0025	.0335	2.675
#3	1.562	.0441	.6408	41.67	-.0031	.0284	2.664

Zoom In Zoom Out

Sample Name: JC86284-5 Acquired: 4/22/2019 17:23:32 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112970.**	**7848.3**	**4211.7**	**9183.8**
Stddev	269.	40.3	6.8	17.2
%RSD	.23808	.51295	.16095	.18749
#1	113240.	7843.5	4216.8	9194.1
#2	112970.	7810.6	4204.0	9163.9
#3	112700.	7890.7	4214.2	9193.3

Zoom In Zoom Out

Sample Name: JC86284-6 Acquired: 4/22/2019 17:28:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0315**	**.0000**	**.0003**	**.0003**	**.0810**	**.0060**	**.2125**	**.0022**	**-.0012**
Stddev	.0001	.0000	.0000	.0003	.0001	.0003	.0001	.0001	.0002
%RSD	.4766	186.4	10.54	76.37	.1701	4.503	.0242	2.911	12.90
#1	.0316	.0001	.0003	.0004	.0811	.0063	.2125	.0022	-.0013
#2	.0313	.0000	.0003	.0005	.0811	.0058	.2126	.0022	-.0010
#3	.0314	-.0000	.0003	.0000	.0809	.0059	.2125	.0021	-.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**3.644**	**.0008**	**-.0017**	**.0026**	**.0046**	**.0061**	**.4752**	**6.112**
Stddev	.0002	.009	.0011	.0008	.0006	.0005	.0007	.0111	.022
%RSD	17.87	.2399	138.6	45.36	21.37	10.81	12.04	2.330	.3588
#1	.0009	3.641	-.0002	-.0008	.0033	.0041	.0060	.4855	6.101
#2	.0010	3.654	.0020	-.0020	.0025	.0048	.0068	.4635	6.137
#3	.0012	3.638	.0006	-.0022	.0022	.0050	.0054	.4765	6.098

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4865**	**2.024**	**.8745**	**2.649**	**.0041**	**.0009**	**1.176**	**.0302**	**.0287**
Stddev	.0057	.027	.0146	.007	.0002	.0001	.001	.0004	.0001
%RSD	1.167	1.320	1.667	.2785	3.866	12.27	.0828	1.458	.4041
#1	.4898	2.045	.8588	2.644	.0040	.0010	1.177	.0298	.0286
#2	.4898	2.033	.8770	2.646	.0043	.0008	1.175	.0302	.0288
#3	.4800	1.994	.8876	2.657	.0040	.0010	1.177	.0307	.0288

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0170**	**.0054**	**.0026**	**2.455**	**-.0006**	**.0014**	**.9941**
Stddev	.0003	.0005	.0000	.009	.0004	.0006	.0036
%RSD	1.738	9.319	1.473	.3471	69.69	41.30	.3662
#1	.0166	.0053	.0025	2.461	-.0009	.0012	.9930
#2	.0171	.0059	.0026	2.459	-.0006	.0021	.9982
#3	.0171	.0049	.0026	2.446	-.0001	.0010	.9912

Zoom In Zoom Out

Sample Name: JC86284-6 Acquired: 4/22/2019 17:28:49 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114760.**	**7913.9**	**4247.4**	**9543.6**
Stddev	78.	65.4	7.4	15.5
%RSD	.06828	.82630	.17502	.16202
#1	114820.	7970.2	4248.7	9543.1
#2	114800.	7842.2	4239.4	9528.4
#3	114670.	7929.5	4254.1	9559.3

Zoom In Zoom Out

Sample Name: JC86284-7 Acquired: 4/22/2019 17:34:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1625**	**.0007**	**.0007**	**.0018**	**.0743**	**.0427**	**.2454**	**.0111**
Stddev	.0002	.0001	.0002	.0003	.0008	.0001	.0001	.0002
%RSD	.1211	14.73	23.73	15.21	1.037	.2521	.0316	1.942
#1	.1626	.0008	.0006	.0020	.0750	.0426	.2454	.0112
#2	.1623	.0007	.0005	.0015	.0735	.0427	.2454	.0113
#3	.1626	.0006	.0008	.0020	.0744	.0428	.2453	.0109

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0081**	**.0114**	F **50.77**	**.0032**	F **-.0029**	**.1154**	**.0158**	**.0337**
Stddev	.0001	.0002	.26	.0008	.0013	.0015	.0020	.0014
%RSD	1.712	2.176	.5058	24.60	45.75	1.315	12.51	4.168
#1	-.0082	.0112	50.72	.0037	-.0036	.1169	.0148	.0351
#2	-.0080	.0115	51.05	.0023	-.0039	.1139	.0180	.0323
#3	-.0082	.0117	50.54	.0036	-.0014	.1153	.0145	.0336

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.825**	**52.88**	**5.581**	**12.88**	**2.235**	**2.963**	**.0383**	**.0027**
Stddev	.023	.06	.017	.02	.019	.011	.0003	.0003
%RSD	.3949	.1089	.3073	.1568	.8694	.3667	.6944	10.86
#1	5.848	52.84	5.590	12.87	2.223	2.970	.0381	.0024
#2	5.824	52.94	5.561	12.86	2.224	2.951	.0382	.0027
#3	5.802	52.85	5.591	12.90	2.257	2.968	.0386	.0030

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.508**	**.0342**	**.3178**	**.2364**	**.1315**	**.0048**	**13.98**	**-.0010**
Stddev	.006	.0002	.0003	.0004	.0037	.0001	.05	.0008
%RSD	.4212	.7302	.0968	.1556	2.832	2.471	.3487	77.70
#1	1.503	.0344	.3178	.2359	.1298	.0049	14.00	-.0002
#2	1.507	.0340	.3176	.2366	.1288	.0049	13.93	-.0011
#3	1.515	.0340	.3182	.2365	.1357	.0047	14.02	-.0017

Zoom In Zoom Out

Sample Name: JC86284-7 Acquired: 4/22/2019 17:34:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0079**	**.5166**
Stddev	.0002	.0009
%RSD	2.755	.1678
#1	.0082	.5165
#2	.0077	.5175
#3	.0079	.5158

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112750.**	**7898.2**	**4161.0**	**9125.4**
Stddev	149.	45.4	5.7	4.4
%RSD	.13172	.57433	.13599	.04785
#1	112600.	7948.2	4164.6	9127.5
#2	112900.	7859.6	4163.9	9120.4
#3	112760.	7886.9	4154.4	9128.4

Zoom In Zoom Out

Sample Name: JC86284-7 Acquired: 4/22/2019 17:39:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1582**	**.0018**	**-.0003**	**.0052**	**.0715**	**.0378**	**.2431**	**.0089**	**-.0128**
Stddev	.0029	.0006	.0015	.0007	.0055	.0032	.0009	.0017	.0031
%RSD	1.822	35.24	511.5	12.69	7.686	8.600	.3794	18.63	23.79
#1	.1588	.0011	.0012	.0045	.0685	.0394	.2430	.0101	-.0155
#2	.1607	.0019	-.0017	.0058	.0778	.0340	.2423	.0097	-.0134
#3	.1551	.0024	-.0004	.0052	.0681	.0399	.2441	.0070	-.0095

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0114**	**58.77**	**.0002**	**-.0102**	**.1136**	**.0209**	**.0336**	**5.720**	**52.36**
Stddev	.0023	.02	.0116	.0086	.0172	.0080	.0182	.152	.07
%RSD	20.53	.0327	6036.	84.01	15.12	38.26	54.30	2.663	.1419
#1	.0140	58.78	-.0127	-.0141	.1323	.0287	.0513	5.750	52.27
#2	.0094	58.75	.0096	-.0004	.1097	.0212	.0347	5.855	52.39
#3	.0109	58.78	.0037	-.0161	.0986	.0128	.0149	5.555	52.41

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.361**	**12.45**	**2.720**	**3.776**	**.0335**	**.0053**	**1.479**	**.0374**	**.3085**
Stddev	.033	.32	.024	.130	.0040	.0022	.021	.0057	.0009
%RSD	.6211	2.599	.8806	3.438	12.09	42.25	1.406	15.34	.3047
#1	5.324	12.64	2.700	3.810	.0321	.0054	1.459	.0361	.3088
#2	5.389	12.64	2.713	3.632	.0381	.0030	1.479	.0437	.3075
#3	5.370	12.08	2.746	3.885	.0303	.0075	1.500	.0324	.3093

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2281**	**.0030**	**.0090**	**13.30**	**.0062**	**.0169**	**.5132**
Stddev	.0037	.0028	.0002	.09	.0224	.0143	.0147
%RSD	1.606	92.45	1.771	.6781	362.2	84.14	2.857
#1	.2321	.0013	.0088	13.39	-.0123	.0156	.5048
#2	.2275	.0015	.0091	13.31	.0310	.0034	.5301
#3	.2248	.0063	.0089	13.21	-.0002	.0318	.5046

Zoom In Zoom Out

Sample Name: JC86284-7 Acquired: 4/22/2019 17:39:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115050.**	**7882.5**	**4265.3**	**9491.2**
Stddev	116.	21.1	5.3	13.6
%RSD	.10118	.26745	.12466	.14297
#1	114970.	7875.8	4262.7	9478.9
#2	114990.	7865.6	4261.8	9489.0
#3	115180.	7906.1	4271.4	9505.8

Zoom In Zoom Out

Sample Name: JC86284-8 Acquired: 4/22/2019 17:45:02 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0323**	**.0002**	**.0002**	**.0007**	**.0098**	**.0707**	**.0279**	**.0198**
Stddev	.0001	.0001	.0003	.0004	.0005	.0002	.0001	.0004
%RSD	.3811	39.00	179.6	52.74	4.598	.3254	.3880	2.085
#1	.0324	.0002	.0001	.0004	.0093	.0705	.0279	.0194
#2	.0325	.0002	-.0001	.0006	.0100	.0709	.0280	.0202
#3	.0322	.0001	.0005	.0011	.0101	.0708	.0278	.0197

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0333**	**.0009**	F **13.99**	**-.0000**	F **-.0029**	**.0155**	**.0089**	**.0035**
Stddev	.0007	.0003	.00	.0002	.0003	.0016	.0007	.0003
%RSD	2.236	28.47	.0232	11300.	10.41	10.42	7.575	9.174
#1	.0334	.0008	13.99	.0002	-.0027	.0171	.0090	.0039
#2	.0325	.0012	13.99	-.0001	-.0027	.0156	.0081	.0033
#3	.0340	.0007	13.99	-.0001	-.0032	.0138	.0095	.0033

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5315**	**7.316**	**1.783**	**1.108**	**1.092**	**5.527**	**.0084**	**.0011**
Stddev	.0104	.004	.011	.039	.015	.006	.0004	.0001
%RSD	1.952	.0605	.5884	3.525	1.324	.1014	4.231	9.641
#1	.5427	7.315	1.786	1.149	1.093	5.529	.0082	.0011
#2	.5297	7.312	1.771	1.105	1.106	5.531	.0088	.0012
#3	.5222	7.321	1.792	1.071	1.077	5.521	.0082	.0010

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.213**	**.0340**	**.0210**	**.0237**	**.0058**	**.0069**	**2.907**	**.0008**
Stddev	.005	.0006	.0001	.0002	.0002	.0002	.007	.0006
%RSD	.4182	1.642	.5485	.9821	3.868	2.831	.2343	73.62
#1	1.213	.0342	.0211	.0238	.0058	.0071	2.900	.0013
#2	1.208	.0334	.0209	.0240	.0056	.0068	2.908	.0009
#3	1.218	.0344	.0211	.0235	.0060	.0067	2.914	.0002

Zoom In Zoom Out

Sample Name: JC86284-8 Acquired: 4/22/2019 17:45:02 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0016**	**.1772**
Stddev	.0010	.0013
%RSD	66.06	.7490
#1	.0007	.1757
#2	.0027	.1782
#3	.0013	.1778

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114900.**	**7936.8**	**4246.0**	**9549.6**
Stddev	309.	66.5	1.5	9.7
%RSD	.26901	.83811	.03437	.10119
#1	114800.	7973.9	4244.4	9553.6
#2	115250.	7976.5	4246.7	9538.6
#3	114660.	7860.0	4247.1	9556.7

Zoom In Zoom Out

Sample Name: JC86284-8 Acquired: 4/22/2019 17:50:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0322**	**.0002**	**.0003**	**.0008**	**.0108**	**.0688**	**.0277**	**.0189**	**.0319**
Stddev	.0002	.0001	.0001	.0004	.0013	.0048	.0016	.0002	.0034
%RSD	.7067	27.66	29.40	46.52	11.73	6.976	5.621	.9564	10.55
#1	.0325	.0001	.0003	.0011	.0108	.0653	.0266	.0190	.0303
#2	.0321	.0002	.0002	.0004	.0121	.0742	.0295	.0187	.0357
#3	.0321	.0003	.0003	.0010	.0096	.0668	.0270	.0188	.0296

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**14.23**	**.0014**	**-.0038**	**.0145**	**.0079**	**.0074**	**.5458**	**7.307**
Stddev	.0004	.01	.0023	.0018	.0011	.0026	.0017	.0237	.072
%RSD	38.25	.0985	164.5	47.60	7.522	33.15	22.68	4.341	.9825
#1	.0013	14.22	-.0007	-.0052	.0142	.0109	.0090	.5551	7.377
#2	.0006	14.25	.0010	-.0045	.0136	.0065	.0077	.5635	7.312
#3	.0009	14.23	.0039	-.0018	.0158	.0062	.0056	.5189	7.233

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.754**	**1.087**	**1.154**	**5.605**	**.0087**	**.0009**	**1.203**	**.0312**	**.0209**
Stddev	.025	.095	.038	.034	.0005	.0002	.000	.0005	.0002
%RSD	1.412	8.749	3.291	.6081	6.145	25.40	.0204	1.463	1.071
#1	1.744	1.131	1.178	5.633	.0082	.0008	1.203	.0309	.0207
#2	1.783	.9782	1.174	5.616	.0093	.0008	1.203	.0317	.0211
#3	1.736	1.153	1.110	5.567	.0087	.0012	1.203	.0309	.0208

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261**	**.0013**	**.0077**	**2.885**	**.0018**	**-.0007**	**.1781**
Stddev	.0037	.0006	.0007	.005	.0027	.0017	.0033
%RSD	14.26	42.58	9.175	.1753	156.3	235.9	1.867
#1	.0302	.0016	.0072	2.879	.0001	-.0004	.1748
#2	.0251	.0007	.0085	2.886	.0003	-.0026	.1815
#3	.0229	.0017	.0073	2.889	.0049	.0008	.1781

Zoom In Zoom Out

Sample Name: JC86284-8 Acquired: 4/22/2019 17:50:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116140.**	**7934.2**	**4259.9**	**9553.0**
Stddev	5091.	72.3	5.4	14.8
%RSD	4.3833	.91120	.12572	.15510
#1	119160.	7882.9	4266.0	9569.9
#2	110260.	7902.8	4256.4	9547.0
#3	118990.	8016.9	4257.1	9542.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 17:55:51 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.024**	**2.042**	**2.009**	**2.025**	**2.037**	**1.985**	**2.055**	**2.023**	**.2499**
Stddev	.002	.003	.003	.002	.003	.003	.003	.003	.0005
%RSD	.0759	.1334	.1246	.1034	.1325	.1654	.1289	.1313	.2072
#1	2.024	2.039	2.012	2.025	2.040	1.988	2.056	2.022	.2497
#2	2.025	2.044	2.009	2.028	2.034	1.982	2.052	2.026	.2495
#3	2.022	2.042	2.007	2.023	2.036	1.984	2.057	2.020	.2505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.026**	**2.048**	**2.021**	**2.080**	**2.047**	**2.009**	**2.046**	**39.48**	**40.30**
Stddev	.002	.003	.004	.001	.003	.004	.001	.06	.09
%RSD	.1140	.1384	.1899	.0577	.1409	.2050	.0497	.1546	.2143
#1	2.027	2.046	2.026	2.080	2.050	2.009	2.046	39.52	40.30
#2	2.023	2.051	2.018	2.082	2.045	2.013	2.047	39.51	40.39
#3	2.027	2.047	2.020	2.079	2.047	2.005	2.045	39.41	40.21
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.73**	**40.26**	**40.82**	**40.03**	**2.055**	**2.058**	**5.295**	**2.083**	**2.019**
Stddev	.06	.16	.04	.02	.004	.003	.007	.001	.002
%RSD	.1571	.4037	.0998	.0595	.1972	.1201	.1257	.0584	.0747
#1	40.67	40.26	40.78	40.02	2.059	2.059	5.299	2.084	2.018
#2	40.80	40.43	40.86	40.06	2.056	2.060	5.298	2.083	2.019
#3	40.72	40.11	40.83	40.02	2.051	2.055	5.287	2.082	2.021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 17:55:51 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.022**	**2.023**	**2.026**	**2.015**	**2.056**	**2.034**	**2.038**
Stddev	.001	.005	.001	.002	.002	.003	.002
%RSD	.0472	.2323	.0629	.0980	.1111	.1293	.1097
#1	2.022	2.027	2.027	2.018	2.058	2.032	2.037
#2	2.021	2.024	2.026	2.014	2.057	2.037	2.041
#3	2.023	2.018	2.025	2.015	2.053	2.033	2.038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110740.**	**7809.2**	**4133.3**	**8615.8**
Stddev	68.	17.8	1.3	5.1
%RSD	.06130	.22767	.03206	.05935
#1	110730.	7809.2	4132.0	8610.0
#2	110810.	7791.4	4133.2	8618.0
#3	110670.	7826.9	4134.6	8619.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 18:00:53 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**.0003**	**.0002**	**.0002**	**-.0001**	**.0002**	**-.0000**	**-.0008**
Stddev	.0003	.0002	.0000	.0001	.0004	.0002	.0001	.0002	.0002
%RSD	141.8	143.0	14.97	53.83	176.4	175.7	24.95	1318.	21.69
#1	.0001	.0000	.0003	.0003	.0005	-.0000	.0003	-.0002	-.0009
#2	.0000	.0000	.0003	.0001	-.0002	.0000	.0003	.0000	-.0010
#3	.0005	.0003	.0003	.0003	.0004	-.0003	.0002	.0001	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0006**	**-.0002**	**.0004**	**-.0005**	**.0010**	**-.0009**	**.0068**	**.0000**
Stddev	.0001	.0001	.0016	.0010	.0006	.0021	.0009	.0097	.0043
%RSD	187.7	12.96	903.6	297.4	128.1	211.1	98.80	142.6	24570.
#1	-.0000	.0006	.0017	.0013	-.0007	.0005	.0001	-.0040	-.0008
#2	-.0000	.0005	-.0009	.0005	-.0010	-.0008	-.0010	.0096	-.0038
#3	.0002	.0007	-.0013	-.0008	.0002	.0033	-.0017	.0148	.0047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0029**	**.0185**	**.0663**	**.0829**	**.0014**	**.0004**	**.0021**	**.0002**	**.0000**
Stddev	.0062	.0099	.0195	.0080	.0006	.0001	.0005	.0002	.0000
%RSD	211.2	53.78	29.36	9.645	44.90	37.17	23.85	91.10	335.3
#1	-.0052	.0292	.0704	.0739	.0013	.0004	.0026	.0003	.0000
#2	.0040	.0167	.0834	.0893	.0021	.0005	.0022	-.0000	-.0000
#3	-.0076	.0095	.0451	.0854	.0008	.0002	.0016	.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 18:00:53 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0008**	**.0002**	**.0012**	**-.0003**	**-.0001**	**.0040**
Stddev	.0003	.0007	.0001	.0000	.0009	.0011	.0012
%RSD	60.12	90.83	77.94	.4589	314.3	923.5	29.39
#1	.0004	.0009	.0002	.0012	-.0011	.0011	.0026
#2	.0008	.0015	.0000	.0012	-.0004	-.0005	.0046
#3	.0002	.0000	.0003	.0012	.0006	-.0010	.0047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115520.**	**7896.8**	**4278.2**	**9605.9**
Stddev	403.	41.7	4.0	4.7
%RSD	.34918	.52798	.09345	.04872
#1	115080.	7940.6	4280.1	9603.7
#2	115590.	7892.3	4280.9	9611.3
#3	115880.	7857.5	4273.6	9602.8

Zoom In Zoom Out

Sample Name: JC86284-9 Acquired: 4/22/2019 18:06:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0300**	**.0003**	**.0005**	**.0007**	**.0113**	**.3026**	**.0371**	**.0128**	**.0225**
Stddev	.0002	.0001	.0002	.0002	.0000	.0002	.0001	.0003	.0001
%RSD	.5713	20.54	32.04	22.67	.3432	.0825	.2441	2.009	.4611
#1	.0300	.0004	.0004	.0009	.0114	.3027	.0372	.0125	.0225
#2	.0298	.0003	.0003	.0005	.0113	.3023	.0370	.0130	.0224
#3	.0301	.0003	.0006	.0007	.0113	.3028	.0370	.0128	.0226

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**F 13.02**	**.0018**	**-.0019**	**.0212**	**.0087**	**.0052**	**.6721**	**12.96**
Stddev	.0001	.02	.0014	.0002	.0007	.0003	.0004	.0087	.05
%RSD	10.01	.1322	74.07	8.479	3.264	3.449	7.489	1.288	.3693
#1	.0013	13.03	.0025	-.0018	.0205	.0085	.0056	.6709	12.92
#2	.0011	13.02	.0027	-.0017	.0214	.0090	.0052	.6812	12.95
#3	.0014	13.00	.0003	-.0020	.0219	.0085	.0048	.6640	13.02

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.716**	**1.403**	**1.163**	**6.017**	**.0096**	**.0014**	**1.281**	**.0322**	**.0357**
Stddev	.015	.037	.024	.015	.0006	.0001	.004	.0004	.0001
%RSD	.8509	2.623	2.066	.2449	6.333	9.967	.2853	1.223	.2918
#1	1.703	1.445	1.143	6.017	.0099	.0013	1.281	.0323	.0357
#2	1.713	1.379	1.156	6.032	.0100	.0015	1.285	.0326	.0356
#3	1.731	1.384	1.190	6.003	.0089	.0015	1.278	.0318	.0358

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0277**	**.0060**	**.0055**	**6.587**	**.0013**	**.0009**	**.5709**
Stddev	.0018	.0011	.0001	.018	.0008	.0026	.0012
%RSD	6.361	18.64	1.721	.2715	62.48	272.7	.2056
#1	.0262	.0064	.0056	6.600	.0016	.0022	.5709
#2	.0297	.0047	.0055	6.593	.0004	-.0020	.5720
#3	.0273	.0069	.0054	6.566	.0019	.0026	.5697

Zoom In Zoom Out

Sample Name: JC86284-9 Acquired: 4/22/2019 18:06:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114940.**	**7977.3**	**4224.2**	**9478.8**
Stddev	303.	30.2	.9	9.2
%RSD	.26367	.37844	.02145	.09740
#1	114600.	8012.1	4223.3	9470.7
#2	115170.	7959.4	4224.2	9476.9
#3	115070.	7960.3	4225.2	9488.9

Zoom In Zoom Out

Sample Name: JC86284-9 Acquired: 4/22/2019 18:11:45 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0302**	**.0002**	**.0004**	**.0006**	**.0104**	**.3022**	**.0372**	**.0123**	**.0221**
Stddev	.0001	.0002	.0001	.0005	.0005	.0013	.0000	.0003	.0006
%RSD	.4151	119.6	37.67	76.42	4.629	.4144	.0760	2.309	2.914
#1	.0303	.0003	.0005	.0012	.0110	.3007	.0372	.0120	.0216
#2	.0301	.0004	.0002	.0002	.0103	.3030	.0372	.0126	.0218
#3	.0303	-.0001	.0003	.0005	.0101	.3028	.0372	.0123	.0228

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**13.23**	**.0009**	**-.0026**	**.0208**	**.0112**	**.0041**	**.6760**	**13.10**
Stddev	.0004	.01	.0007	.0006	.0011	.0025	.0015	.0268	.04
%RSD	30.96	.0498	69.85	24.55	5.227	22.60	37.54	3.964	.3418
#1	.0018	13.22	.0011	-.0033	.0201	.0095	.0044	.6934	13.08
#2	.0011	13.23	.0002	-.0020	.0203	.0100	.0055	.6451	13.15
#3	.0011	13.23	.0015	-.0025	.0221	.0141	.0024	.6894	13.07

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.704**	**1.412**	**1.203**	**6.121**	**.0101**	**.0019**	**1.271**	**.0325**	**.0356**
Stddev	.024	.049	.081	.004	.0013	.0004	.004	.0006	.0001
%RSD	1.435	3.478	6.700	.0716	12.93	23.20	.2916	1.960	.3023
#1	1.689	1.357	1.158	6.126	.0116	.0016	1.271	.0333	.0356
#2	1.690	1.428	1.154	6.119	.0093	.0017	1.267	.0321	.0355
#3	1.732	1.451	1.296	6.118	.0094	.0024	1.274	.0322	.0357

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0263**	**.0063**	**.0054**	**6.510**	**-.0002**	**.0020**	**.5650**
Stddev	.0008	.0013	.0003	.008	.0007	.0026	.0028
%RSD	2.943	20.62	5.826	.1225	467.6	128.6	.4965
#1	.0254	.0056	.0052	6.517	-.0003	.0010	.5628
#2	.0269	.0055	.0058	6.501	-.0008	.0001	.5682
#3	.0265	.0078	.0053	6.511	.0006	.0050	.5641

Zoom In Zoom Out

Sample Name: JC86284-9 Acquired: 4/22/2019 18:11:45 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115290.**	**7939.8**	**4255.2**	**9525.3**
Stddev	113.	29.6	4.5	17.6
%RSD	.09832	.37302	.10624	.18459
#1	115410.	7911.1	4260.4	9545.1
#2	115190.	7937.9	4253.0	9511.5
#3	115290.	7970.2	4252.2	9519.2

Zoom In Zoom Out

Sample Name: JC86284-10 Acquired: 4/22/2019 18:17:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8060**	**.0009**	**.0017**	**.0058**	**.0516**	**.5531**	**.3580**	**.0309**
Stddev	.0020	.0000	.0001	.0002	.0002	.0011	.0004	.0003
%RSD	.2527	2.839	5.194	2.604	.3033	.1957	.1254	.8494
#1	.8079	.0009	.0017	.0057	.0518	.5541	.3579	.0306
#2	.8064	.0009	.0017	.0059	.0516	.5519	.3576	.0311
#3	.8039	.0010	.0016	.0059	.0515	.5532	.3585	.0308

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **-.0046**	**.0243**	F **41.16**	**.0067**	F **-.0028**	**.0477**	**.0200**	**.0614**
Stddev	.0005	.0005	.04	.0008	.0004	.0005	.0022	.0006
%RSD	10.33	1.949	.0876	11.60	15.02	1.076	11.18	1.004
#1	-.0052	.0245	41.19	.0068	-.0024	.0480	.0179	.0613
#2	-.0043	.0247	41.17	.0059	-.0032	.0471	.0224	.0608
#3	-.0045	.0238	41.12	.0074	-.0029	.0480	.0198	.0620

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.50**	**59.84**	**17.87**	**13.99**	**4.344**	**6.773**	**.0465**	**.0154**
Stddev	.02	.02	.02	.04	.045	.012	.0004	.0002
%RSD	.1696	.0282	.1088	.3159	1.032	.1775	.8810	1.365
#1	10.52	59.85	17.88	13.99	4.354	6.785	.0469	.0155
#2	10.48	59.85	17.87	14.03	4.383	6.773	.0461	.0156
#3	10.50	59.82	17.85	13.94	4.295	6.761	.0466	.0152

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.793**	**.0787**	**.2851**	**.6031**	**.0896**	**.0711**	**10.77**	**.0064**
Stddev	.007	.0003	.0005	.0015	.0009	.0006	.02	.0010
%RSD	.4187	.3539	.1773	.2545	1.009	.7766	.1497	14.77
#1	1.799	.0785	.2856	.6044	.0886	.0707	10.77	.0068
#2	1.795	.0785	.2852	.6014	.0899	.0718	10.79	.0054
#3	1.785	.0790	.2846	.6036	.0903	.0709	10.75	.0072

Zoom In Zoom Out

Sample Name: JC86284-10 Acquired: 4/22/2019 18:17:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0159**	**.9427**
Stddev	.0004	.0006
%RSD	2.584	.0675
#1	.0159	.9434
#2	.0154	.9426
#3	.0163	.9421

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112680.**	**7923.2**	**4134.8**	**9016.1**
Stddev	49.	20.1	3.8	7.6
%RSD	.04384	.25419	.09224	.08450
#1	112670.	7944.2	4130.8	9007.4
#2	112730.	7904.0	4138.4	9019.2
#3	112630.	7921.4	4135.2	9021.7

Zoom In Zoom Out

Sample Name: JC86284-10 Acquired: 4/22/2019 18:22:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7877**	**.0002**	**.0023**	**.0066**	**.0489**	**.5282**	**.3545**	**.0285**	**-.0118**
Stddev	.0010	.0006	.0008	.0023	.0033	.0010	.0007	.0004	.0037
%RSD	.1273	300.7	36.94	35.33	6.830	.1944	.2067	1.558	30.94
#1	.7870	.0008	.0025	.0046	.0527	.5293	.3537	.0289	-.0077
#2	.7873	.0001	.0030	.0061	.0464	.5280	.3549	.0280	-.0132
#3	.7889	-.0004	.0014	.0092	.0476	.5273	.3550	.0286	-.0145

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0222**	**46.15**	**.0077**	**-.0008**	**.0463**	**.0411**	**.0614**	**10.14**	**59.50**
Stddev	.0021	.06	.0150	.0028	.0079	.0219	.0192	.05	.02
%RSD	9.499	.1341	193.0	350.8	17.10	53.30	31.32	.4613	.0256
#1	.0205	46.08	-.0070	-.0018	.0500	.0158	.0396	10.13	59.50
#2	.0214	46.18	.0229	-.0030	.0372	.0548	.0761	10.10	59.49
#3	.0245	46.20	.0073	.0024	.0517	.0527	.0685	10.19	59.52

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.39**	**13.78**	**4.590**	**7.338**	**.0461**	**.0150**	**1.722**	**.0779**	**.2781**
Stddev	.04	.24	.250	.037	.0048	.0003	.028	.0016	.0014
%RSD	.2580	1.720	5.437	.4994	10.48	1.715	1.650	2.106	.5108
#1	17.40	13.89	4.329	7.381	.0482	.0149	1.742	.0764	.2766
#2	17.34	13.51	4.826	7.319	.0494	.0149	1.734	.0797	.2784
#3	17.43	13.94	4.615	7.316	.0405	.0153	1.689	.0776	.2793

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5817**	**.0087**	**.0714**	**10.33**	**.0099**	**.0230**	**.9325**
Stddev	.0042	.0046	.0018	.02	.0113	.0119	.0027
%RSD	.7202	52.28	2.511	.1623	114.0	51.63	.2937
#1	.5797	.0112	.0695	10.32	.0182	.0143	.9332
#2	.5865	.0035	.0731	10.31	-.0030	.0182	.9295
#3	.5789	.0116	.0717	10.34	.0146	.0365	.9348

Zoom In Zoom Out

Sample Name: JC86284-10 Acquired: 4/22/2019 18:22:25 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115210.**	**7946.8**	**4268.4**	**9479.5**
Stddev	71.	29.1	1.8	8.1
%RSD	.06123	.36675	.04148	.08519
#1	115200.	7961.0	4266.7	9488.8
#2	115150.	7966.2	4268.4	9474.7
#3	115290.	7913.3	4270.2	9475.0

Zoom In Zoom Out

Sample Name: JC86284-11 Acquired: 4/22/2019 18:27:48 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**-.0000**	**.0002**	**.0003**	**.0015**	**.0012**	**.0038**	**.0008**	**-.0004**
Stddev	.0002	.0000	.0001	.0002	.0003	.0004	.0000	.0001	.0006
%RSD	8.254	5615.	30.47	79.57	18.40	35.33	.4967	13.25	154.6
#1	.0031	.0000	.0002	.0001	.0015	.0015	.0038	.0006	-.0005
#2	.0026	.0000	.0001	.0002	.0017	.0007	.0038	.0008	.0003
#3	.0028	-.0000	.0002	.0005	.0012	.0014	.0038	.0008	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0281**	**.0008**	**-.0015**	**.0003**	**.0041**	**.0005**	**.0586**	**1.769**
Stddev	.0003	.0001	.0004	.0006	.0006	.0005	.0005	.0069	.012
%RSD	144.9	.3284	54.25	40.00	180.4	13.05	95.92	11.77	.6881
#1	.0001	.0281	.0005	-.0021	-.0001	.0037	-.0000	.0512	1.777
#2	-.0001	.0282	.0012	-.0012	.0009	.0039	.0010	.0599	1.776
#3	.0005	.0281	.0005	-.0010	.0001	.0047	.0006	.0648	1.755

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1010**	**.6779**	**.4490**	**3.916**	**.0059**	**.0007**	**.3243**	**.0305**	**.0052**
Stddev	.0013	.0249	.0173	.012	.0002	.0003	.0017	.0011	.0001
%RSD	1.292	3.674	3.860	.2949	3.798	43.32	.5145	3.467	1.079
#1	.0995	.6940	.4649	3.916	.0057	.0008	.3256	.0316	.0051
#2	.1020	.6904	.4516	3.928	.0060	.0011	.3224	.0302	.0052
#3	.1015	.6492	.4305	3.904	.0061	.0004	.3250	.0296	.0051

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**.0004**	**.0005**	**.7912**	**-.0002**	**-.0010**	**.1528**
Stddev	.0002	.0001	.0001	.0039	.0007	.0006	.0005
%RSD	11.47	30.63	15.62	.4913	303.1	67.77	.3348
#1	.0018	.0004	.0005	.7907	-.0011	-.0008	.1531
#2	.0023	.0003	.0005	.7876	.0001	-.0017	.1531
#3	.0021	.0005	.0004	.7953	.0003	-.0004	.1522

Zoom In Zoom Out

Sample Name: JC86284-11 Acquired: 4/22/2019 18:27:48 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115910.**	**8005.2**	**4252.7**	**9656.8**
Stddev	82.	44.2	3.1	18.2
%RSD	.07061	.55187	.07251	.18820
#1	115990.	7996.8	4252.8	9663.6
#2	115930.	7965.9	4249.5	9636.2
#3	115830.	8053.0	4255.6	9670.5

Zoom In Zoom Out

Sample Name: JC86284-12 Acquired: 4/22/2019 18:33:15 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3350**	**.0004**	**.0022**	**.0038**	**.0519**	**.2703**	**.2444**	**.0259**
Stddev	.0009	.0000	.0001	.0001	.0006	.0003	.0003	.0004
%RSD	.2672	8.954	3.221	3.550	1.227	.1078	.1378	1.487
#1	.3347	.0004	.0023	.0037	.0517	.2700	.2448	.0259
#2	.3343	.0003	.0021	.0039	.0514	.2706	.2444	.0255
#3	.3360	.0004	.0023	.0037	.0527	.2704	.2441	.0262

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0165**	**6.634**	**.0073**	F **-.0025**	**.0443**	**.0071**	**.0250**
Stddev	.0003	.0002	.012	.0008	.0013	.0004	.0015	.0006
%RSD	57.05	1.222	.1810	10.72	52.38	.9053	21.04	2.295
#1	-.0002	.0167	6.642	.0082	-.0010	.0440	.0088	.0256
#2	-.0006	.0163	6.620	.0070	-.0034	.0447	.0060	.0248
#3	-.0006	.0165	6.640	.0067	-.0032	.0441	.0065	.0245

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.054**	**50.62**	**12.26**	**10.90**	**3.757**	**6.805**	**.0387**	**.0083**
Stddev	.006	.12	.01	.03	.024	.014	.0002	.0002
%RSD	.0810	.2410	.0847	.3146	.6303	.1996	.5360	2.117
#1	7.053	50.56	12.26	10.88	3.736	6.797	.0385	.0083
#2	7.060	50.55	12.26	10.93	3.752	6.798	.0389	.0084
#3	7.048	50.77	12.28	10.87	3.782	6.821	.0385	.0081

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.281**	**.0544**	**.2062**	**.3967**	**.0062**	**.0286**	**7.300**	**.0013**
Stddev	.016	.0007	.0007	.0012	.0006	.0001	.022	.0010
%RSD	.3742	1.277	.3182	.3075	10.45	.2268	.2994	77.01
#1	4.299	.0550	.2065	.3974	.0061	.0285	7.320	.0005
#2	4.276	.0536	.2054	.3974	.0068	.0286	7.303	.0010
#3	4.269	.0547	.2066	.3953	.0055	.0286	7.277	.0024

Zoom In Zoom Out

Sample Name: JC86284-12 Acquired: 4/22/2019 18:33:15 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0121**	**.8268**
Stddev	.0011	.0047
%RSD	9.165	.5736
#1	.0112	.8317
#2	.0117	.8266
#3	.0133	.8222

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113630.**	**7951.2**	**4181.2**	**9126.5**
Stddev	239.	15.6	13.1	17.7
%RSD	.21027	.19558	.31316	.19355
#1	113530.	7962.6	4167.6	9109.4
#2	113450.	7957.5	4182.4	9125.4
#3	113900.	7933.5	4193.7	9144.7

Zoom In Zoom Out

Sample Name: JC86284-13 Acquired: 4/22/2019 18:38:33 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0129**	**-.0000**	**.0002**	**.0003**	**.0019**	**.0054**	**.0153**	**.0015**	**-.0006**
Stddev	.0001	.0001	.0002	.0001	.0004	.0002	.0001	.0003	.0002
%RSD	.7945	220.5	77.88	33.09	20.39	3.426	.7520	16.45	36.01
#1	.0128	.0000	.0000	.0003	.0015	.0052	.0153	.0013	-.0004
#2	.0130	-.0001	.0002	.0004	.0022	.0055	.0154	.0015	-.0006
#3	.0129	-.0000	.0004	.0002	.0021	.0055	.0152	.0018	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.1029**	**.0011**	**-.0011**	**.0036**	**.0034**	**.0008**	**.2541**	**4.481**
Stddev	.0002	.0008	.0003	.0005	.0002	.0009	.0005	.0053	.009
%RSD	46.60	.8148	24.65	45.39	6.844	26.03	61.38	2.079	.1951
#1	.0004	.1036	.0009	-.0017	.0038	.0027	.0009	.2560	4.473
#2	.0003	.1032	.0014	-.0010	.0036	.0031	.0002	.2581	4.481
#3	.0007	.1020	.0009	-.0007	.0033	.0044	.0011	.2481	4.490

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3802**	**1.403**	**.5725**	**2.949**	**.0038**	**.0006**	**.7073**	**.0408**	**.0145**
Stddev	.0039	.024	.0102	.016	.0004	.0002	.0060	.0003	.0001
%RSD	1.033	1.693	1.774	.5491	10.41	25.98	.8510	.6807	.5863
#1	.3779	1.385	.5808	2.931	.0042	.0007	.7091	.0408	.0144
#2	.3779	1.395	.5611	2.952	.0039	.0007	.7122	.0411	.0146
#3	.3847	1.430	.5755	2.963	.0034	.0004	.7005	.0406	.0144

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0176**	**-.0002**	**.0016**	**2.379**	**.0009**	**-.0002**	**.4047**
Stddev	.0001	.0005	.0000	.026	.0007	.0010	.0035
%RSD	.6233	326.1	2.744	1.093	73.21	444.7	.8742
#1	.0175	-.0006	.0016	2.398	.0013	.0005	.4074
#2	.0176	.0004	.0015	2.391	.0014	.0002	.4060
#3	.0177	-.0003	.0016	2.350	.0001	-.0014	.4007

Zoom In Zoom Out

Sample Name: JC86284-13 Acquired: 4/22/2019 18:38:33 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115620.**	**8020.7**	**4275.2**	**9664.2**
Stddev	239.	8.3	30.8	69.6
%RSD	.20650	.10294	.71993	.72066
#1	115410.	8011.2	4258.5	9622.6
#2	115570.	8025.7	4256.4	9625.5
#3	115880.	8025.3	4310.7	9744.7

Zoom In Zoom Out

Sample Name: JC86284-14 Acquired: 4/22/2019 18:43:57 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2355**	**.0003**	**.0009**	**.0026**	**.0308**	**.1372**	**.1868**	**.0112**
Stddev	.0005	.0001	.0001	.0002	.0007	.0004	.0009	.0004
%RSD	.2186	25.33	11.45	5.873	2.113	.2956	.4879	3.200
#1	.2360	.0004	.0009	.0027	.0311	.1375	.1873	.0114
#2	.2350	.0003	.0009	.0026	.0313	.1374	.1873	.0114
#3	.2355	.0002	.0008	.0024	.0301	.1367	.1857	.0108

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0122**	F **11.26**	**.0052**	F **-.0033**	**.0286**	**.0082**	**.0169**
Stddev	.0003	.0002	.01	.0008	.0012	.0004	.0018	.0004
%RSD	15.23	1.566	.0468	15.73	35.10	1.306	22.10	2.623
#1	-.0022	.0125	11.27	.0054	-.0027	.0286	.0073	.0164
#2	-.0017	.0121	11.26	.0043	-.0025	.0290	.0070	.0173
#3	-.0017	.0122	11.25	.0060	-.0046	.0283	.0103	.0170

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.135**	**58.14**	**7.315**	**11.48**	**2.706**	**4.127**	**.0346**	**.0062**
Stddev	.012	.14	.036	.06	.031	.028	.0005	.0002
%RSD	.2416	.2479	.4885	.4885	1.133	.6743	1.567	2.590
#1	5.138	58.28	7.320	11.52	2.730	4.131	.0345	.0062
#2	5.121	58.00	7.277	11.41	2.672	4.097	.0352	.0064
#3	5.146	58.15	7.348	11.49	2.716	4.153	.0341	.0061

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.547**	**.0381**	**.2689**	**.2880**	**.0079**	**.0191**	**16.76**	**-.0012**
Stddev	.006	.0006	.0007	.0023	.0008	.0001	.04	.0009
%RSD	.1657	1.612	.2724	.7813	9.964	.6172	.2568	80.26
#1	3.554	.0386	.2696	.2896	.0071	.0192	16.81	-.0019
#2	3.543	.0374	.2682	.2889	.0086	.0190	16.73	-.0001
#3	3.544	.0381	.2690	.2854	.0082	.0191	16.74	-.0016

Zoom In Zoom Out

Sample Name: JC86284-14 Acquired: 4/22/2019 18:43:57 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0080**	**.8886**
Stddev	.0014	.0033
%RSD	17.05	.3700
#1	.0068	.8923
#2	.0095	.8863
#3	.0077	.8872

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113310.**	**7890.0**	**4157.9**	**9091.2**
Stddev	562.	73.5	6.8	17.8
%RSD	.49643	.93115	.16363	.19570
#1	113120.	7837.4	4155.1	9093.0
#2	112860.	7974.0	4152.9	9072.6
#3	113940.	7858.7	4165.6	9108.1

Zoom In Zoom Out

Sample Name: JC86284-15 Acquired: 4/22/2019 18:49:16 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1851**	**.0003**	**.0012**	**.0020**	**.0352**	**.1602**	**.1255**	**.0148**
Stddev	.0003	.0001	.0002	.0001	.0003	.0005	.0002	.0001
%RSD	.1643	42.96	18.26	7.238	.8137	.3332	.1683	.6728
#1	.1848	.0002	.0014	.0020	.0354	.1596	.1255	.0148
#2	.1849	.0003	.0012	.0018	.0354	.1607	.1257	.0148
#3	.1854	.0004	.0010	.0021	.0349	.1603	.1252	.0149

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0082**	F **11.11**	**.0158**	F **-.0031**	**.3402**	**.0078**	**.0192**
Stddev	.0004	.0001	.01	.0001	.0001	.0006	.0016	.0004
%RSD	94.09	1.497	.0620	.8244	3.735	.1787	20.16	2.345
#1	-.0000	.0081	11.12	.0157	-.0031	.3407	.0083	.0195
#2	-.0007	.0082	11.10	.0159	-.0031	.3404	.0060	.0193
#3	-.0004	.0083	11.10	.0159	-.0029	.3396	.0091	.0187

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.188**	**26.09**	**6.909**	**6.268**	**2.459**	**5.013**	**.0473**	**.0066**
Stddev	.012	.07	.033	.096	.017	.019	.0006	.0002
%RSD	.3873	.2518	.4742	1.529	.6852	.3741	1.246	3.362
#1	3.185	26.05	6.871	6.161	2.439	5.013	.0479	.0064
#2	3.202	26.17	6.928	6.298	2.468	5.032	.0473	.0069
#3	3.177	26.06	6.927	6.345	2.468	4.994	.0467	.0066

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.523**	**.6986**	**.1135**	**.1810**	**.0060**	**.0193**	**4.636**	**.0009**
Stddev	.009	.0031	.0003	.0013	.0008	.0001	.011	.0005
%RSD	.3621	.4400	.2772	.7209	12.59	.5373	.2336	47.81
#1	2.526	.6954	.1132	.1821	.0057	.0194	4.623	.0006
#2	2.512	.6987	.1135	.1815	.0055	.0192	4.644	.0015
#3	2.529	.7016	.1138	.1796	.0069	.0194	4.639	.0007

Zoom In Zoom Out

Sample Name: JC86284-15 Acquired: 4/22/2019 18:49:16 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0065**	**.5713**
Stddev	.0007	.0017
%RSD	11.15	.2905
#1	.0058	.5694
#2	.0064	.5721
#3	.0073	.5724

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114670.**	**7950.3**	**4215.2**	**9330.2**
Stddev	146.	55.3	3.4	5.7
%RSD	.12708	.69613	.07992	.06113
#1	114560.	8011.5	4211.4	9325.7
#2	114610.	7903.7	4216.9	9336.6
#3	114830.	7935.8	4217.5	9328.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 18:54:35 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.016**	**2.030**	**2.007**	**2.028**	**2.045**	**1.984**	**2.055**	**2.023**	**.2498**
Stddev	.008	.006	.002	.003	.007	.003	.005	.003	.0006
%RSD	.3959	.2952	.1083	.1600	.3304	.1329	.2312	.1691	.2575
#1	2.022	2.036	2.008	2.031	2.052	1.987	2.057	2.026	.2501
#2	2.007	2.024	2.009	2.028	2.045	1.981	2.059	2.025	.2503
#3	2.019	2.030	2.005	2.025	2.038	1.984	2.050	2.019	.2491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.022**	**2.056**	**2.029**	**2.084**	**2.052**	**2.014**	**2.049**	**39.55**	**40.44**
Stddev	.003	.002	.001	.001	.004	.002	.003	.11	.08
%RSD	.1536	.0738	.0636	.0534	.1944	.0837	.1239	.2661	.1858
#1	2.025	2.057	2.028	2.086	2.057	2.015	2.052	39.53	40.49
#2	2.023	2.057	2.031	2.084	2.051	2.014	2.049	39.45	40.35
#3	2.019	2.054	2.028	2.083	2.049	2.012	2.047	39.66	40.48
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.52**	**40.09**	**40.85**	**40.09**	**2.059**	**2.060**	**5.302**	**2.090**	**2.009**
Stddev	.11	.03	.10	.08	.002	.003	.002	.000	.008
%RSD	.2595	.0851	.2396	.1916	.0941	.1564	.0307	.0208	.4092
#1	40.64	40.13	40.96	40.14	2.061	2.062	5.303	2.089	2.017
#2	40.44	40.07	40.78	40.00	2.058	2.061	5.303	2.090	2.001
#3	40.48	40.08	40.80	40.13	2.058	2.056	5.300	2.090	2.009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 18:54:35 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021**	**2.024**	**2.026**	**2.022**	**2.061**	**2.038**	**2.051**
Stddev	.003	.004	.000	.001	.004	.004	.002
%RSD	.1489	.1833	.0099	.0467	.2005	.1699	.1018
#1	2.022	2.023	2.026	2.023	2.064	2.038	2.049
#2	2.024	2.028	2.025	2.022	2.063	2.034	2.053
#3	2.018	2.020	2.025	2.021	2.056	2.041	2.050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110650.**	**7796.6**	**4130.4**	**8608.1**
Stddev	426.	31.5	4.0	8.5
%RSD	.38522	.40368	.09769	.09839
#1	110440.	7760.5	4129.9	8601.8
#2	110380.	7811.1	4126.7	8604.7
#3	111150.	7818.1	4134.7	8617.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 18:59:37 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	F **.0003**	**.0004**	**.0002**	**.0001**	**-.0002**	**.0002**	**.0002**	**-.0010**
Stddev	.0003	.0000	.0002	.0002	.0002	.0003	.0001	.0003	.0004
%RSD	55.86	12.90	46.55	69.87	248.9	113.6	39.81	166.0	35.88
#1	.0006	.0003	.0002	.0003	-.0001	-.0005	.0001	.0004	-.0014
#2	.0002	.0002	.0005	.0003	.0001	-.0003	.0002	-.0001	-.0008
#3	.0006	.0002	.0004	.0000	.0003	.0001	.0003	.0003	-.0008
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002							
Low Limit		-.0002							

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0007**	**.0005**	**.0004**	**.0007**	**.0012**	**-.0004**	**-.0028**	**.0039**
Stddev	.0001	.0001	.0004	.0002	.0009	.0012	.0008	.0117	.0042
%RSD	25.69	16.16	70.76	66.54	131.3	106.6	226.6	418.3	107.1
#1	.0006	.0008	.0009	.0003	.0011	.0004	.0001	.0107	.0018
#2	.0004	.0007	.0001	.0002	.0014	.0005	.0002	-.0089	.0087
#3	.0003	.0006	.0006	.0006	-.0004	.0026	-.0013	-.0101	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0153**	**.0761**	**.0685**	**.0016**	**.0003**	**.0018**	**.0001**	**.0001**
Stddev	.0026	.0229	.0104	.0080	.0005	.0001	.0007	.0003	.0001
%RSD	106.9	149.4	13.69	11.64	28.27	22.47	41.33	364.6	41.16
#1	-.0005	-.0081	.0738	.0766	.0022	.0004	.0024	.0001	.0001
#2	.0036	.0377	.0670	.0680	.0014	.0004	.0010	.0004	.0001
#3	.0042	.0164	.0874	.0607	.0014	.0003	.0020	-.0002	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 18:59:37 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**.0002**	**.0009**	**-.0001**	**.0017**	**.0047**
Stddev	.0002	.0007	.0002	.0001	.0005	.0022	.0002
%RSD	149.5	956.5	64.18	15.50	333.1	127.5	5.329
#1	.0000	.0008	.0004	.0008	-.0001	.0009	.0048
#2	.0000	-.0006	.0002	.0008	-.0006	.0041	.0044
#3	.0004	.0001	.0001	.0010	.0003	.0000	.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116220.**	**7886.0**	**4289.2**	**9614.7**
Stddev	56.	39.3	1.4	5.0
%RSD	.04796	.49843	.03291	.05179
#1	116170.	7843.6	4287.7	9614.5
#2	116280.	7893.2	4289.2	9609.9
#3	116220.	7921.1	4290.6	9619.8

Zoom In Zoom Out

Sample Name: MOCONF Acquired: 4/22/2019 19:05:09 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0002**	**.0001**	**.0024**	W **-.0020**	**-.0006**	**-.0003**	**-.0004**
Stddev	.0002	.0001	.0001	.0001	.0002	.0002	.0000	.0003
%RSD	8865.	27.91	85.21	5.412	11.13	40.25	13.87	65.39
#1	-.0002	-.0002	.0000	.0023	-.0018	-.0006	-.0003	-.0005
#2	-.0001	-.0001	.0001	.0023	-.0020	-.0003	-.0003	-.0001
#3	.0003	-.0002	.0002	.0026	-.0022	-.0008	-.0003	-.0007

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0008**	**-.0008**	**.0016**	**.0002**	**.0014**	**.0006**	**.0008**
Stddev	.0004	.0003	.0002	.0004	.0006	.0005	.0011	.0008
%RSD	39.02	36.56	22.18	26.42	372.7	36.38	182.3	102.5
#1	.0008	.0011	-.0009	.0011	.0005	.0020	.0010	.0001
#2	.0015	.0008	-.0006	.0017	.0005	.0012	.0015	.0017
#3	.0008	.0005	-.0008	.0019	-.0005	.0010	-.0006	.0006

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0025**	**.0004**	**.0196**	**.0537**	**.0875**	**.0040**	F **10.59**
Stddev	.0044	.0009	.0037	.0210	.0086	.0043	.0003	.01
%RSD	489.4	37.80	957.1	107.1	16.05	4.873	8.506	.1169
#1	.0017	.0026	-.0039	.0299	.0488	.0891	.0038	10.58
#2	-.0038	.0015	.0022	-.0046	.0486	.0907	.0038	10.60
#3	.0048	.0033	.0028	.0335	.0636	.0827	.0044	10.58

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0012**	**.0000**	**.0013**	**.0057**	**.0052**	**-.0030**	**-.0016**
Stddev	.0011	.0001	.0000	.0001	.0010	.0002	.0011	.0001
%RSD	175.4	5.043	160.7	10.55	16.86	3.263	36.53	5.108
#1	.0017	.0011	.0000	.0014	.0066	.0053	-.0041	-.0016
#2	.0006	.0012	.0001	.0012	.0058	.0050	-.0029	-.0015
#3	-.0005	.0012	-.0000	.0013	.0047	.0052	-.0019	-.0017

Zoom In Zoom Out

Sample Name: MOCONF Acquired: 4/22/2019 19:05:09 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0004**	**.0046**
Stddev	.0003	.0009
%RSD	74.24	19.96
#1	.0005	.0055
#2	.0001	.0037
#3	.0005	.0045

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115620.**	**7903.3**	**4286.5**	**9643.0**
Stddev	66.	53.1	3.4	5.6
%RSD	.05693	.67226	.07832	.05852
#1	115560.	7897.6	4284.3	9642.4
#2	115610.	7959.1	4284.8	9637.7
#3	115690.	7853.2	4290.3	9648.9

Zoom In Zoom Out

Sample Name: VCONF Acquired: 4/22/2019 19:10:35 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0001**	**-.0005**	**.0001**	**-.0006**	**.0003**	**-.0000**	**.0002**
Stddev	.0003	.0001	.0000	.0001	.0001	.0001	.0001	.0002
%RSD	35.72	61.53	9.163	224.3	18.30	50.14	271.9	149.9
#1	.0005	.0002	-.0005	.0001	-.0006	.0004	.0000	.0003
#2	.0011	.0002	-.0004	-.0001	-.0007	.0003	-.0000	-.0001
#3	.0008	.0000	-.0005	.0002	-.0005	.0001	-.0001	.0002

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0028**	F **11.12**	**.0012**	**.0003**	**.0029**	**-.0011**	**.0005**	**.0016**
Stddev	.0004	.00	.0000	.0007	.0010	.0006	.0014	.0002
%RSD	13.93	.0417	4.100	250.1	34.38	55.05	304.1	10.66
#1	-.0025	11.13	.0012	.0010	.0018	-.0010	.0010	.0015
#2	-.0027	11.12	.0012	-.0002	.0038	-.0006	-.0011	.0017
#3	-.0033	11.12	.0011	-.0001	.0031	-.0018	.0015	.0014

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0165**	**.0191**	**.0050**	**-.0164**	**.0776**	**.1265**	**.0259**	**.0017**
Stddev	.0063	.0051	.0008	.0175	.0136	.0090	.0004	.0002
%RSD	38.41	26.66	16.41	106.3	17.52	7.092	1.606	12.91
#1	.0178	.0173	.0054	-.0366	.0707	.1214	.0263	.0019
#2	.0096	.0249	.0056	-.0065	.0933	.1212	.0259	.0015
#3	.0221	.0152	.0041	-.0063	.0689	.1368	.0255	.0017

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4872**	**.0025**	**.0000**	**.0005**	**.0021**	W **-.0014**	**-.0018**	**-.0002**
Stddev	.0010	.0001	.0000	.0003	.0003	.0000	.0014	.0008
%RSD	.2135	3.021	146.5	62.31	14.61	2.234	76.19	399.1
#1	.4880	.0025	.0000	.0004	.0020	-.0014	-.0004	.0007
#2	.4860	.0026	.0000	.0002	.0024	-.0014	-.0031	-.0005
#3	.4877	.0024	-.0000	.0008	.0018	-.0015	-.0018	-.0007

Zoom In Zoom Out

Sample Name: VCONF Acquired: 4/22/2019 19:10:35 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0008**	**-.0028**
Stddev	.0021	.0009
%RSD	274.6	32.90
#1	-.0010	-.0025
#2	.0002	-.0038
#3	.0031	-.0020

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115640.**	**7824.9**	**4278.4**	**9547.4**
Stddev	111.	32.3	8.0	16.1
%RSD	.09639	.41255	.18776	.16914
#1	115510.	7841.5	4281.6	9543.7
#2	115680.	7787.7	4269.2	9533.4
#3	115730.	7845.6	4284.3	9565.0

Zoom In Zoom Out

Sample Name: TICONF Acquired: 4/22/2019 19:16:05 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0001**	**.0001**	**-.0011**	**-.0002**	**.0022**	**.0002**	**-.0003**	**-.0006**
Stddev	.0002	.0001	.0000	.0001	.0003	.0005	.0000	.0003	.0003
%RSD	50.50	81.51	69.61	14.24	116.2	21.09	11.70	99.83	58.11
#1	.0005	.0001	.0000	-.0012	-.0005	.0017	.0002	-.0005	-.0005
#2	.0001	.0000	.0001	-.0010	-.0002	.0024	.0002	.0000	-.0003
#3	.0004	.0002	.0001	-.0010	-.0000	.0025	.0002	-.0003	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0004**	**.0004**	**-.0007**	**-.0002**	**.0013**	**.0014**	**.0275**	**.0231**
Stddev	.0003	.0001	.0010	.0010	.0005	.0008	.0002	.0035	.0033
%RSD	177.3	26.97	257.9	137.8	315.9	62.65	11.52	12.66	14.48
#1	-.0001	.0005	.0001	-.0016	-.0006	.0011	.0013	.0310	.0269
#2	.0001	.0004	.0015	-.0009	-.0003	.0006	.0013	.0241	.0212
#3	.0005	.0003	-.0004	.0003	.0004	.0022	.0016	.0274	.0211

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0063**	**-.0318**	**.0491**	**.0430**	**.0013**	**.0002**	**.0234**	**-.0001**	**.0000**
Stddev	.0022	.0116	.0382	.0050	.0003	.0000	.0022	.0003	.0001
%RSD	34.56	36.43	77.80	11.54	26.52	5.660	9.512	240.5	2215.
#1	.0038	-.0407	.0074	.0439	.0016	.0002	.0211	-.0004	.0000
#2	.0077	-.0187	.0576	.0475	.0011	.0002	.0256	-.0002	-.0001
#3	.0073	-.0361	.0824	.0377	.0010	.0002	.0235	.0002	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.47**	**-.0013**	**.0002**	**-.0041**	**-.0024**	**.0006**	**.0043**
Stddev	.00	.0002	.0001	.0008	.0017	.0005	.0005
%RSD	.0334	11.42	37.68	20.29	71.85	86.73	12.63
#1	10.48	-.0012	.0003	-.0046	-.0044	.0006	.0047
#2	10.47	-.0015	.0001	-.0045	-.0016	.0011	.0037
#3	10.48	-.0012	.0002	-.0031	-.0013	.0001	.0045

Zoom In Zoom Out

Sample Name: TICONF Acquired: 4/22/2019 19:16:05 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115880.**	**7866.7**	**4293.2**	**9591.9**
Stddev	436.	14.9	7.2	18.9
%RSD	.37649	.18904	.16856	.19664
#1	116150.	7882.3	4285.1	9571.4
#2	116120.	7852.6	4295.6	9595.7
#3	115380.	7865.3	4299.0	9608.5

Zoom In Zoom Out

Sample Name: MNCONF Acquired: 4/22/2019 19:21:36 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0002**	**.0001**	**.0001**	**-.0012**	**.0002**	F **9.806**	**-.0001**	**.0003**
Stddev	.0002	.0000	.0001	.0002	.0005	.0003	.019	.0000	.0007
%RSD	72.09	19.34	174.5	144.3	44.34	159.3	.1982	43.75	233.6
#1	.0005	.0002	.0002	-.0001	-.0011	.0006	9.822	-.0002	-.0005
#2	.0001	.0001	.0000	.0002	-.0018	.0000	9.784	-.0001	.0008
#3	.0003	.0002	-.0000	.0003	-.0007	-.0000	9.812	-.0001	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.0010**	**-.0013**	**-.0014**	**.0004**	**.0025**	**-.0001**	**.0020**	**.0084**
Stddev	.0003	.0001	.0010	.0009	.0007	.0009	.0016	.0126	.0040
%RSD	17.12	8.896	78.19	69.40	150.4	36.31	1321.	625.5	47.35
#1	.0020	.0010	-.0021	-.0020	.0012	.0035	.0011	.0160	.0120
#2	.0014	.0011	-.0015	-.0017	-.0001	.0017	-.0019	-.0084	.0092
#3	.0018	.0009	-.0002	-.0003	.0003	.0024	.0005	-.0016	.0041

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105**	**-.0679**	**.0315**	**.0382**	**-.0003**	**-.0002**	**.0081**	**-.0005**	**-.0000**
Stddev	.0008	.0248	.0332	.0088	.0003	.0001	.0003	.0003	.0001
%RSD	7.588	36.47	105.1	23.04	108.5	29.61	4.195	65.43	18480.
#1	.0111	-.0751	-.0027	.0476	.0001	-.0002	.0083	-.0001	-.0000
#2	.0096	-.0403	.0635	.0369	-.0005	-.0001	.0083	-.0007	-.0001
#3	.0107	-.0883	.0337	.0301	-.0004	-.0003	.0077	-.0006	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0006**	**.0000**	**.0070**	**.0002**	**-.0001**	**.0303**
Stddev	.0003	.0009	.0001	.0009	.0013	.0014	.0007
%RSD	51.67	150.9	384.3	12.95	735.4	1495.	2.232
#1	.0004	.0016	.0000	.0061	.0013	-.0009	.0311
#2	.0011	.0005	-.0001	.0070	.0004	.0015	.0302
#3	.0005	-.0002	.0001	.0079	-.0012	-.0009	.0297

Zoom In Zoom Out

Sample Name: MNCONF Acquired: 4/22/2019 19:21:36 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115940.**	**7945.1**	**4301.4**	**9616.5**
Stddev	224.	15.2	134.4	287.4
%RSD	.19303	.19074	3.1256	2.9892
#1	115710.	7945.0	4304.0	9614.3
#2	115960.	7929.9	4434.5	9905.0
#3	116160.	7960.2	4165.7	9330.1

Zoom In Zoom Out

Sample Name: SNCONF Acquired: 4/22/2019 19:27:16 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**.0001**	**.0002**	**-.0000**	**.0006**	**.0004**	**-.0009**	**.0002**
Stddev	.0001	.0001	.0001	.0002	.0002	.0003	.0000	.0000	.0002
%RSD	42.39	349.1	126.6	113.2	395.8	47.08	6.502	4.342	70.08
#1	.0002	.0001	.0002	.0004	.0001	.0009	.0004	-.0008	.0000
#2	.0002	.0001	.0001	.0000	-.0002	.0006	.0004	-.0009	.0003
#3	.0001	-.0001	-.0000	.0001	-.0000	.0003	.0004	-.0009	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0017**	**.0018**	**.0009**	**-.0002**	**.0008**	**-.0024**	**.0121**	**.0269**
Stddev	.0005	.0000	.0006	.0003	.0004	.0008	.0005	.0023	.0030
%RSD	1057.	2.944	35.70	33.98	149.7	97.93	22.53	19.27	11.27
#1	.0003	.0016	.0019	.0012	.0002	.0016	-.0030	.0135	.0276
#2	.0004	.0017	.0011	.0008	-.0003	.0000	-.0023	.0094	.0296
#3	-.0005	.0017	.0024	.0006	-.0006	.0008	-.0019	.0135	.0236

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.0137**	**.1093**	**.0396**	**.0048**	**.0000**	**.0527**	F **10.73**	**-.0000**
Stddev	.0026	.0140	.0383	.0104	.0007	.0001	.0003	.03	.0000
%RSD	149.7	102.2	35.08	26.16	13.85	1084.	.5109	.3157	38.74
#1	.0030	.0287	.0684	.0279	.0053	-.0001	.0527	10.69	-.0000
#2	.0033	.0112	.1149	.0434	.0040	.0000	.0530	10.73	-.0000
#3	-.0012	.0011	.1445	.0476	.0050	.0001	.0524	10.76	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0004**	**.0053**	**-.0008**	**.0002**	**.0015**	**.0042**
Stddev	.0001	.0009	.0001	.0037	.0005	.0015	.0004
%RSD	12.89	242.8	1.001	477.2	221.3	99.77	9.685
#1	.0006	-.0004	.0053	.0033	-.0003	.0006	.0039
#2	.0005	.0006	.0053	-.0041	.0007	.0033	.0042
#3	.0005	-.0013	.0054	-.0015	.0003	.0007	.0047

Zoom In Zoom Out

Sample Name: SNCONF Acquired: 4/22/2019 19:27:16 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115250.**	**7842.4**	**4276.7**	**9577.1**
Stddev	225.	61.8	4.2	6.3
%RSD	.19504	.78849	.09876	.06541
#1	115400.	7771.0	4280.4	9583.6
#2	114990.	7878.6	4277.7	9576.7
#3	115360.	7877.7	4272.1	9571.1

Zoom In Zoom Out

Sample Name: SICONF Acquired: 4/22/2019 19:32:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0000**	**.0001**	**-.0001**	**-.0002**	**-.0007**	**-.0005**	**-.0001**	**-.0009**
Stddev	.0001	.0001	.0001	.0001	.0003	.0005	.0001	.0002	.0004
%RSD	57.88	241.0	99.21	109.4	142.7	69.39	10.80	298.1	45.73
#1	.0003	-.0001	.0001	-.0001	-.0004	-.0012	-.0005	.0002	-.0013
#2	.0001	.0001	.0002	-.0002	-.0003	-.0003	-.0004	-.0002	-.0005
#3	.0003	-.0001	-.0000	.0000	.0001	-.0006	-.0005	-.0002	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0006**	**-.0006**	**-.0004**	**-.0009**	**-.0015**	**-.0006**	**-.0110**	**-.0043**
Stddev	.0001	.0001	.0008	.0008	.0002	.0007	.0014	.0110	.0026
%RSD	38.10	10.02	134.6	189.0	26.50	48.39	220.9	100.7	61.28
#1	.0002	-.0005	-.0009	-.0010	-.0009	-.0012	-.0010	-.0060	-.0030
#2	.0004	-.0006	-.0013	-.0008	-.0006	-.0010	-.0018	-.0236	-.0025
#3	.0004	-.0006	.0003	.0005	-.0011	-.0024	.0009	-.0033	-.0073

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**-.0147**	**.0653**	**.0377**	**.0002**	**.0000**	**11.26**	**-.0007**	**.0000**
Stddev	.0047	.0113	.0090	.0050	.0005	.0001	.00	.0001	.0000
%RSD	102.0	77.00	13.78	13.39	189.6	308.2	.0349	13.01	142.9
#1	.0027	-.0038	.0560	.0319	.0007	-.0001	11.26	-.0008	-.0000
#2	.0099	-.0264	.0661	.0401	.0003	.0001	11.26	-.0008	.0000
#3	.0012	-.0140	.0740	.0410	-.0002	.0001	11.27	-.0006	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0102**	**-.0004**	**-.0005**	**.0003**	**.0005**	**.0029**
Stddev	.0001	.0009	.0000	.0012	.0016	.0005	.0006
%RSD	70.49	9.230	8.740	218.0	598.3	106.6	20.12
#1	.0001	.0112	-.0004	-.0004	.0022	.0011	.0023
#2	.0002	.0099	-.0004	-.0018	-.0006	.0002	.0035
#3	.0001	.0094	-.0004	.0005	-.0007	.0002	.0028

Zoom In Zoom Out

Sample Name: SICONF Acquired: 4/22/2019 19:32:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115810.**	**7897.3**	**4299.7**	**9605.1**
Stddev	308.	12.9	4.3	14.1
%RSD	.26587	.16286	.09920	.14700
#1	115930.	7883.1	4295.6	9594.2
#2	115460.	7900.8	4304.1	9621.0
#3	116030.	7908.1	4299.3	9600.0

Zoom In Zoom Out

Sample Name: ZNCONF Acquired: 4/22/2019 19:38:17 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0002**	**.0000**	**.0000**	**-.0002**	**-.0004**	**.0001**	**.0001**	**-.0024**
Stddev	.0003	.0001	.0001	.0003	.0003	.0002	.0001	.0001	.0001
%RSD	72.78	43.33	248.1	1578.	120.2	60.16	58.38	51.87	5.318
#1	.0003	.0002	.0002	-.0003	-.0006	-.0003	.0001	.0001	-.0024
#2	.0002	.0001	-.0001	.0000	-.0001	-.0006	.0001	.0001	-.0022
#3	.0008	.0002	.0000	.0003	-.0001	-.0002	.0001	.0002	-.0025

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	F **11.34**	**-.0001**	**-.0006**	**.0001**	**.0053**	**.0014**	**-.0038**	**.0035**
Stddev	.0003	.03	.0014	.0010	.0010	.0010	.0009	.0125	.0040
%RSD	313.2	.3006	986.8	159.4	1454.	18.30	66.12	328.2	111.4
#1	.0004	11.38	.0003	.0003	.0009	.0054	.0024	-.0079	-.0003
#2	-.0002	11.32	.0010	-.0016	-.0010	.0044	.0012	-.0137	.0076
#3	.0001	11.33	-.0017	-.0004	.0003	.0063	.0006	.0102	.0033

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0092**	**.0610**	**.0464**	**.0001**	**.0001**	**.0025**	**.0006**	**-.0000**
Stddev	.0040	.0223	.0121	.0046	.0003	.0001	.0010	.0004	.0001
%RSD	646.4	242.7	19.79	10.02	243.8	76.12	38.70	67.32	1555.
#1	.0037	.0165	.0630	.0453	-.0001	.0002	.0034	.0008	.0001
#2	.0020	-.0234	.0719	.0515	.0005	.0001	.0026	.0001	-.0000
#3	-.0039	-.0207	.0480	.0425	-.0001	.0000	.0015	.0009	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0011**	**-.0000**	**.0125**	**.0000**	**.0003**	**.0035**
Stddev	.0004	.0003	.0002	.0005	.0009	.0014	.0008
%RSD	158.7	29.49	1602.	3.961	3354.	471.8	22.04
#1	.0004	.0015	-.0003	.0120	.0006	-.0012	.0037
#2	.0005	.0009	.0001	.0129	.0005	.0006	.0026
#3	-.0002	.0010	.0001	.0128	-.0010	.0015	.0040

Zoom In Zoom Out

Sample Name: ZNCONF Acquired: 4/22/2019 19:38:17 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115380.**	**7830.9**	**4273.6**	**9560.4**
Stddev	491.	12.1	5.6	8.1
%RSD	.42594	.15469	.13169	.08433
#1	115950.	7843.4	4267.1	9551.9
#2	115080.	7830.0	4276.9	9568.0
#3	115120.	7819.2	4276.8	9561.3

Zoom In Zoom Out

Sample Name: ZRCONF Acquired: 4/22/2019 19:43:47 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066**	**.0001**	**.0002**	**.0002**	**-.0008**	**.0057**	**.0004**	**-.0005**	**.0028**
Stddev	.0002	.0001	.0001	.0001	.0003	.0002	.0001	.0003	.0005
%RSD	3.095	55.55	60.32	35.28	38.31	2.968	21.63	61.25	19.34
#1	.0066	.0001	.0002	.0002	-.0007	.0056	.0004	-.0002	.0023
#2	.0068	.0002	.0002	.0002	-.0006	.0059	.0004	-.0005	.0034
#3	.0064	.0002	.0000	.0001	-.0012	.0056	.0005	-.0007	.0028

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0010**	**-.0003**	**-.0009**	**.0016**	**.0037**	**.0011**	**.1749**	**.0064**
Stddev	.0002	.0000	.0006	.0009	.0002	.0008	.0007	.0093	.0022
%RSD	20.81	3.991	164.3	102.6	13.19	20.82	65.06	5.330	35.20
#1	.0009	.0009	.0001	.0000	.0013	.0034	.0006	.1823	.0041
#2	.0008	.0010	-.0010	-.0009	.0017	.0032	.0008	.1644	.0063
#3	.0012	.0010	-.0002	-.0018	.0017	.0046	.0019	.1779	.0086

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094**	**-.0052**	**.0298**	**.0377**	**.0004**	**-.0000**	**.0071**	**.0099**	**.0005**
Stddev	.0009	.0367	.0205	.0031	.0006	.0001	.0003	.0005	.0001
%RSD	9.435	710.9	68.78	8.221	138.0	343.1	3.589	4.919	11.93
#1	.0094	-.0062	.0061	.0394	.0001	-.0002	.0073	.0093	.0005
#2	.0086	.0321	.0415	.0396	.0001	.0000	.0072	.0101	.0006
#3	.0104	-.0413	.0417	.0341	.0012	.0000	.0068	.0101	.0006

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.2186**	F **10.95**	**-.0007**	**-.0020**	**.0016**	**.0043**
Stddev	.0000	.0013	.07	.0021	.0008	.0018	.0009
%RSD	2.192	.6040	.6063	312.6	39.88	112.7	21.12
#1	.0006	.2198	11.00	.0006	-.0028	.0027	.0053
#2	.0006	.2172	10.87	.0005	-.0012	-.0005	.0041
#3	.0006	.2187	10.97	-.0030	-.0021	.0027	.0035

Zoom In Zoom Out

Sample Name: ZRCONF Acquired: 4/22/2019 19:43:47 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113490.**	**7842.3**	**4272.5**	**9567.9**
Stddev	213.	21.5	9.9	13.3
%RSD	.18739	.27474	.23079	.13908
#1	113290.	7853.0	4261.1	9556.8
#2	113710.	7856.4	4277.0	9564.2
#3	113460.	7817.5	4279.2	9582.6

Zoom In Zoom Out

Sample Name: NICONF Acquired: 4/22/2019 19:49:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0000**	**-.0007**	**.0002**	**-.0005**	**-.0004**	**-.0002**	F **10.23**	**-.0009**
Stddev	.0001	.0001	.0000	.0002	.0003	.0003	.0001	.01	.0002
%RSD	53.47	2916.	4.616	88.08	61.45	65.78	34.06	.0688	22.67
#1	.0002	.0001	-.0007	.0002	-.0009	-.0006	-.0002	10.23	-.0007
#2	.0002	-.0000	-.0008	.0001	-.0003	-.0005	-.0001	10.23	-.0011
#3	.0004	-.0001	-.0008	.0004	-.0004	-.0001	-.0002	10.22	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0002**	**-.0004**	**-.0009**	**-.0002**	**.0002**	**.0016**	**.0024**	**-.0182**
Stddev	.0002	.0001	.0002	.0008	.0004	.0005	.0003	.0150	.0053
%RSD	158.4	44.42	38.65	92.08	183.9	255.5	18.24	619.8	28.90
#1	.0002	.0003	-.0006	.0000	.0001	-.0002	.0013	.0183	-.0187
#2	.0003	.0001	-.0004	-.0011	-.0001	.0001	.0016	-.0115	-.0127
#3	-.0001	.0002	-.0003	-.0015	-.0007	.0007	.0018	.0004	-.0232

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**-.0102**	**.0274**	**.0251**	**.0001**	**.0002**	**.0081**	**-.0004**	**-.0001**
Stddev	.0028	.0254	.0409	.0051	.0002	.0001	.0003	.0000	.0000
%RSD	62.32	249.1	149.4	20.44	131.6	74.89	4.063	8.868	48.13
#1	.0055	.0090	.0055	.0293	.0001	.0002	.0083	-.0004	-.0001
#2	.0065	-.0006	.0021	.0194	.0003	.0000	.0077	-.0003	-.0001
#3	.0013	-.0390	.0745	.0267	-.0000	.0003	.0083	-.0004	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0016**	**.0034**	**-.0050**	**-.0010**	**.0001**	**.0139**
Stddev	.0002	.0007	.0004	.0019	.0010	.0024	.0020
%RSD	116.1	43.56	12.00	37.52	102.4	2033.	14.12
#1	.0002	.0008	.0038	-.0072	-.0012	-.0023	.0153
#2	.0004	.0022	.0035	-.0040	.0001	.0025	.0117
#3	-.0000	.0019	.0030	-.0038	-.0018	.0002	.0149

Zoom In Zoom Out

Sample Name: NICONF Acquired: 4/22/2019 19:49:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115560.**	**7856.6**	**4280.1**	**9584.8**
Stddev	298.	23.1	2.9	2.2
%RSD	.25826	.29387	.06839	.02259
#1	115240.	7873.7	4281.9	9583.7
#2	115600.	7865.9	4281.7	9583.4
#3	115840.	7830.3	4276.7	9587.3

Zoom In Zoom Out

Sample Name: ALCONF Acquired: 4/22/2019 19:54:57 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**-.0000**	**-.0001**	**-.0003**	**-.0000**	**.0005**	**-.0008**	**-.0008**
Stddev	.0002	.0001	.0002	.0003	.0003	.0003	.0000	.0003
%RSD	23.95	281.4	324.2	78.84	681.0	56.37	.7470	38.28
#1	-.0012	.0000	-.0002	-.0003	-.0002	.0005	-.0008	-.0009
#2	-.0008	-.0002	.0000	-.0006	.0003	.0008	-.0008	-.0010
#3	-.0010	.0000	.0001	-.0001	-.0003	.0002	-.0008	-.0004

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**-.0003**	**.0027**	**.0027**	**.0006**	**-.0009**	**.0021**	**-.0033**
Stddev	.0005	.0003	.0001	.0021	.0009	.0011	.0029	.0012
%RSD	73.71	80.40	2.469	76.68	153.0	128.6	135.0	37.48
#1	-.0006	-.0002	.0028	.0043	.0012	.0000	-.0012	-.0035
#2	-.0013	-.0007	.0027	.0004	.0009	-.0005	.0036	-.0043
#3	-.0003	-.0002	.0028	.0035	-.0004	-.0021	.0040	-.0019

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **505.0**	**-.0076**	**.0022**	**.0042**	**-.1166**	**.0359**	**-.0020**	**-.0017**
Stddev	.6	.0024	.0008	.0215	.0169	.0050	.0012	.0001
%RSD	.1096	31.99	36.63	515.6	14.48	13.90	58.83	7.316
#1	505.6	-.0050	.0013	-.0203	-.1301	.0402	-.0016	-.0016
#2	505.0	-.0099	.0029	.0203	-.1221	.0371	-.0034	-.0018
#3	504.5	-.0080	.0025	.0125	-.0977	.0304	-.0011	-.0018

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0029**	**-.0012**	**.0001**	**.0002**	**.0020**	**.0010**	W **-.0253**	**-.0013**
Stddev	.0007	.0001	.0001	.0002	.0010	.0000	.0005	.0007
%RSD	22.68	8.995	178.0	100.3	49.50	1.602	2.086	53.12
#1	-.0036	-.0011	.0002	.0004	.0009	.0010	-.0258	-.0008
#2	-.0028	-.0013	-.0001	.0002	.0024	.0010	-.0248	-.0021
#3	-.0023	-.0013	.0001	-.0000	.0028	.0010	-.0252	-.0011

Zoom In Zoom Out

Sample Name: ALCONF Acquired: 4/22/2019 19:54:57 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0007**	**.0093**
Stddev	.0011	.0012
%RSD	157.1	13.19
#1	.0018	.0091
#2	-.0004	.0082
#3	.0008	.0106

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110150.**	**8135.8**	**4379.1**	**8523.3**
Stddev	110.	65.6	2.3	6.2
%RSD	.09959	.80670	.05320	.07279
#1	110250.	8068.8	4377.0	8520.5
#2	110150.	8138.7	4378.8	8519.0
#3	110040.	8200.0	4381.6	8530.4

Zoom In Zoom Out

Sample Name: COCONF Acquired: 4/22/2019 20:00:23 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0002**	**.0022**	F **10.78**	**-.0001**	**-.0003**	**.0000**	**.0002**	**-.0006**
Stddev	.0002	.0000	.0000	.01	.0003	.0001	.0000	.0002	.0006
%RSD	44.31	11.28	1.950	.0925	205.5	40.55	179.0	90.83	103.8
#1	.0006	.0002	.0022	10.78	-.0003	-.0005	.0000	.0003	-.0000
#2	.0003	.0002	.0022	10.79	-.0003	-.0002	.0000	.0004	-.0005
#3	.0007	.0002	.0021	10.77	.0002	-.0002	-.0000	-.0000	-.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0003**	**.0006**	**.0001**	**-.0013**	**.0002**	**-.0011**	**-.0033**	**-.0040**
Stddev	.0002	.0001	.0006	.0011	.0003	.0006	.0006	.0124	.0042
%RSD	1787.	22.43	100.4	1701.	25.61	303.6	54.39	373.9	104.2
#1	-.0003	.0003	.0014	.0010	-.0016	.0001	-.0017	-.0166	-.0040
#2	.0002	.0002	.0004	-.0012	-.0014	-.0003	-.0005	.0079	-.0082
#3	.0001	.0002	.0002	.0004	-.0009	.0009	-.0010	-.0013	.0002

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**-.0065**	**.0422**	**.0473**	**-.0008**	**.0000**	**.0008**	**-.0003**	**.0000**
Stddev	.0037	.0074	.0205	.0090	.0004	.0001	.0006	.0002	.0001
%RSD	307.1	114.0	48.59	19.01	45.99	134.6	69.33	58.39	203.9
#1	-.0048	-.0151	.0629	.0571	-.0008	.0001	.0004	-.0004	.0001
#2	.0026	-.0031	.0219	.0456	-.0004	.0001	.0015	-.0001	-.0000
#3	-.0014	-.0014	.0416	.0393	-.0012	-.0000	.0006	-.0003	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0028**	**.0008**	**.0003**	**.0153**	**.0008**	**.0038**
Stddev	.0002	.0006	.0001	.0018	.0013	.0022	.0007
%RSD	106.3	21.54	6.680	685.5	8.327	279.6	18.92
#1	-.0004	-.0029	.0007	.0010	.0165	-.0017	.0035
#2	-.0000	-.0034	.0007	.0015	.0154	.0019	.0047
#3	-.0001	-.0022	.0008	-.0017	.0140	.0022	.0034

Zoom In Zoom Out

Sample Name: COCONF Acquired: 4/22/2019 20:00:23 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115430.**	**7850.9**	**4278.4**	**9619.9**
Stddev	541.	67.1	2.0	3.4
%RSD	.46903	.85487	.04568	.03544
#1	114960.	7780.6	4280.6	9620.3
#2	115310.	7857.8	4277.2	9623.1
#3	116020.	7914.3	4277.3	9616.4

Zoom In Zoom Out

Sample Name: CACONF Acquired: 4/22/2019 20:05:54 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**-.0002**	**.0001**	**.0002**	**.0006**	**.0006**	**.0012**	**-.0002**
Stddev	.0004	.0000	.0002	.0001	.0000	.0003	.0001	.0001
%RSD	45.86	15.48	214.6	51.14	8.081	57.36	7.384	51.37
#1	.0007	-.0002	-.0001	.0003	.0005	.0007	.0013	-.0003
#2	.0013	-.0002	.0002	.0002	.0006	.0008	.0012	-.0001
#3	.0005	-.0002	.0003	.0001	.0006	.0002	.0011	-.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0003**	**.0097**	**.0002**	**.0006**	**.0002**	**-.0010**	**.0005**
Stddev	.0001	.0001	.0002	.0010	.0007	.0006	.0010	.0008
%RSD	19.41	35.04	1.680	417.9	107.2	335.0	101.7	137.4
#1	.0005	.0002	.0098	-.0005	.0002	.0002	-.0002	-.0003
#2	.0008	.0004	.0098	-.0001	.0014	-.0005	-.0006	.0008
#3	.0006	.0004	.0095	.0013	.0003	.0008	-.0021	.0012

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0138**	F **441.5**	**.0036**	**-.0162**	**-.1286**	**.0690**	**-.0008**	**-.0011**
Stddev	.0078	.2	.0023	.0326	.0198	.0178	.0003	.0002
%RSD	56.25	.0520	63.62	201.3	15.39	25.79	38.32	21.84
#1	.0217	441.3	.0010	.0200	-.1498	.0727	-.0005	-.0012
#2	.0062	441.8	.0047	-.0433	-.1106	.0496	-.0007	-.0011
#3	.0136	441.5	.0051	-.0254	-.1253	.0846	-.0011	-.0008

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**-.0014**	W **-.0034**	**-.0006**	**.0012**	**.0004**	**.0152**	**.0018**
Stddev	.0010	.0003	.0001	.0002	.0002	.0001	.0039	.0008
%RSD	40.99	24.41	4.173	35.25	17.86	21.49	25.85	46.17
#1	.0014	-.0010	-.0032	-.0009	.0013	.0004	.0184	.0010
#2	.0034	-.0015	-.0035	-.0006	.0010	.0004	.0164	.0026
#3	.0026	-.0017	-.0035	-.0004	.0014	.0003	.0108	.0018

Zoom In Zoom Out

Sample Name: CACONF Acquired: 4/22/2019 20:05:54 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	W **-.0153**	**-.0015**
Stddev	.0012	.0002
%RSD	7.862	15.90
#1	-.0166	-.0017
#2	-.0143	-.0012
#3	-.0151	-.0016

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106380.**	**7566.4**	**3895.4**	**8169.7**
Stddev	278.	39.4	4.4	6.7
%RSD	.26166	.52100	.11393	.08245
#1	106690.	7610.8	3890.3	8168.3
#2	106300.	7553.0	3897.3	8163.8
#3	106150.	7535.4	3898.6	8177.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 20:11:25 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.016**	**2.039**	**2.011**	**2.038**	**2.046**	**1.988**	**2.060**	**2.033**	**.2496**
Stddev	.003	.004	.001	.004	.004	.005	.003	.004	.0006
%RSD	.1458	.2216	.0550	.2222	.1972	.2517	.1355	.2155	.2389
#1	2.019	2.040	2.010	2.042	2.041	1.986	2.058	2.037	.2492
#2	2.013	2.034	2.012	2.038	2.047	1.993	2.063	2.033	.2503
#3	2.017	2.042	2.011	2.033	2.049	1.984	2.059	2.029	.2493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028**	**2.060**	**2.025**	**2.094**	**2.060**	**2.012**	**2.047**	**39.35**	**40.26**
Stddev	.004	.004	.001	.004	.004	.005	.002	.07	.09
%RSD	.1994	.2051	.0237	.1910	.1691	.2510	.1175	.1730	.2324
#1	2.028	2.065	2.024	2.095	2.063	2.007	2.045	39.43	40.23
#2	2.032	2.056	2.025	2.097	2.058	2.012	2.049	39.32	40.18
#3	2.024	2.060	2.025	2.090	2.057	2.017	2.049	39.31	40.36
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.52**	**40.20**	**40.76**	**40.00**	**2.059**	**2.060**	**5.294**	**2.088**	**2.013**
Stddev	.14	.24	.08	.06	.001	.002	.003	.002	.003
%RSD	.3466	.5875	.2075	.1587	.0576	.0712	.0557	.0829	.1380
#1	40.57	40.17	40.70	40.04	2.060	2.060	5.291	2.090	2.016
#2	40.36	39.97	40.73	39.92	2.059	2.062	5.297	2.088	2.011
#3	40.63	40.44	40.86	40.02	2.058	2.059	5.293	2.087	2.013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 20:11:25 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021**	**2.029**	**2.028**	**2.013**	**2.057**	**2.020**	**2.054**
Stddev	.003	.002	.001	.001	.003	.005	.003
%RSD	.1482	.0901	.0480	.0679	.1527	.2258	.1500
#1	2.021	2.030	2.028	2.014	2.054	2.025	2.051
#2	2.025	2.027	2.028	2.014	2.059	2.018	2.054
#3	2.019	2.030	2.027	2.011	2.060	2.017	2.057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110570.**	**7746.7**	**4129.3**	**8588.5**
Stddev	202.	56.9	2.6	12.2
%RSD	.18275	.73474	.06322	.14165
#1	110780.	7739.5	4126.3	8576.1
#2	110370.	7806.9	4130.9	8588.9
#3	110550.	7693.7	4130.7	8600.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 20:16:27 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**.0001**	**.0003**	**-.0004**	**-.0005**	**.0002**	**-.0001**	**-.0007**
Stddev	.0001	.0001	.0000	.0001	.0002	.0003	.0001	.0002	.0003
%RSD	21.88	63.11	12.48	28.38	37.71	52.97	47.85	220.9	43.28
#1	.0003	.0001	.0001	.0005	-.0005	-.0004	.0002	-.0002	-.0008
#2	.0004	.0001	.0001	.0003	-.0003	-.0003	.0002	-.0002	-.0003
#3	.0004	.0002	.0001	.0003	-.0006	-.0009	.0001	.0001	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**.0010**	**-.0004**	**-.0000**	**.0017**	**.0002**	**-.0040**	**-.0009**
Stddev	.0001	.0001	.0010	.0007	.0005	.0009	.0006	.0125	.0051
%RSD	58.32	45.36	102.7	175.6	73700.	55.42	418.1	315.8	547.7
#1	.0001	.0002	-.0001	.0003	.0003	.0015	-.0006	-.0080	-.0064
#2	.0002	.0002	.0012	-.0004	.0002	.0027	.0007	.0101	-.0002
#3	.0003	.0004	.0018	-.0011	-.0005	.0009	.0003	-.0140	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0206**	**.0766**	**.0548**	**.0008**	**.0004**	**.0005**	**.0001**	**.0001**
Stddev	.0019	.0048	.0348	.0066	.0000	.0002	.0005	.0001	.0001
%RSD	384.4	23.30	45.39	12.11	5.132	39.70	95.05	206.3	56.55
#1	.0005	-.0257	.0791	.0486	.0008	.0006	.0005	-.0000	.0001
#2	.0024	-.0162	.1100	.0618	.0008	.0005	.0009	-.0000	.0002
#3	-.0014	-.0198	.0406	.0540	.0008	.0002	.0000	.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 20:16:27 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**.0002**	**-.0017**	**.0001**	**.0011**	**.0045**
Stddev	.0001	.0004	.0000	.0010	.0004	.0016	.0002
%RSD	38.94	396.2	27.35	60.44	524.9	138.1	3.410
#1	.0004	.0001	.0001	-.0006	.0001	.0004	.0047
#2	.0002	-.0005	.0002	-.0027	-.0003	.0029	.0045
#3	.0003	.0001	.0002	-.0018	.0005	.0001	.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115520.**	**7859.8**	**4285.5**	**9605.2**
Stddev	183.	28.3	6.3	15.4
%RSD	.15852	.35964	.14639	.16059
#1	115370.	7861.2	4280.8	9602.8
#2	115470.	7830.9	4292.6	9621.7
#3	115720.	7887.4	4283.0	9591.2

Zoom In Zoom Out

Sample Name: JC86284-16 Acquired: 4/22/2019 20:21:59 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0504**	**.0001**	**.0006**	**.0008**	**.0341**	**.0596**	**.0410**	**.0106**	**.0003**
Stddev	.0022	.0001	.0002	.0003	.0008	.0003	.0001	.0002	.0004
%RSD	4.388	63.88	26.74	30.88	2.485	.4400	.2052	1.908	144.7
#1	.0490	.0001	.0004	.0006	.0331	.0593	.0411	.0108	.0000
#2	.0493	.0000	.0008	.0011	.0345	.0597	.0410	.0105	.0008
#3	.0529	.0002	.0007	.0009	.0346	.0597	.0409	.0104	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**3.665**	**.0049**	**-.0013**	**.0100**	**.0042**	**.0096**	**1.021**	**8.299**
Stddev	.0001	.004	.0012	.0007	.0007	.0017	.0008	.050	.405
%RSD	5.182	.1005	24.50	50.24	7.070	39.59	7.869	4.871	4.880
#1	.0022	3.662	.0036	-.0017	.0093	.0036	.0098	.9906	8.025
#2	.0025	3.664	.0060	-.0005	.0107	.0029	.0088	.9938	8.108
#3	.0023	3.669	.0050	-.0017	.0099	.0061	.0102	1.078	8.764

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.286**	**2.082**	**.9962**	**4.417**	**.0186**	**.0024**	**1.293**	**.0371**	**.0369**
Stddev	.145	.133	.0329	.209	.0005	.0002	.004	.0003	.0018
%RSD	4.428	6.379	3.304	4.736	2.925	6.854	.2882	.9434	4.769
#1	3.205	1.995	.9741	4.312	.0180	.0025	1.290	.0374	.0359
#2	3.200	2.016	.9804	4.282	.0191	.0026	1.293	.0367	.0359
#3	3.455	2.235	1.034	4.658	.0187	.0023	1.297	.0372	.0390

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0488**	**.0021**	**.0065**	**2.058**	**.0004**	**.0026**	**.2780**
Stddev	.0003	.0009	.0001	.007	.0007	.0023	.0016
%RSD	.6121	44.58	2.251	.3514	166.6	87.63	.5613
#1	.0488	.0030	.0066	2.053	-.0004	.0004	.2769
#2	.0486	.0011	.0065	2.055	.0009	.0024	.2773
#3	.0492	.0023	.0063	2.066	.0008	.0050	.2798

Zoom In Zoom Out

Sample Name: JC86284-16 Acquired: 4/22/2019 20:21:59 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115280.**	**7730.5**	**4244.1**	**9526.3**
Stddev	219.	321.0	7.3	8.2
%RSD	.18989	4.1519	.17198	.08606
#1	115140.	7951.6	4252.2	9529.7
#2	115530.	7877.5	4242.1	9532.2
#3	115160.	7362.3	4238.0	9516.9

Zoom In Zoom Out

Sample Name: JC86284-17 Acquired: 4/22/2019 20:27:21 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0486**	**.0001**	**.0005**	**.0009**	**.0301**	**.0504**	**.0887**	**.0071**
Stddev	.0001	.0001	.0001	.0002	.0003	.0002	.0003	.0004
%RSD	.1716	61.98	15.43	17.70	.9588	.3223	.3673	6.058
#1	.0485	.0001	.0005	.0007	.0298	.0504	.0884	.0075
#2	.0487	.0001	.0004	.0010	.0304	.0506	.0888	.0067
#3	.0486	.0002	.0005	.0008	.0302	.0503	.0890	.0071

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0021**	**3.824**	**.0049**	F **-.0025**	**.0058**	**.0054**	**.0088**
Stddev	.0003	.0002	.012	.0004	.0015	.0004	.0012	.0006
%RSD	66.44	8.801	.3068	8.604	57.82	7.270	23.16	6.709
#1	-.0002	.0019	3.838	.0044	-.0009	.0057	.0064	.0083
#2	-.0007	.0022	3.816	.0050	-.0030	.0062	.0057	.0094
#3	-.0003	.0023	3.819	.0052	-.0037	.0054	.0040	.0086

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7992**	**7.811**	**21.70**	**1.791**	**1.301**	**3.872**	**.0131**	**.0036**
Stddev	.0235	.022	.01	.005	.021	.003	.0005	.0002
%RSD	2.938	.2769	.0460	.2785	1.619	.0707	3.653	4.823
#1	.8067	7.836	21.69	1.791	1.302	3.871	.0136	.0037
#2	.7729	7.801	21.71	1.796	1.321	3.875	.0131	.0037
#3	.8181	7.797	21.70	1.786	1.279	3.870	.0126	.0034

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.885**	**.0364**	**.0300**	**.0420**	**.0017**	**.0058**	**1.813**	**.0008**
Stddev	.005	.0001	.0001	.0000	.0010	.0001	.002	.0010
%RSD	.2636	.3480	.3470	.1034	57.43	1.706	.1342	128.5
#1	1.887	.0364	.0299	.0420	.0006	.0059	1.815	.0002
#2	1.889	.0365	.0301	.0421	.0023	.0057	1.813	.0020
#3	1.880	.0363	.0301	.0420	.0022	.0058	1.810	.0002

Zoom In Zoom Out

Sample Name: JC86284-17 Acquired: 4/22/2019 20:27:21 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0027**	**.2250**
Stddev	.0023	.0011
%RSD	85.87	.5022
#1	.0001	.2237
#2	.0035	.2257
#3	.0044	.2256

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115060.**	**7884.4**	**4218.7**	**9445.4**
Stddev	225.	18.4	3.9	16.5
%RSD	.19524	.23318	.09277	.17452
#1	115320.	7865.7	4214.4	9426.4
#2	114930.	7902.5	4219.7	9453.2
#3	114930.	7884.9	4222.1	9456.4

Zoom In Zoom Out

Sample Name: JC86284-18 Acquired: 4/22/2019 20:32:42 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0182**	**.0001**	**.0000**	**.0004**	**.0015**	**.0027**	**.0031**	**.0008**	**-.0006**
Stddev	.0004	.0001	.0001	.0002	.0003	.0000	.0000	.0002	.0003
%RSD	2.447	160.0	13340.	39.71	18.44	1.563	1.023	22.94	48.06
#1	.0178	.0001	.0000	.0003	.0013	.0027	.0031	.0010	-.0005
#2	.0187	.0001	.0001	.0006	.0018	.0026	.0032	.0007	-.0009
#3	.0182	-.0001	-.0002	.0003	.0014	.0027	.0032	.0008	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0260**	**.0014**	**-.0017**	**.0004**	**.0033**	**.0007**	**.0675**	**1.250**
Stddev	.0002	.0001	.0005	.0006	.0007	.0007	.0003	.0132	.026
%RSD	582.8	.4607	33.80	36.20	163.6	20.78	44.16	19.51	2.084
#1	-.0001	.0262	.0019	-.0013	-.0004	.0025	.0010	.0537	1.220
#2	.0003	.0260	.0009	-.0025	.0010	.0037	.0007	.0799	1.265
#3	-.0000	.0259	.0014	-.0014	.0007	.0036	.0004	.0691	1.265

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1116**	**.4707**	**.3677**	**3.548**	**.0050**	**.0006**	**.3256**	**.0312**	**.0055**
Stddev	.0059	.0069	.0128	.068	.0003	.0002	.0003	.0003	.0001
%RSD	5.304	1.457	3.478	1.917	6.005	36.34	.1057	.8415	1.628
#1	.1113	.4704	.3551	3.469	.0049	.0008	.3258	.0311	.0054
#2	.1177	.4778	.3674	3.584	.0048	.0005	.3258	.0315	.0055
#3	.1059	.4641	.3806	3.590	.0054	.0004	.3252	.0310	.0056

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**-.0002**	**.0005**	**1.227**	**-.0002**	**.0004**	**.1351**
Stddev	.0002	.0002	.0002	.010	.0006	.0006	.0013
%RSD	8.313	141.3	28.36	.7839	355.8	164.1	.9829
#1	.0020	-.0001	.0005	1.235	-.0004	.0007	.1340
#2	.0018	.0000	.0004	1.231	-.0006	-.0003	.1366
#3	.0021	-.0004	.0007	1.217	.0005	.0007	.1347

Zoom In Zoom Out

Sample Name: JC86284-18 Acquired: 4/22/2019 20:32:42 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115860.**	**8006.9**	**4254.9**	**9632.1**
Stddev	258.	128.3	6.4	12.6
%RSD	.22287	1.6017	.15005	.13102
#1	115580.	8144.2	4250.8	9626.9
#2	116090.	7890.2	4251.6	9622.9
#3	115900.	7986.3	4262.2	9646.5

Zoom In Zoom Out

Sample Name: JC86517-2 Acquired: 4/22/2019 20:38:09 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**-.0000**	**-.0000**	**.0003**	**.0013**	**.0015**	**.0039**	**.0004**	**-.0002**
Stddev	.0001	.0001	.0001	.0001	.0002	.0004	.0000	.0001	.0002
%RSD	3.538	5583.	418.9	46.54	13.75	30.17	1.221	32.62	113.9
#1	.0033	.0001	-.0000	.0001	.0015	.0018	.0040	.0006	-.0005
#2	.0033	.0001	.0001	.0003	.0014	.0016	.0039	.0003	-.0000
#3	.0031	-.0001	-.0001	.0004	.0011	.0010	.0039	.0003	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0272**	**.0014**	**-.0011**	**.0009**	**.0036**	**.0009**	**.0968**	**1.934**
Stddev	.0003	.0001	.0009	.0001	.0001	.0007	.0009	.0120	.006
%RSD	2877.	.3033	60.34	7.799	11.90	20.06	103.3	12.41	.3130
#1	-.0001	.0271	.0005	-.0010	.0010	.0043	.0003	.0984	1.941
#2	-.0003	.0271	.0015	-.0012	.0009	.0029	.0004	.1080	1.932
#3	.0004	.0273	.0023	-.0011	.0008	.0035	.0019	.0841	1.930

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1441**	**.6765**	**.4817**	**3.759**	**.0034**	**.0008**	**.4027**	**.0302**	**.0071**
Stddev	.0021	.0287	.0461	.006	.0003	.0001	.0012	.0003	.0001
%RSD	1.428	4.249	9.567	.1514	9.146	17.45	.2923	.9518	1.830
#1	.1438	.6645	.4598	3.761	.0036	.0009	.4036	.0299	.0069
#2	.1463	.6557	.5346	3.763	.0030	.0007	.4013	.0305	.0070
#3	.1422	.7093	.4506	3.752	.0035	.0007	.4031	.0302	.0072

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**-.0002**	**.0006**	**.7395**	**.0002**	**-.0005**	**.1525**
Stddev	.0002	.0001	.0001	.0026	.0007	.0016	.0013
%RSD	7.416	70.44	11.12	.3478	309.8	331.1	.8295
#1	.0030	-.0003	.0007	.7398	.0001	-.0019	.1516
#2	.0027	-.0000	.0007	.7420	-.0004	-.0008	.1540
#3	.0032	-.0002	.0006	.7368	.0010	.0013	.1520

Zoom In Zoom Out

Sample Name: JC86517-2 Acquired: 4/22/2019 20:38:09 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115460.**	**7927.0**	**4251.1**	**9639.5**
Stddev	88.	62.1	4.1	6.5
%RSD	.07582	.78400	.09545	.06731
#1	115380.	7909.9	4252.3	9633.2
#2	115440.	7996.0	4246.6	9639.1
#3	115550.	7875.3	4254.5	9646.2

Zoom In Zoom Out

Sample Name: MP14274-MB1CONF Acquired: 4/22/2019 20:43:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0000**	**.0002**	**-.0001**	**-.0001**	**-.0001**	**.0004**	**-.0001**	**-.0007**
Stddev	.0002	.0001	.0001	.0001	.0002	.0001	.0000	.0004	.0003
%RSD	49.09	315.0	65.00	132.7	323.1	87.35	6.943	354.8	38.08
#1	.0003	.0001	.0002	.0000	-.0003	-.0000	.0004	-.0005	-.0005
#2	.0002	-.0000	.0004	-.0001	-.0000	-.0001	.0004	.0001	-.0007
#3	.0005	-.0000	.0001	-.0002	.0001	-.0001	.0004	.0001	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0018**	**-.0002**	**-.0013**	**.0002**	**-.0003**	**.0005**	**.0058**	**.0028**
Stddev	.0002	.0001	.0004	.0006	.0018	.0002	.0002	.0030	.0032
%RSD	82.61	5.020	238.9	43.21	753.2	63.12	33.45	51.53	115.0
#1	.0004	.0019	.0003	-.0007	.0018	-.0004	.0004	.0081	.0013
#2	.0002	.0018	-.0003	-.0018	.0005	-.0001	.0007	.0024	.0065
#3	.0000	.0018	-.0006	-.0013	-.0017	-.0004	.0005	.0068	.0006

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0159**	**.0255**	**.0475**	**.0003**	**.0004**	**.0145**	**.0013**	**-.0000**
Stddev	.0059	.0404	.0236	.0084	.0007	.0002	.0013	.0006	.0001
%RSD	61.55	253.4	92.41	17.77	243.4	63.47	9.064	44.72	149.5
#1	.0139	.0369	.0503	.0378	-.0003	.0007	.0140	.0012	-.0001
#2	.0120	.0415	.0033	.0525	.0011	.0003	.0160	.0018	.0000
#3	.0029	-.0306	.0231	.0523	.0001	.0002	.0136	.0007	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0020**	**.0002**	**.0076**	**-.0007**	**.0006**	**.0028**
Stddev	.0002	.0004	.0000	.0019	.0012	.0003	.0012
%RSD	67.64	21.86	18.87	25.00	171.7	45.32	42.93
#1	.0002	.0016	.0002	.0094	.0005	.0003	.0015
#2	.0005	.0019	.0002	.0079	-.0008	.0009	.0030
#3	.0002	.0024	.0001	.0056	-.0019	.0006	.0039

Zoom In Zoom Out

Sample Name: MP14274-MB1CONF Acquired: 4/22/2019 20:43:38 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115320.**	**7970.3**	**4278.2**	**9628.6**
Stddev	77.	53.7	5.6	11.3
%RSD	.06684	.67389	.13088	.11726
#1	115230.	7986.9	4271.7	9616.0
#2	115380.	7910.2	4280.8	9632.0
#3	115350.	8013.7	4282.0	9637.8

Zoom In Zoom Out

Sample Name: MP14274-B1CONF Acquired: 4/22/2019 20:49:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.002**	**2.006**	**1.983**	**1.976**	**2.030**	**1.975**	**2.037**	**1.977**
Stddev	.004	.004	.001	.002	.007	.004	.007	.004
%RSD	.2230	.1845	.0459	.0867	.3552	.1800	.3667	.2149
#1	1.997	2.003	1.984	1.978	2.038	1.979	2.046	1.982
#2	2.004	2.010	1.982	1.974	2.025	1.975	2.032	1.975
#3	2.005	2.006	1.984	1.975	2.026	1.972	2.034	1.974

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2687**	**2.009**	**2.014**	**2.032**	**2.074**	**2.009**	**1.973**	**2.075**
Stddev	.0009	.006	.003	.001	.004	.002	.004	.002
%RSD	.3410	.3161	.1320	.0518	.1933	.1121	.1805	.0785
#1	.2697	2.015	2.017	2.031	2.078	2.012	1.977	2.075
#2	.2680	2.007	2.013	2.033	2.073	2.008	1.969	2.073
#3	.2685	2.003	2.012	2.031	2.071	2.007	1.973	2.076

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.16**	**25.68**	**25.76**	**25.21**	**25.82**	**25.59**	**2.008**	**2.101**
Stddev	.10	.05	.05	.12	.04	.02	.002	.001
%RSD	.3914	.1854	.1827	.4631	.1381	.0736	.0857	.0426
#1	25.26	25.73	25.78	25.27	25.79	25.61	2.008	2.102
#2	25.07	25.66	25.79	25.08	25.81	25.58	2.006	2.100
#3	25.16	25.64	25.70	25.29	25.86	25.59	2.010	2.100

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1890**	**2.131**	**1.991**	**2.066**	**2.017**	**2.058**	F **-.1035**	**.0022**
Stddev	.0008	.004	.004	.006	.002	.003	.0026	.0009
%RSD	.4302	.1796	.1994	.2931	.0759	.1443	2.544	40.53
#1	.1892	2.135	1.987	2.072	2.015	2.061	-.1040	.0028
#2	.1881	2.129	1.993	2.060	2.018	2.059	-.1059	.0026
#3	.1897	2.128	1.994	2.065	2.017	2.055	-.1007	.0012

Zoom In Zoom Out

Sample Name: MP14274-B1CONF Acquired: 4/22/2019 20:49:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0011**	**2.012**
Stddev	.0005	.006
%RSD	51.65	.2811
#1	-.0012	2.017
#2	-.0005	2.013
#3	-.0015	2.005

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111870.**	**7902.0**	**4183.7**	**8875.3**
Stddev	489.	32.5	3.6	6.7
%RSD	.43689	.41077	.08665	.07523
#1	111310.	7864.6	4182.1	8868.5
#2	112200.	7923.1	4187.9	8881.8
#3	112110.	7918.2	4181.2	8875.5

Zoom In Zoom Out

Sample Name: JC86456-2 7 Acquired: 4/22/2019 20:54:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0000**	**-.0000**	**.0002**	**.0003**	**-.0003**	**.0009**	**.0016**	**-.0004**
Stddev	.0002	.0001	.0001	.0001	.0001	.0003	.0000	.0001	.0001
%RSD	26.73	174.0	822.6	57.43	20.88	89.69	5.184	4.216	28.84
#1	.0007	.0001	-.0000	.0003	.0002	-.0007	.0008	.0015	-.0004
#2	.0011	.0001	.0001	.0001	.0004	-.0002	.0009	.0017	-.0003
#3	.0007	-.0000	-.0001	.0003	.0003	-.0001	.0009	.0016	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0221**	**.0003**	**.0000**	**.0001**	**.0015**	**.0003**	**.0167**	**.1678**
Stddev	.0002	.0000	.0003	.0002	.0011	.0016	.0007	.0219	.0038
%RSD	67.18	.1204	95.09	645.1	1225.	100.5	258.8	131.4	2.281
#1	.0002	.0221	-.0000	-.0001	.0013	.0009	-.0005	-.0045	.1663
#2	.0002	.0221	.0006	.0003	-.0001	.0033	.0006	.0154	.1650
#3	.0005	.0221	.0004	-.0001	-.0009	.0004	.0007	.0393	.1722

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**-.0049**	**.0766**	**.0817**	**.0017**	**.0003**	**.0680**	**.0003**	**.0032**
Stddev	.0061	.0148	.0208	.0070	.0005	.0002	.0009	.0002	.0000
%RSD	159.1	302.8	27.20	8.579	30.12	87.70	1.366	75.97	1.141
#1	.0075	-.0124	.0554	.0804	.0015	.0005	.0691	.0005	.0031
#2	.0071	.0121	.0970	.0892	.0012	.0001	.0674	.0001	.0032
#3	-.0032	-.0144	.0774	.0754	.0022	.0002	.0676	.0004	.0032

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0049**	**.0200**	**.0085**	**-.0006**	**.0004**	**.0052**
Stddev	.0002	.0009	.0002	.0018	.0013	.0007	.0010
%RSD	49.03	17.88	1.103	21.02	211.9	175.0	19.92
#1	.0007	.0055	.0200	.0071	.0001	.0013	.0042
#2	.0003	.0052	.0198	.0106	.0002	.0001	.0050
#3	.0003	.0039	.0203	.0079	-.0022	-.0001	.0063

Zoom In Zoom Out

Sample Name: JC86456-2 7 Acquired: 4/22/2019 20:54:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115840.**	**7930.1**	**4291.4**	**9661.5**
Stddev	400.	14.6	1.7	2.2
%RSD	.34508	.18445	.04026	.02251
#1	115570.	7917.0	4289.5	9663.9
#2	116300.	7927.5	4292.7	9661.3
#3	115650.	7945.9	4292.1	9659.5

Zoom In Zoom Out

Sample Name: MP14400-MB1 Acquired: 4/22/2019 20:59:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**.0002**	**.0004**	**.0009**	**.0004**	**.0005**	**.0010**	**-.0005**
Stddev	.0001	.0001	.0002	.0001	.0004	.0003	.0000	.0002	.0002
%RSD	33.18	128.8	81.79	36.70	43.03	84.60	5.990	22.60	36.66
#1	.0003	.0000	.0000	.0005	.0006	.0003	.0005	.0013	-.0007
#2	.0004	.0000	.0002	.0003	.0007	.0008	.0006	.0009	-.0006
#3	.0005	.0002	.0004	.0003	.0013	.0002	.0005	.0009	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0127**	**.0007**	**.0004**	**.0011**	**.0017**	**-.0007**	**.0065**	**.1376**
Stddev	.0001	.0001	.0005	.0003	.0007	.0019	.0006	.0050	.0013
%RSD	41.68	.6206	74.36	82.58	67.05	110.4	89.45	76.05	.9642
#1	.0004	.0126	.0005	.0004	.0005	.0029	-.0002	.0122	.1375
#2	.0002	.0127	.0003	.0007	.0019	-.0005	-.0004	.0028	.1364
#3	.0002	.0127	.0013	.0001	.0008	.0027	-.0013	.0046	.1391

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0360**	**-.0043**	**.0876**	**.1176**	**.0016**	**.0004**	**.0098**	**.0183**	**.0004**
Stddev	.0040	.0277	.0111	.0028	.0009	.0002	.0006	.0008	.0001
%RSD	11.21	638.1	12.66	2.342	57.82	38.54	6.143	4.401	26.24
#1	.0397	.0186	.1003	.1169	.0026	.0006	.0091	.0175	.0005
#2	.0317	.0035	.0801	.1206	.0012	.0003	.0100	.0182	.0003
#3	.0367	-.0351	.0823	.1152	.0009	.0004	.0102	.0191	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0017**	**.0006**	**.0158**	**-.0009**	**-.0005**	**.0232**
Stddev	.0001	.0005	.0000	.0017	.0013	.0005	.0008
%RSD	14.87	28.96	8.671	10.64	155.8	97.50	3.528
#1	.0005	.0012	.0006	.0175	.0007	.0000	.0240
#2	.0007	.0017	.0006	.0141	-.0016	-.0006	.0232
#3	.0007	.0022	.0005	.0157	-.0017	-.0010	.0224

Zoom In Zoom Out

Sample Name: MP14400-MB1 Acquired: 4/22/2019 20:59:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116260.**	**7995.7**	**4284.4**	**9672.3**
Stddev	235.	10.7	7.2	14.1
%RSD	.20203	.13407	.16772	.14616
#1	116290.	8002.4	4291.9	9688.7
#2	116020.	7983.4	4283.9	9664.1
#3	116490.	8001.4	4277.5	9664.3

Zoom In Zoom Out

Sample Name: MP14400-B1 Acquired: 4/22/2019 21:05:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.924**	**1.937**	**1.898**	**1.877**	**1.892**	**1.869**	**1.929**	**1.886**
Stddev	.007	.008	.001	.002	.002	.004	.000	.001
%RSD	.3735	.3977	.0660	.0856	.1085	.1997	.0185	.0511
#1	1.933	1.945	1.900	1.879	1.893	1.873	1.929	1.887
#2	1.921	1.937	1.897	1.877	1.893	1.867	1.929	1.886
#3	1.919	1.930	1.898	1.876	1.890	1.866	1.928	1.885

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2525**	**1.892**	**1.946**	**1.919**	**1.988**	**1.923**	**1.877**	**1.956**
Stddev	.0003	.001	.000	.003	.004	.001	.007	.003
%RSD	.1016	.0634	.0169	.1290	.2233	.0653	.3912	.1257
#1	.2524	1.891	1.945	1.920	1.992	1.923	1.882	1.959
#2	.2522	1.894	1.946	1.920	1.989	1.922	1.881	1.957
#3	.2527	1.892	1.946	1.916	1.983	1.925	1.869	1.954

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.65**	**24.25**	**24.61**	**24.07**	**24.57**	**24.30**	**1.880**	**1.944**
Stddev	.06	.06	.09	.12	.03	.07	.002	.000
%RSD	.2476	.2418	.3727	.4843	.1134	.2774	.1227	.0186
#1	23.67	24.26	24.70	24.08	24.57	24.35	1.882	1.944
#2	23.69	24.31	24.61	24.18	24.60	24.33	1.877	1.944
#3	23.58	24.19	24.52	23.95	24.54	24.23	1.881	1.943

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0936**	**2.025**	**1.919**	**1.928**	**1.234**	**1.934**	W **-.0458**	**.0025**
Stddev	.0004	.005	.007	.001	.007	.001	.0007	.0006
%RSD	.4669	.2683	.3504	.0712	.5537	.0733	1.605	25.17
#1	.0935	2.030	1.926	1.930	1.227	1.935	-.0455	.0021
#2	.0940	2.019	1.917	1.928	1.234	1.935	-.0466	.0033
#3	.0932	2.026	1.913	1.927	1.241	1.933	-.0452	.0022

Zoom In Zoom Out

Sample Name: MP14400-B1 Acquired: 4/22/2019 21:05:08 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0004**	**1.934**
Stddev	.0012	.006
%RSD	307.7	.3202
#1	-.0003	1.941
#2	.0018	1.932
#3	-.0003	1.929

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112400.**	**7838.0**	**4162.2**	**8855.9**
Stddev	58.	51.7	2.3	1.5
%RSD	.05175	.66022	.05451	.01681
#1	112460.	7862.8	4163.0	8857.4
#2	112350.	7778.5	4164.0	8855.8
#3	112400.	7872.6	4159.7	8854.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 21:10:13 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.043**	**2.054**	**2.023**	**2.032**	**2.047**	**1.999**	**2.067**	**2.037**	**.2518**
Stddev	.001	.003	.001	.001	.000	.001	.004	.003	.0014
%RSD	.0269	.1544	.0336	.0228	.0117	.0612	.1841	.1404	.5479
#1	2.042	2.054	2.022	2.032	2.047	1.998	2.067	2.040	.2533
#2	2.042	2.058	2.023	2.031	2.047	1.998	2.071	2.037	.2505
#3	2.043	2.052	2.022	2.031	2.046	2.000	2.063	2.035	.2518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.040**	**2.064**	**2.030**	**2.095**	**2.059**	**2.021**	**2.051**	**39.68**	**40.39**
Stddev	.004	.002	.003	.002	.001	.001	.001	.03	.08
%RSD	.1811	.1018	.1478	.1055	.0273	.0644	.0402	.0735	.2046
#1	2.040	2.062	2.028	2.092	2.059	2.019	2.050	39.70	40.37
#2	2.043	2.065	2.033	2.097	2.059	2.021	2.051	39.70	40.48
#3	2.036	2.066	2.028	2.095	2.058	2.021	2.052	39.65	40.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.75**	**40.48**	**41.16**	**40.40**	**2.065**	**2.065**	**5.312**	**2.093**	**2.040**
Stddev	.08	.24	.08	.04	.001	.001	.001	.003	.001
%RSD	.1896	.5991	.1917	.0974	.0568	.0476	.0259	.1237	.0414
#1	40.78	40.39	41.16	40.41	2.067	2.065	5.313	2.093	2.041
#2	40.80	40.76	41.24	40.44	2.064	2.064	5.311	2.091	2.039
#3	40.66	40.30	41.08	40.36	2.066	2.066	5.311	2.096	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 21:10:13 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.035**	**2.046**	**2.039**	**2.018**	**2.061**	**2.033**	**2.060**
Stddev	.001	.002	.002	.004	.003	.004	.002
%RSD	.0386	.0877	.0943	.1892	.1402	.1764	.0734
#1	2.036	2.048	2.041	2.016	2.064	2.029	2.059
#2	2.034	2.044	2.040	2.022	2.061	2.035	2.062
#3	2.035	2.046	2.037	2.015	2.058	2.034	2.060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110390.**	**7695.5**	**4123.7**	**8598.2**
Stddev	115.	62.6	2.5	1.9
%RSD	.10422	.81302	.06068	.02155
#1	110280.	7727.0	4126.0	8599.3
#2	110380.	7623.4	4123.9	8596.1
#3	110510.	7736.0	4121.1	8599.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 21:15:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**.0001**	**.0003**	**-.0005**	**-.0001**	**.0001**	**.0000**	**-.0002**
Stddev	.0001	.0000	.0001	.0001	.0004	.0000	.0000	.0002	.0002
%RSD	44.80	46.85	126.8	52.71	70.95	30.86	28.06	390.8	101.5
#1	.0002	.0000	.0002	.0004	-.0005	-.0001	.0001	.0002	-.0003
#2	.0004	.0001	-.0000	.0002	-.0002	-.0002	.0001	.0001	.0000
#3	.0002	.0001	.0001	.0002	-.0009	-.0001	.0002	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0003**	**.0010**	**-.0005**	**.0002**	**.0023**	**-.0008**	**.0001**	**.0015**
Stddev	.0003	.0001	.0007	.0005	.0011	.0007	.0006	.0061	.0008
%RSD	100.4	47.58	64.53	111.7	682.7	31.00	74.11	4942.	53.71
#1	.0000	.0003	.0017	-.0000	.0015	.0026	-.0007	.0038	.0024
#2	.0007	.0001	.0009	-.0010	-.0006	.0015	-.0015	.0035	.0007
#3	.0003	.0004	.0004	-.0004	-.0004	.0027	-.0003	-.0069	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0042**	**-.0011**	**.0854**	**.0551**	**.0024**	**.0005**	**-.0006**	**.0004**	**.0000**
Stddev	.0059	.0248	.0169	.0115	.0005	.0001	.0017	.0001	.0002
%RSD	141.9	2253.	19.79	20.86	20.01	23.69	290.8	17.64	694.6
#1	-.0023	-.0274	.0844	.0557	.0028	.0006	-.0004	.0005	-.0000
#2	.0092	.0219	.0690	.0663	.0027	.0004	.0010	.0004	-.0001
#3	.0056	.0022	.1028	.0433	.0019	.0004	-.0024	.0004	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 21:15:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0048**	**.0003**	**-.0011**	**.0000**	**-.0001**	**.0027**
Stddev	.0002	.0003	.0003	.0010	.0009	.0013	.0008
%RSD	53.38	6.603	102.1	86.74	1954.	1146.	28.05
#1	.0006	.0049	.0003	-.0002	.0010	.0014	.0020
#2	.0007	.0050	-.0000	-.0021	-.0007	-.0007	.0026
#3	.0002	.0044	.0005	-.0011	-.0001	-.0010	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115040.**	**7860.4**	**4280.8**	**9609.1**
Stddev	441.	35.5	4.9	9.1
%RSD	.38334	.45150	.11525	.09453
#1	114600.	7820.5	4283.4	9602.3
#2	115480.	7888.3	4283.8	9619.4
#3	115030.	7872.5	4275.1	9605.5

Zoom In Zoom Out

Sample Name: MP14400-S1 Acquired: 4/22/2019 21:20:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.204**	**1.884**	**1.876**	**1.942**	**1.988**	**1.959**	**5.178**	**1.989**	**.2510**
Stddev	.001	.001	.002	.001	.003	.001	.012	.003	.0008
%RSD	.0633	.0522	.0963	.0686	.1235	.0610	.2274	.1247	.3118
#1	2.204	1.883	1.878	1.941	1.990	1.957	5.188	1.987	.2510
#2	2.205	1.885	1.875	1.943	1.989	1.960	5.181	1.989	.2502
#3	2.202	1.884	1.875	1.943	1.985	1.958	5.165	1.992	.2517

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028**	**2.182**	**1.913**	**1.932**	**1.982**	**1.828**	**1.245**	**115.8**	**30.32**
Stddev	.003	.006	.003	.001	.003	.001	.003	.1	.04
%RSD	.1488	.2928	.1738	.0286	.1418	.0248	.2248	.0821	.1415
#1	2.030	2.175	1.916	1.932	1.980	1.828	1.248	115.7	30.28
#2	2.028	2.184	1.910	1.932	1.981	1.828	1.245	115.8	30.32
#3	2.024	2.187	1.915	1.933	1.985	1.827	1.243	115.9	30.37

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.2**	**44.01**	**37.96**	**24.58**	**1.822**	**1.879**	**2.556**	**1.894**	**1.941**
Stddev	.0	.16	.02	.02	.003	.001	.011	.002	.003
%RSD	.0212	.3676	.0503	.0944	.1565	.0525	.4433	.1055	.1529
#1	153.2	44.17	37.94	24.56	1.825	1.879	2.562	1.891	1.941
#2	153.2	43.85	37.96	24.57	1.820	1.880	2.562	1.895	1.944
#3	153.1	44.01	37.98	24.60	1.821	1.878	2.542	1.895	1.938

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.344**	**.9853**	**1.955**	**.1313**	**.0016**	**.1090**	**3.670**
Stddev	.007	.0027	.001	.0014	.0001	.0004	.020
%RSD	.2111	.2781	.0394	1.050	3.960	.3527	.5378
#1	3.350	.9843	1.956	.1329	.0015	.1094	3.692
#2	3.345	.9831	1.955	.1304	.0016	.1088	3.661
#3	3.336	.9884	1.955	.1307	.0016	.1087	3.656

Zoom In Zoom Out

Sample Name: MP14400-S1 Acquired: 4/22/2019 21:20:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113000.**	**8046.2**	**4204.8**	**8659.8**
Stddev	313.	18.1	2.6	2.2
%RSD	.27680	.22478	.06176	.02513
#1	112680.	8061.6	4203.8	8661.3
#2	113040.	8050.6	4202.8	8657.3
#3	113300.	8026.3	4207.7	8660.7

Zoom In Zoom Out

Sample Name: MP14400-S2 Acquired: 4/22/2019 21:25:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.245**	**1.940**	**1.947**	**2.006**	**2.078**	**2.037**	**4.468**	**2.059**	**.2598**
Stddev	.004	.010	.002	.001	.004	.004	.005	.001	.0003
%RSD	.1637	.5151	.0819	.0574	.1729	.1884	.1126	.0552	.1043
#1	2.247	1.951	1.948	2.007	2.082	2.040	4.473	2.059	.2599
#2	2.247	1.938	1.945	2.005	2.077	2.033	4.467	2.060	.2595
#3	2.241	1.931	1.946	2.005	2.075	2.037	4.463	2.057	.2600

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.091**	**2.248**	**1.983**	**2.000**	**2.046**	**1.892**	**1.301**	**118.5**	**30.90**
Stddev	.003	.005	.004	.002	.004	.004	.003	.1	.08
%RSD	.1233	.2457	.2260	.1045	.1723	.1862	.1988	.0680	.2608
#1	2.092	2.253	1.979	1.998	2.050	1.888	1.303	118.5	30.99
#2	2.093	2.249	1.981	2.000	2.046	1.895	1.298	118.5	30.85
#3	2.088	2.242	1.988	2.002	2.043	1.892	1.303	118.4	30.86

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**152.6**	**44.69**	**39.00**	**25.37**	**1.874**	**1.948**	**2.679**	**1.963**	**1.996**
Stddev	.8	.46	.08	.03	.004	.001	.002	.002	.005
%RSD	.5412	1.028	.2148	.1293	.2377	.0395	.0748	.1030	.2463
#1	153.5	45.18	39.07	25.40	1.871	1.948	2.677	1.965	2.001
#2	152.4	44.62	39.02	25.39	1.873	1.947	2.681	1.961	1.994
#3	151.9	44.27	38.91	25.34	1.880	1.948	2.678	1.962	1.992

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.401**	**.9887**	**2.037**	**.1253**	**.0034**	**.1120**	**3.693**
Stddev	.004	.0005	.001	.0039	.0008	.0004	.021
%RSD	.1061	.0530	.0335	3.142	22.40	.3174	.5668
#1	3.404	.9886	2.037	.1208	.0026	.1119	3.669
#2	3.402	.9893	2.038	.1276	.0035	.1117	3.700
#3	3.397	.9882	2.036	.1276	.0042	.1124	3.709

Zoom In Zoom Out

Sample Name: MP14400-S2 Acquired: 4/22/2019 21:25:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112670.**	**8047.7**	**4202.1**	**8645.9**
Stddev	160.	48.7	3.4	7.6
%RSD	.14169	.60569	.08028	.08828
#1	112490.	7992.0	4198.5	8637.3
#2	112760.	8068.1	4202.8	8648.9
#3	112770.	8082.9	4205.1	8651.6

Zoom In Zoom Out

Sample Name: JC86406-10 Acquired: 4/22/2019 21:30:48 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6626**	**.0065**	**.0016**	**.0439**	**.1867**	**.1576**	**1.391**	**.0925**	**.0008**
Stddev	.0014	.0002	.0001	.0002	.0007	.0013	.004	.0001	.0006
%RSD	.2134	2.522	9.019	.4211	.3753	.8233	.3048	.1218	70.04
#1	.6612	.0063	.0014	.0437	.1866	.1582	1.392	.0926	.0002
#2	.6640	.0066	.0017	.0440	.1875	.1584	1.394	.0924	.0011
#3	.6627	.0067	.0017	.0440	.1861	.1561	1.386	.0926	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2180**	**.7034**	**.0607**	**.0010**	**1.684**	**.0101**	**.0015**	**106.1**	**52.74**
Stddev	.0013	.0010	.0005	.0002	.002	.0023	.0011	.1	.16
%RSD	.6084	.1484	.8824	20.07	.1089	23.13	75.63	.1286	.3059
#1	.2193	.7022	.0610	.0008	1.683	.0127	.0003	106.0	52.80
#2	.2180	.7041	.0601	.0009	1.683	.0098	.0016	106.2	52.55
#3	.2167	.7038	.0611	.0012	1.686	.0080	.0026	106.2	52.86

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**136.7**	**20.28**	**10.56**	**.8557**	**.0524**	**.0061**	**1.660**	**.0676**	**.1786**
Stddev	.5	.12	.03	.0071	.0004	.0001	.007	.0010	.0008
%RSD	.3414	.5885	.3012	.8299	.7041	2.112	.4133	1.500	.4245
#1	136.8	20.21	10.54	.8475	.0522	.0060	1.656	.0668	.1784
#2	136.2	20.22	10.55	.8599	.0522	.0063	1.667	.0674	.1795
#3	137.1	20.42	10.60	.8596	.0528	.0061	1.655	.0688	.1780

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.564**	**.0127**	**.0361**	**1.075**	**-.0025**	**.1543**	**6.348**
Stddev	.007	.0002	.0002	.006	.0010	.0008	.034
%RSD	.2594	1.408	.5285	.5686	40.17	.5202	.5419
#1	2.566	.0129	.0363	1.073	-.0030	.1552	6.312
#2	2.569	.0127	.0360	1.081	-.0014	.1536	6.380
#3	2.556	.0125	.0360	1.069	-.0032	.1540	6.352

Zoom In Zoom Out

Sample Name: JC86406-10 Acquired: 4/22/2019 21:30:48 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**119040.**	**8491.6**	**4431.3**	**8870.9**
Stddev	317.	67.8	8.8	13.4
%RSD	.26643	.79796	.19868	.15070
#1	118910.	8464.5	4441.2	8886.3
#2	118810.	8568.7	4424.5	8863.0
#3	119400.	8441.6	4428.2	8863.3

Zoom In Zoom Out

Sample Name: MP14400-SD1 Acquired: 4/22/2019 21:36:03 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7195**	**.0066**	**.0020**	**.0451**	**.2032**	**.1639**	**1.520**	**.0935**	**-.0006**
Stddev	.0020	.0002	.0006	.0013	.0027	.0003	.002	.0008	.0008
%RSD	.2785	3.599	29.07	2.861	1.316	.1709	.1109	.8549	136.2
#1	.7174	.0068	.0027	.0456	.2062	.1642	1.521	.0926	-.0006
#2	.7196	.0063	.0018	.0436	.2010	.1640	1.521	.0940	-.0014
#3	.7214	.0065	.0016	.0460	.2025	.1636	1.518	.0940	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2359**	**.8098**	**.0695**	**.0008**	**1.749**	**.0121**	**.0015**	**113.0**	**57.53**
Stddev	.0010	.0009	.0053	.0055	.005	.0111	.0010	.2	.06
%RSD	.4082	.1075	7.562	673.5	.2836	91.56	69.70	.1768	.1107
#1	.2355	.8094	.0710	.0006	1.744	.0217	.0007	112.8	57.47
#2	.2370	.8092	.0636	.0064	1.753	-.0000	.0012	113.2	57.52
#3	.2352	.8108	.0738	-.0046	1.751	.0146	.0027	112.9	57.60

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**152.9**	**22.12**	**11.62**	**1.044**	**.0656**	**.0064**	**1.910**	**.0755**	**.1920**
Stddev	.3	.13	.16	.026	.0010	.0009	.003	.0036	.0013
%RSD	.1820	.6029	1.378	2.529	1.589	13.96	.1487	4.801	.6913
#1	153.0	22.00	11.63	1.048	.0661	.0074	1.913	.0727	.1911
#2	153.1	22.26	11.77	1.015	.0644	.0057	1.907	.0796	.1915
#3	152.5	22.09	11.45	1.067	.0662	.0062	1.911	.0743	.1935

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.767**	**.0291**	**.0386**	**1.164**	**.0016**	**.1650**	**6.853**
Stddev	.005	.0028	.0008	.002	.0060	.0067	.009
%RSD	.1908	9.784	1.991	.1322	374.8	4.067	.1264
#1	2.773	.0323	.0378	1.162	-.0028	.1668	6.860
#2	2.764	.0270	.0392	1.165	-.0008	.1707	6.856
#3	2.765	.0280	.0389	1.165	.0084	.1576	6.844

Zoom In Zoom Out

Sample Name: MP14400-SD1 Acquired: 4/22/2019 21:36:03 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115600.**	**7982.3**	**4307.5**	**9282.1**
Stddev	273.	43.0	5.9	9.7
%RSD	.23609	.53822	.13719	.10410
#1	115570.	7945.0	4300.9	9280.0
#2	115350.	7972.6	4309.5	9273.6
#3	115890.	8029.3	4312.2	9292.6

Zoom In Zoom Out

Sample Name: jc86406-1 Acquired: 4/22/2019 21:41:23 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5658**	**.0062**	**.0001**	**.0429**	**.4448**	**.1162**	**.7536**	**.1155**
Stddev	.0010	.0001	.0002	.0014	.0018	.0002	.0016	.0033
%RSD	.1684	1.124	252.9	3.166	.4100	.1920	.2078	2.851
#1	.5657	.0062	.0003	.0439	.4434	.1161	.7519	.1175
#2	.5649	.0063	-.0000	.0435	.4469	.1165	.7548	.1173
#3	.5668	.0063	-.0000	.0414	.4442	.1161	.7542	.1117

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0062**	**.5732**	**.3789**	**.1026**	**.0010**	**.1165**	**.0082**	**-.0008**
Stddev	.0008	.0012	.0098	.0026	.0018	.0006	.0044	.0022
%RSD	12.88	.2162	2.591	2.575	188.0	.4937	53.46	276.1
#1	-.0052	.5720	.3827	.1042	-.0009	.1159	.0061	.0017
#2	-.0065	.5744	.3863	.1040	.0010	.1170	.0053	-.0019
#3	-.0067	.5733	.3678	.0996	.0028	.1166	.0133	-.0022

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **319.5**	**17.91**	F **332.5**	**12.26**	**10.23**	**1.084**	**.0291**	**.0118**
Stddev	.4	.06	.7	.05	.02	.002	.0005	.0004
%RSD	.1398	.3156	.2119	.3794	.1610	.1969	1.713	3.434
#1	320.0	17.95	333.1	12.25	10.24	1.084	.0291	.0114
#2	319.1	17.84	331.7	12.22	10.21	1.082	.0296	.0122
#3	319.5	17.93	332.8	12.31	10.24	1.087	.0286	.0118

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.699**	**.0272**	**.1844**	**2.313**	**.0131**	**.1507**	**.5612**	**.0017**
Stddev	.040	.0002	.0005	.003	.0009	.0005	.0096	.0015
%RSD	2.335	.5889	.2895	.1411	6.920	.3333	1.718	87.39
#1	1.724	.0273	.1850	2.310	.0141	.1510	.5694	.0034
#2	1.720	.0273	.1839	2.317	.0123	.1510	.5635	.0010
#3	1.653	.0270	.1844	2.312	.0130	.1501	.5506	.0007

Zoom In Zoom Out

Sample Name: jc86406-1 Acquired: 4/22/2019 21:41:23 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1994**	**2.314**
Stddev	.0019	.054
%RSD	.9753	2.322
#1	.2001	2.346
#2	.2010	2.343
#3	.1972	2.252

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112720.**	**8129.2**	**4359.7**	**8876.3**
Stddev	385.	18.4	83.2	159.6
%RSD	.34150	.22646	1.9092	1.7975
#1	113160.	8118.0	4312.3	8790.4
#2	112470.	8150.5	4310.9	8778.0
#3	112530.	8119.2	4455.8	9060.3

Zoom In Zoom Out

Sample Name: jc86406-2 Acquired: 4/22/2019 21:46:36 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6155**	**.0061**	**.0008**	**.0618**	**.2666**	**.1142**	**1.644**	**.1226**	**-.0016**
Stddev	.0010	.0001	.0003	.0001	.0007	.0005	.005	.0004	.0003
%RSD	.1552	1.388	40.30	.1818	.2681	.4666	.2834	.3637	18.80
#1	.6159	.0062	.0005	.0618	.2673	.1140	1.650	.1226	-.0020
#2	.6144	.0061	.0012	.0617	.2665	.1138	1.641	.1231	-.0014
#3	.6161	.0061	.0008	.0619	.2659	.1148	1.642	.1222	-.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3742**	**.5141**	**.0732**	**.0022**	**.3037**	**.0041**	**-.0016**	**186.6**	**10.58**
Stddev	.0012	.0004	.0015	.0015	.0011	.0015	.0021	.4	.04
%RSD	.3273	.0719	2.098	65.84	.3758	36.05	132.0	.2140	.3785
#1	.3756	.5139	.0718	.0010	.3031	.0048	-.0040	187.0	10.60
#2	.3738	.5140	.0730	.0018	.3050	.0024	-.0000	186.2	10.53
#3	.3733	.5146	.0749	.0038	.3030	.0052	-.0008	186.4	10.60

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **216.3**	**18.54**	**11.71**	**.5677**	**.0397**	**.0086**	**1.715**	**.0280**	**.1263**
Stddev	1.0	.14	.03	.0012	.0003	.0002	.004	.0004	.0001
%RSD	.4614	.7724	.2624	.2100	.7209	2.543	.2140	1.270	.0699
#1	217.2	18.65	11.75	.5667	.0396	.0085	1.715	.0283	.1263
#2	215.2	18.37	11.71	.5675	.0400	.0088	1.718	.0279	.1262
#3	216.5	18.59	11.69	.5690	.0395	.0083	1.711	.0276	.1264

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.809**	**.0115**	**.0809**	**.9143**	**-.0007**	**.1421**	**2.169**
Stddev	.007	.0001	.0003	.0029	.0004	.0017	.002
%RSD	.1822	1.273	.4139	.3209	55.63	1.176	.0887
#1	3.817	.0114	.0813	.9173	-.0003	.1404	2.172
#2	3.806	.0114	.0806	.9115	-.0008	.1438	2.168
#3	3.804	.0116	.0809	.9140	-.0011	.1421	2.168

Zoom In Zoom Out

Sample Name: jc86406-2 Acquired: 4/22/2019 21:46:36 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115050.**	**8204.7**	**4335.9**	**8870.4**
Stddev	576.	86.7	3.5	4.5
%RSD	.50059	1.0570	.07973	.05122
#1	114390.	8115.6	4339.6	8866.1
#2	115310.	8288.9	4332.7	8875.2
#3	115450.	8209.5	4335.2	8869.9

Zoom In Zoom Out

Sample Name: jc86406-3 Acquired: 4/22/2019 21:51:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2725**	**.0031**	**.0009**	**.0288**	**.1147**	**.0738**	**.9138**	**.0686**	**.0003**
Stddev	.0010	.0000	.0001	.0001	.0006	.0003	.0014	.0001	.0004
%RSD	.3691	.3899	12.74	.3084	.5520	.3878	.1559	.1692	125.5
#1	.2728	.0031	.0009	.0288	.1144	.0735	.9146	.0686	.0008
#2	.2733	.0031	.0010	.0289	.1143	.0741	.9122	.0687	.0002
#3	.2714	.0031	.0008	.0287	.1154	.0739	.9147	.0685	-.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1451**	**.3226**	**.0355**	**-.0005**	**.2654**	**.0025**	**-.0015**	**67.81**	**4.176**
Stddev	.0008	.0002	.0002	.0005	.0011	.0020	.0012	.21	.004
%RSD	.5281	.0740	.5374	112.9	.4197	77.82	77.44	.3099	.0868
#1	.1455	.3225	.0353	-.0000	.2660	.0047	-.0010	67.84	4.173
#2	.1442	.3229	.0357	-.0011	.2641	.0019	-.0029	68.01	4.177
#3	.1455	.3226	.0354	-.0003	.2661	.0009	-.0007	67.59	4.180

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.0**	**12.07**	**5.623**	**.2575**	**.0140**	**.0035**	**1.644**	**.0212**	**.0431**
Stddev	.2	.12	.017	.0085	.0010	.0000	.005	.0004	.0001
%RSD	.1963	1.023	.3039	3.291	7.253	.3071	.3188	1.765	.2870
#1	105.0	12.00	5.627	.2593	.0152	.0035	1.649	.0208	.0429
#2	104.7	12.00	5.604	.2649	.0136	.0035	1.642	.0216	.0432
#3	105.2	12.21	5.638	.2483	.0132	.0035	1.639	.0211	.0431

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8805**	**.0051**	**.0080**	**.3868**	**.0017**	**.0803**	**1.721**
Stddev	.0010	.0004	.0002	.0017	.0011	.0004	.001
%RSD	.1179	8.428	2.210	.4361	66.46	.5179	.0580
#1	.8808	.0051	.0081	.3852	.0025	.0798	1.721
#2	.8793	.0047	.0081	.3886	.0022	.0804	1.720
#3	.8813	.0055	.0078	.3866	.0004	.0806	1.722

Zoom In Zoom Out

Sample Name: jc86406-3 Acquired: 4/22/2019 21:51:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115870.**	**8081.2**	**4318.1**	**9146.0**
Stddev	363.	30.6	3.2	3.5
%RSD	.31288	.37829	.07451	.03801
#1	115490.	8102.4	4316.6	9141.9
#2	116220.	8095.0	4321.8	9148.0
#3	115880.	8046.1	4316.0	9148.0

Zoom In Zoom Out

Sample Name: jc86406-4 Acquired: 4/22/2019 21:57:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3848**	**.0045**	**.0107**	**.0647**	**.1279**	**.1154**	**2.286**	**.1039**	**-.0002**
Stddev	.0005	.0002	.0001	.0001	.0004	.0006	.004	.0004	.0004
%RSD	.1260	4.080	.8091	.2105	.2925	.5008	.1892	.3779	249.3
#1	.3851	.0044	.0106	.0646	.1281	.1148	2.289	.1042	-.0002
#2	.3852	.0047	.0106	.0648	.1275	.1160	2.281	.1039	.0003
#3	.3843	.0044	.0108	.0648	.1282	.1153	2.287	.1034	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1764**	**.4466**	**.0568**	**-.0004**	**.2808**	**.0033**	**-.0004**	**85.10**	**5.639**
Stddev	.0006	.0010	.0007	.0017	.0011	.0014	.0005	.16	.026
%RSD	.3431	.2276	1.242	445.3	.4075	42.86	119.0	.1897	.4621
#1	.1761	.4470	.0576	-.0017	.2820	.0049	-.0001	84.96	5.613
#2	.1759	.4455	.0567	.0015	.2797	.0029	-.0010	85.28	5.665
#3	.1770	.4474	.0562	-.0009	.2807	.0022	-.0002	85.08	5.639

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**145.6**	**17.12**	**9.374**	**1.222**	**.0209**	**.0063**	**1.750**	**.0283**	**.0460**
Stddev	.5	.11	.026	.004	.0007	.0001	.007	.0007	.0003
%RSD	.3600	.6659	.2741	.3620	3.440	1.910	.3881	2.481	.7046
#1	145.6	17.15	9.364	1.218	.0214	.0062	1.754	.0279	.0459
#2	146.1	17.22	9.404	1.226	.0201	.0065	1.753	.0278	.0463
#3	145.1	16.99	9.355	1.222	.0212	.0063	1.742	.0291	.0457

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.440**	**.0054**	**.0324**	**.3106**	**.0027**	**.1062**	**2.588**
Stddev	.002	.0006	.0001	.0027	.0008	.0003	.006
%RSD	.1445	11.61	.2577	.8657	28.07	.3136	.2522
#1	1.442	.0059	.0325	.3091	.0035	.1063	2.595
#2	1.438	.0047	.0324	.3090	.0020	.1065	2.584
#3	1.441	.0055	.0324	.3137	.0026	.1058	2.584

Zoom In Zoom Out

Sample Name: jc86406-4 Acquired: 4/22/2019 21:57:10 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115490.**	**8080.9**	**4315.3**	**9052.1**
Stddev	200.	35.6	1.2	3.3
%RSD	.17279	.44058	.02890	.03696
#1	115380.	8105.0	4316.4	9053.6
#2	115720.	8040.0	4315.7	9048.2
#3	115370.	8097.7	4314.0	9054.3

Zoom In Zoom Out

Sample Name: jc86406-5 Acquired: 4/22/2019 22:02:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2063**	**.0027**	**.0000**	**.0369**	**.1517**	**.1742**	**.9348**	**.1780**
Stddev	.0006	.0002	.0002	.0004	.0006	.0007	.0011	.0003
%RSD	.2722	6.140	451.7	1.033	.3809	.3849	.1192	.1678
#1	.2065	.0026	.0001	.0369	.1523	.1744	.9337	.1782
#2	.2057	.0029	.0002	.0365	.1514	.1734	.9359	.1781
#3	.2067	.0027	-.0002	.0373	.1513	.1747	.9349	.1776

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **-.0042**	**.1739**	**.2453**	**.0521**	**-.0000**	**.0559**	**-.0027**	**-.0023**
Stddev	.0001	.0008	.0005	.0012	.0003	.0003	.0010	.0019
%RSD	3.196	.4474	.2095	2.273	1317.	.5982	36.16	82.17
#1	-.0041	.1746	.2458	.0520	-.0004	.0563	-.0029	-.0002
#2	-.0043	.1730	.2452	.0533	.0001	.0557	-.0016	-.0029
#3	-.0042	.1741	.2448	.0509	.0002	.0557	-.0035	-.0038

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**68.71**	**1.547**	F **290.4**	**15.08**	**7.131**	**.6359**	**.0318**	**.0113**
Stddev	.05	.003	.7	.05	.003	.0026	.0002	.0003
%RSD	.0660	.1806	.2348	.3334	.0359	.4087	.4952	3.047
#1	68.71	1.550	291.0	15.05	7.133	.6353	.0316	.0110
#2	68.66	1.547	289.6	15.06	7.131	.6337	.0319	.0117
#3	68.75	1.544	290.5	15.14	7.128	.6388	.0319	.0111

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.778**	**.0382**	**.0204**	**1.173**	**.0075**	**.0547**	**5.092**	**.0102**
Stddev	.004	.0004	.0001	.001	.0010	.0001	.017	.0010
%RSD	.2108	1.041	.5451	.0519	12.68	.2418	.3343	9.449
#1	1.782	.0380	.0203	1.173	.0081	.0546	5.087	.0105
#2	1.776	.0380	.0206	1.174	.0064	.0546	5.077	.0091
#3	1.775	.0387	.0204	1.172	.0080	.0548	5.110	.0110

Zoom In Zoom Out

Sample Name: jc86406-5 Acquired: 4/22/2019 22:02:27 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0922**	**1.936**
Stddev	.0018	.007
%RSD	1.963	.3640
#1	.0909	1.934
#2	.0913	1.930
#3	.0942	1.944

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113150.**	**8016.5**	**4216.0**	**9147.6**
Stddev	155.	48.8	4.1	9.5
%RSD	.13727	.60910	.09804	.10440
#1	113250.	7960.1	4220.7	9158.2
#2	112970.	8044.2	4212.9	9139.8
#3	113240.	8045.1	4214.4	9144.9

Zoom In Zoom Out

Sample Name: jc86406-6 Acquired: 4/22/2019 22:07:42 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.073**	**.0065**	**.0005**	**.1050**	**.2435**	**.1488**	**3.801**	**.2267**	**.0051**
Stddev	.001	.0000	.0000	.0006	.0006	.0002	.001	.0005	.0005
%RSD	.0484	.3881	3.084	.5392	.2324	.1413	.0308	.2233	9.757
#1	1.072	.0065	.0006	.1057	.2442	.1486	3.800	.2267	.0046
#2	1.073	.0065	.0005	.1049	.2432	.1490	3.802	.2271	.0056
#3	1.073	.0065	.0005	.1046	.2431	.1489	3.800	.2261	.0051

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2959**	**.6578**	**.0227**	**.0030**	**.0809**	**.0003**	**-.0035**	**155.2**	**17.33**
Stddev	.0006	.0003	.0019	.0011	.0006	.0017	.0012	.1	.03
%RSD	.2034	.0427	8.500	36.89	.7945	542.6	34.71	.0649	.1528
#1	.2963	.6578	.0223	.0037	.0814	-.0016	-.0028	155.0	17.30
#2	.2952	.6580	.0210	.0036	.0802	.0008	-.0029	155.2	17.34
#3	.2960	.6575	.0248	.0017	.0811	.0017	-.0050	155.2	17.35

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **202.9**	**94.06**	**86.99**	**2.426**	**.0026**	**.0040**	**1.417**	**.0271**	**.0474**
Stddev	.3	.33	.24	.016	.0005	.0002	.001	.0004	.0002
%RSD	.1345	.3527	.2738	.6521	20.52	4.033	.0564	1.448	.5046
#1	202.6	93.68	86.73	2.418	.0020	.0040	1.417	.0268	.0472
#2	203.0	94.20	87.04	2.416	.0029	.0038	1.417	.0275	.0475
#3	203.2	94.30	87.19	2.445	.0029	.0041	1.418	.0270	.0476

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.58**	**.0049**	**.0285**	**.4647**	**.0026**	**.1256**	**4.686**
Stddev	.01	.0001	.0001	.0024	.0009	.0018	.004
%RSD	.0538	2.068	.3250	.5069	35.79	1.416	.0767
#1	10.58	.0049	.0285	.4625	.0018	.1247	4.682
#2	10.57	.0050	.0286	.4644	.0024	.1245	4.688
#3	10.58	.0048	.0284	.4671	.0036	.1277	4.688

Zoom In Zoom Out

Sample Name: jc86406-6 Acquired: 4/22/2019 22:07:42 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112390.**	**8010.3**	**4150.9**	**8494.3**
Stddev	52.	17.6	.5	4.3
%RSD	.04662	.21965	.01111	.05059
#1	112340.	8030.6	4150.4	8496.5
#2	112380.	8001.4	4151.0	8489.3
#3	112450.	7999.0	4151.3	8497.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 22:12:57 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.014**	**2.018**	**2.017**	**2.033**	**2.045**	**1.989**	**2.063**	**2.033**	**.2508**
Stddev	.083	.084	.002	.003	.006	.002	.001	.002	.0008
%RSD	4.100	4.158	.0985	.1471	.2724	.0909	.0375	.1189	.3023
#1	2.030	2.033	2.018	2.033	2.044	1.988	2.063	2.034	.2507
#2	1.924	1.928	2.015	2.030	2.052	1.988	2.063	2.030	.2501
#3	2.087	2.094	2.018	2.036	2.041	1.991	2.062	2.034	.2516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.032**	**2.060**	**2.027**	**2.090**	**2.058**	**2.013**	**2.048**	**39.14**	**39.82**
Stddev	.001	.001	.002	.007	.005	.001	.004	1.58	1.59
%RSD	.0498	.0697	.0847	.3425	.2302	.0532	.2040	4.039	3.988
#1	2.032	2.061	2.028	2.096	2.055	2.015	2.047	39.45	40.09
#2	2.032	2.058	2.028	2.082	2.056	2.013	2.052	37.43	38.11
#3	2.030	2.061	2.025	2.093	2.063	2.012	2.044	40.54	41.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.02**	**39.67**	**40.66**	**39.86**	**2.059**	**2.062**	**5.300**	**2.089**	**2.011**
Stddev	1.64	1.56	1.53	1.54	.003	.002	.003	.004	.082
%RSD	4.087	3.939	3.752	3.862	.1266	.0809	.0593	.1884	4.064
#1	40.41	39.98	40.98	40.17	2.062	2.063	5.303	2.094	2.028
#2	38.22	37.98	39.01	38.19	2.058	2.062	5.301	2.086	1.922
#3	41.42	41.05	42.01	41.23	2.057	2.060	5.297	2.088	2.082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 22:12:57 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028**	**2.031**	**2.030**	**2.013**	**2.061**	**2.007**	**2.061**
Stddev	.001	.001	.003	.007	.004	.080	.002
%RSD	.0573	.0533	.1257	.3554	.2105	3.997	.0716
#1	2.029	2.030	2.033	2.005	2.065	2.025	2.062
#2	2.027	2.032	2.028	2.018	2.061	1.919	2.060
#3	2.027	2.031	2.030	2.017	2.057	2.076	2.059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110340.**	**7762.9**	**4118.5**	**8577.1**
Stddev	227.	279.3	1.9	8.6
%RSD	.20605	3.5979	.04732	.10016
#1	110420.	7691.5	4120.7	8581.1
#2	110090.	8070.9	4117.3	8582.9
#3	110520.	7526.1	4117.4	8567.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 22:17:59 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0002**	**.0002**	**.0002**	**-.0003**	**-.0005**	**.0002**	**.0000**	**-.0004**
Stddev	.0002	.0000	.0002	.0002	.0004	.0002	.0000	.0003	.0002
%RSD	53.75	31.24	79.89	79.61	134.8	32.92	14.29	752.3	51.57
#1	.0005	.0001	.0001	.0000	-.0008	-.0006	.0002	-.0003	-.0004
#2	.0002	.0002	.0004	.0003	.0000	-.0003	.0002	.0000	-.0006
#3	.0003	.0002	.0001	.0002	-.0002	-.0004	.0002	.0004	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**.0005**	**.0004**	**-.0001**	**.0006**	**-.0007**	**-.0041**	**.0013**
Stddev	.0002	.0001	.0006	.0007	.0005	.0019	.0017	.0066	.0028
%RSD	74.52	37.36	135.0	189.3	424.2	294.0	258.3	160.3	220.6
#1	.0000	.0002	-.0002	.0005	.0004	.0000	.0012	-.0082	.0015
#2	.0004	.0002	.0011	-.0004	-.0001	.0028	-.0010	-.0076	-.0016
#3	.0003	.0004	.0005	.0009	-.0006	-.0009	-.0021	.0035	.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0078**	**.0019**	**.0907**	**.0342**	**.0020**	**.0003**	**.0003**	**.0003**	**.0001**
Stddev	.0029	.0232	.0329	.0031	.0002	.0001	.0005	.0002	.0001
%RSD	36.95	1225.	36.24	9.075	8.115	37.15	165.2	61.34	66.35
#1	.0099	.0265	.1214	.0309	.0022	.0004	.0008	.0003	.0000
#2	.0091	-.0196	.0948	.0371	.0019	.0002	-.0002	.0002	.0002
#3	.0045	-.0012	.0560	.0346	.0019	.0004	.0002	.0006	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 22:17:59 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0012**	**.0002**	**.0007**	**-.0011**	**.0030**	**.0032**
Stddev	.0003	.0003	.0002	.0019	.0002	.0007	.0014
%RSD	81.48	24.82	85.52	256.5	16.82	23.47	45.16
#1	.0004	.0015	.0000	.0002	-.0013	.0038	.0048
#2	.0000	.0009	.0003	-.0008	-.0010	.0024	.0026
#3	.0006	.0011	.0003	.0029	-.0010	.0029	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115640.**	**7795.6**	**4286.6**	**9607.7**
Stddev	203.	27.4	3.5	4.0
%RSD	.17568	.35121	.08169	.04213
#1	115830.	7819.7	4285.6	9605.2
#2	115430.	7765.8	4290.5	9605.5
#3	115650.	7801.2	4283.7	9612.4

Zoom In Zoom Out

Sample Name: jc86406-7 Acquired: 4/22/2019 22:23:30 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3507**	**.0040**	**.0010**	**.0518**	**.1245**	**.1569**	**2.103**	**.0965**	**-.0007**
Stddev	.0007	.0001	.0001	.0004	.0011	.0001	.001	.0009	.0003
%RSD	.2138	1.419	8.587	.8395	.8749	.0482	.0394	.9076	39.45
#1	.3514	.0039	.0011	.0518	.1233	.1570	2.104	.0955	-.0007
#2	.3509	.0040	.0009	.0514	.1255	.1568	2.103	.0972	-.0004
#3	.3499	.0040	.0009	.0523	.1246	.1569	2.102	.0968	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1474**	**.6222**	**.0423**	**.0001**	**.2298**	**.0018**	**-.0011**	**68.09**	**7.016**
Stddev	.0004	.0010	.0012	.0005	.0007	.0044	.0012	.16	.027
%RSD	.2484	.1644	2.873	1020.	.3180	242.6	114.5	.2340	.3875
#1	.1470	.6221	.0411	.0001	.2290	.0064	-.0020	68.19	7.027
#2	.1475	.6233	.0435	.0005	.2304	.0016	-.0015	67.91	6.985
#3	.1477	.6213	.0424	-.0005	.2302	-.0025	.0003	68.18	7.037

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**128.9**	**17.91**	**7.420**	**2.298**	**.0257**	**.0049**	**1.538**	**.0325**	**.0462**
Stddev	.4	.12	.029	.005	.0010	.0001	.001	.0003	.0001
%RSD	.2873	.6827	.3923	.1980	3.722	1.863	.0927	.7972	.2438
#1	129.3	18.04	7.450	2.304	.0268	.0049	1.539	.0322	.0462
#2	128.8	17.89	7.417	2.296	.0250	.0049	1.539	.0326	.0460
#3	128.5	17.79	7.392	2.296	.0253	.0050	1.536	.0326	.0463

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.317**	**.0055**	**.0407**	**.3224**	**.0028**	**.0926**	**1.851**
Stddev	.001	.0009	.0003	.0004	.0016	.0016	.003
%RSD	.0993	16.23	.6885	.1285	57.58	1.722	.1720
#1	1.316	.0056	.0405	.3223	.0041	.0945	1.850
#2	1.319	.0064	.0405	.3220	.0010	.0919	1.855
#3	1.317	.0046	.0410	.3228	.0032	.0915	1.849

Zoom In Zoom Out

Sample Name: jc86406-7 Acquired: 4/22/2019 22:23:30 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116590.**	**8124.8**	**4343.0**	**9068.5**
Stddev	148.	64.1	1.1	3.2
%RSD	.12713	.78915	.02438	.03509
#1	116590.	8058.1	4344.1	9064.8
#2	116440.	8130.2	4342.0	9070.5
#3	116740.	8186.0	4342.9	9070.2

Zoom In Zoom Out

Sample Name: jc86406-8 Acquired: 4/22/2019 22:28:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.693**	**.0033**	**.0047**	**.0392**	**.1761**	**1.558**	**1.105**	**.1231**	**.0036**
Stddev	.001	.0001	.0001	.0005	.0008	.003	.001	.0003	.0005
%RSD	.0299	2.415	2.551	1.336	.4467	.2139	.1310	.2668	12.67
#1	1.692	.0032	.0047	.0386	.1761	1.557	1.104	.1234	.0032
#2	1.693	.0034	.0048	.0395	.1768	1.555	1.106	.1227	.0041
#3	1.693	.0034	.0046	.0395	.1753	1.561	1.104	.1231	.0036

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3827**	**2.428**	**.0793**	**-.0008**	**3.778**	**.0051**	**.0014**	**78.09**	**15.75**
Stddev	.0008	.002	.0010	.0009	.002	.0007	.0006	.04	.02
%RSD	.2000	.0834	1.224	111.2	.0515	13.48	42.21	.0530	.1468
#1	.3818	2.426	.0783	.0002	3.778	.0059	.0018	78.04	15.76
#2	.3832	2.430	.0792	-.0015	3.780	.0045	.0016	78.11	15.77
#3	.3831	2.430	.0802	-.0010	3.776	.0051	.0007	78.12	15.73

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**150.7**	**13.73**	**6.353**	**3.191**	**.0268**	**.0059**	**1.750**	**.7002**	**.1363**
Stddev	.1	.05	.016	.006	.0003	.0003	.015	.0012	.0001
%RSD	.0491	.3457	.2466	.1917	1.283	5.256	.8312	.1765	.0867
#1	150.7	13.67	6.342	3.184	.0265	.0057	1.733	.6990	.1362
#2	150.6	13.75	6.371	3.194	.0266	.0063	1.761	.7001	.1362
#3	150.7	13.75	6.346	3.195	.0271	.0057	1.755	.7015	.1364

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.008**	**.0091**	**.0179**	**1.719**	**.0032**	**.0955**	**3.490**
Stddev	.001	.0004	.0002	.003	.0008	.0005	.009
%RSD	.1323	4.308	1.327	.1655	24.97	.5340	.2643
#1	1.009	.0086	.0180	1.719	.0032	.0950	3.480
#2	1.007	.0094	.0176	1.716	.0024	.0955	3.492
#3	1.009	.0091	.0180	1.722	.0040	.0960	3.498

Zoom In Zoom Out

Sample Name: jc86406-8 Acquired: 4/22/2019 22:28:46 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114370.**	**7965.8**	**4263.2**	**9046.9**
Stddev	180.	36.6	4.6	7.5
%RSD	.15756	.45999	.10848	.08331
#1	114370.	7997.4	4267.8	9051.5
#2	114190.	7974.3	4258.5	9038.2
#3	114550.	7925.6	4263.4	9051.1

Zoom In Zoom Out

Sample Name: jc86406-9 Acquired: 4/22/2019 22:34:00 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2261**	**.0037**	**.0005**	**.0670**	**.1028**	**.0901**	**2.677**	**.1006**	**-.0006**
Stddev	.0007	.0000	.0001	.0012	.0005	.0005	.002	.0016	.0002
%RSD	.3085	.5446	22.27	1.743	.4501	.5803	.0553	1.542	32.17
#1	.2253	.0038	.0004	.0683	.1026	.0896	2.675	.1024	-.0005
#2	.2266	.0037	.0004	.0667	.1033	.0901	2.677	.0995	-.0008
#3	.2264	.0037	.0006	.0660	.1025	.0906	2.678	.1000	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1325**	**.3127**	**.0412**	**-.0004**	**.0994**	**-.0009**	**-.0008**	**64.19**	**5.737**
Stddev	.0003	.0057	.0022	.0004	.0021	.0009	.0014	.11	.003
%RSD	.2580	1.812	5.430	98.45	2.126	95.38	169.5	.1713	.0543
#1	.1326	.3192	.0437	-.0007	.1018	-.0017	-.0014	64.07	5.734
#2	.1321	.3092	.0394	.0001	.0978	-.0011	-.0019	64.28	5.740
#3	.1328	.3096	.0404	-.0007	.0986	.0000	.0008	64.22	5.736

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**122.7**	**17.26**	**7.664**	**.5259**	**.0223**	**.0049**	**1.503**	**.0231**	**.0526**
Stddev	.1	.02	.050	.0066	.0006	.0001	.025	.0007	.0002
%RSD	.0945	.1323	.6511	1.261	2.899	1.361	1.672	2.947	.4675
#1	122.6	17.26	7.612	.5223	.0229	.0048	1.532	.0234	.0523
#2	122.9	17.24	7.667	.5335	.0224	.0050	1.494	.0223	.0527
#3	122.7	17.29	7.712	.5218	.0216	.0049	1.485	.0235	.0527

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.249**	**.0041**	**.0478**	**.1809**	**-.0025**	**.0926**	**1.697**
Stddev	.001	.0010	.0002	.0018	.0018	.0002	.026
%RSD	.0785	25.37	.3622	.9976	70.66	.2640	1.526
#1	1.249	.0052	.0477	.1804	-.0006	.0927	1.726
#2	1.248	.0037	.0478	.1829	-.0029	.0923	1.686
#3	1.249	.0033	.0480	.1794	-.0040	.0927	1.678

Zoom In Zoom Out

Sample Name: jc86406-9 Acquired: 4/22/2019 22:34:00 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116480.**	**8185.6**	**4295.0**	**9034.1**
Stddev	148.	18.4	64.6	129.0
%RSD	.12735	.22480	1.5044	1.4282
#1	116340.	8186.4	4220.4	8885.1
#2	116470.	8203.7	4332.1	9109.2
#3	116640.	8166.9	4332.5	9107.8

Zoom In Zoom Out

Sample Name: jc86406-11 Acquired: 4/22/2019 22:39:17 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2768**	**.0039**	**.0002**	**.0539**	**.1358**	**.0910**	**2.370**	**.0967**	**-.0018**
Stddev	.0008	.0001	.0001	.0002	.0084	.0048	.134	.0001	.0021
%RSD	.3070	2.349	36.36	.4522	6.189	5.311	5.657	.1270	116.1
#1	.2777	.0038	.0002	.0540	.1310	.0883	2.278	.0965	-.0006
#2	.2761	.0040	.0002	.0540	.1455	.0966	2.524	.0968	-.0042
#3	.2765	.0040	.0003	.0536	.1310	.0881	2.308	.0967	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1621**	**.2977**	**.0452**	**.0007**	**.0974**	**.0024**	**-.0030**	**77.39**	**4.252**
Stddev	.0086	.0006	.0001	.0017	.0005	.0012	.0009	.03	.009
%RSD	5.332	.2014	.1239	263.3	.4668	48.48	31.79	.0399	.2225
#1	.1557	.2982	.0452	.0019	.0979	.0036	-.0034	77.42	4.251
#2	.1719	.2977	.0451	-.0013	.0971	.0012	-.0019	77.37	4.262
#3	.1586	.2970	.0452	.0014	.0972	.0025	-.0036	77.37	4.243

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**131.9**	**16.05**	**7.180**	**.6458**	**.0243**	**.0037**	**1.542**	**.0227**	**.0384**
Stddev	.2	.05	.028	.0056	.0001	.0002	.005	.0002	.0001
%RSD	.1370	.2957	.3944	.8595	.3245	6.273	.3053	.7616	.2283
#1	132.0	16.10	7.209	.6434	.0243	.0036	1.546	.0228	.0384
#2	131.9	16.03	7.177	.6521	.0242	.0040	1.544	.0227	.0385
#3	131.7	16.02	7.153	.6418	.0244	.0037	1.537	.0225	.0385

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.251**	**.0048**	**.0445**	**.2059**	**.0013**	**.0971**	**1.652**
Stddev	.071	.0007	.0018	.0031	.0011	.0017	.002
%RSD	5.670	14.34	4.003	1.504	83.11	1.785	.1067
#1	1.202	.0046	.0432	.2042	.0020	.0970	1.653
#2	1.332	.0056	.0465	.2094	.0019	.0988	1.653
#3	1.218	.0042	.0437	.2039	.0001	.0954	1.650

Zoom In Zoom Out

Sample Name: jc86406-11 Acquired: 4/22/2019 22:39:17 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113140.**	**8122.1**	**4328.7**	**9074.5**
Stddev	5177.	11.2	3.0	10.2
%RSD	4.5760	.13806	.06944	.11283
#1	116780.	8111.2	4326.5	9064.2
#2	107220.	8121.7	4332.1	9084.7
#3	115430.	8133.6	4327.6	9074.8

Zoom In Zoom Out

Sample Name: jc86406-12 Acquired: 4/22/2019 22:44:33 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1801**	**.0040**	**.0002**	**.0665**	**.1226**	**.0963**	**1.091**	**.1069**	**-.0010**
Stddev	.0003	.0000	.0001	.0002	.0003	.0003	.001	.0002	.0005
%RSD	.1438	.8030	56.60	.3039	.2845	.2933	.1159	.2011	48.96
#1	.1801	.0040	.0002	.0666	.1228	.0961	1.092	.1066	-.0007
#2	.1799	.0040	.0002	.0662	.1228	.0962	1.091	.1070	-.0016
#3	.1804	.0040	.0001	.0665	.1222	.0966	1.090	.1070	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1593**	**.2799**	**.0510**	**-.0008**	**.0669**	**.0029**	**-.0006**	**78.36**	**1.297**
Stddev	.0011	.0001	.0011	.0001	.0009	.0002	.0010	.06	.004
%RSD	.6806	.0318	2.082	9.623	1.368	6.228	163.0	.0826	.3087
#1	.1598	.2800	.0522	-.0008	.0674	.0027	-.0010	78.30	1.298
#2	.1600	.2799	.0501	-.0007	.0675	.0030	-.0013	78.43	1.293
#3	.1580	.2798	.0507	-.0007	.0659	.0030	.0005	78.35	1.301

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.3**	**15.65**	**6.944**	**1.181**	**.0218**	**.0042**	**1.416**	**.0216**	**.0205**
Stddev	.1	.04	.021	.012	.0010	.0003	.003	.0004	.0001
%RSD	.0563	.2718	.3077	.9749	4.369	7.642	.1860	2.042	.5873
#1	153.2	15.69	6.924	1.171	.0224	.0044	1.419	.0219	.0203
#2	153.4	15.66	6.941	1.180	.0207	.0045	1.415	.0211	.0205
#3	153.4	15.61	6.967	1.194	.0223	.0039	1.414	.0218	.0206

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.155**	**.0045**	**.0617**	**.1543**	**.0021**	**.1039**	**1.781**
Stddev	.002	.0006	.0002	.0005	.0025	.0008	.006
%RSD	.1581	13.46	.3447	.3461	122.1	.7695	.3191
#1	1.156	.0038	.0617	.1549	-.0003	.1034	1.779
#2	1.156	.0050	.0619	.1539	.0048	.1035	1.787
#3	1.153	.0045	.0615	.1540	.0018	.1048	1.776

Zoom In Zoom Out

Sample Name: jc86406-12 Acquired: 4/22/2019 22:44:33 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115790.**	**8072.4**	**4324.4**	**9107.2**
Stddev	255.	26.2	4.3	5.8
%RSD	.22019	.32413	.09888	.06382
#1	115550.	8043.4	4320.5	9102.0
#2	115760.	8079.7	4328.9	9113.5
#3	116050.	8094.2	4323.7	9106.2

Zoom In Zoom Out

Sample Name: jc86406-13 Acquired: 4/22/2019 22:49:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2562**	**.0039**	**.0003**	**.0543**	**.1545**	**.0948**	**1.454**	**.1107**	**-.0001**
Stddev	.0005	.0001	.0002	.0007	.0009	.0003	.003	.0000	.0003
%RSD	.1885	2.875	91.21	1.256	.5942	.3381	.1899	.0075	241.3
#1	.2567	.0039	.0005	.0535	.1555	.0947	1.457	.1107	-.0003
#2	.2560	.0040	.0002	.0547	.1541	.0952	1.453	.1107	-.0002
#3	.2558	.0038	.0001	.0547	.1538	.0946	1.452	.1107	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1732**	**.3126**	**.0464**	**.0005**	**.0804**	**.0027**	**-.0012**	**82.58**	**19.03**
Stddev	.0006	.0001	.0010	.0015	.0003	.0022	.0015	.10	.02
%RSD	.3481	.0445	2.187	282.0	.4274	82.12	128.5	.1212	.0850
#1	.1732	.3124	.0476	.0013	.0806	.0049	-.0029	82.59	19.05
#2	.1738	.3126	.0458	.0015	.0800	.0004	-.0005	82.67	19.02
#3	.1726	.3127	.0458	-.0012	.0806	.0030	-.0001	82.47	19.03

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**150.0**	**18.88**	**8.220**	**1.133**	**.0248**	**.0053**	**1.743**	**.0211**	**.0588**
Stddev	.2	.06	.006	.013	.0003	.0001	.003	.0003	.0001
%RSD	.1048	.3314	.0789	1.148	1.193	2.519	.1428	1.373	.1969
#1	149.9	18.89	8.215	1.121	.0247	.0054	1.744	.0212	.0587
#2	149.9	18.81	8.227	1.132	.0252	.0052	1.744	.0214	.0588
#3	150.2	18.94	8.217	1.147	.0246	.0054	1.740	.0208	.0589

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.447**	**.0063**	**.0625**	**.6800**	**.0028**	**.1108**	**2.004**
Stddev	.001	.0006	.0004	.0030	.0004	.0011	.005
%RSD	.0346	8.933	.6253	.4480	13.51	1.032	.2655
#1	1.447	.0069	.0622	.6782	.0033	.1095	1.998
#2	1.448	.0057	.0629	.6782	.0027	.1117	2.008
#3	1.447	.0064	.0623	.6835	.0026	.1111	2.007

Zoom In Zoom Out

Sample Name: jc86406-13 Acquired: 4/22/2019 22:49:51 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115150.**	**8003.9**	**4284.9**	**9006.7**
Stddev	336.	32.7	5.3	14.8
%RSD	.29195	.40810	.12346	.16447
#1	114800.	7981.6	4283.3	8991.2
#2	115180.	8041.4	4280.6	9008.2
#3	115470.	7988.7	4290.8	9020.8

Zoom In Zoom Out

Sample Name: jc86406-14 Acquired: 4/22/2019 22:55:07 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2981**	**.0044**	**.0004**	**.0313**	**.1224**	**.0788**	**.8057**	**.0717**	**-.0008**
Stddev	.0085	.0002	.0002	.0003	.0006	.0007	.0021	.0003	.0003
%RSD	2.859	4.457	58.58	.9725	.4796	.8327	.2667	.4370	40.17
#1	.3038	.0045	.0006	.0314	.1229	.0792	.8077	.0714	-.0008
#2	.3022	.0046	.0001	.0315	.1225	.0790	.8035	.0720	-.0005
#3	.2883	.0042	.0003	.0310	.1217	.0780	.8059	.0717	-.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1465**	**.2747**	**.0467**	**.0002**	**.2056**	**.0018**	**-.0013**	**76.23**	**6.975**
Stddev	.0005	.0007	.0009	.0004	.0009	.0002	.0009	2.10	.173
%RSD	.3333	.2453	2.006	197.1	.4211	13.79	65.91	2.754	2.488
#1	.1470	.2739	.0463	-.0001	.2063	.0015	-.0010	77.54	7.064
#2	.1461	.2752	.0478	.0007	.2058	.0018	-.0023	77.34	7.086
#3	.1463	.2748	.0461	.0000	.2046	.0020	-.0007	73.81	6.775

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**111.9**	**11.68**	**4.756**	**1.380**	**.0152**	**.0039**	**1.657**	**.0251**	**.1026**
Stddev	3.4	.37	.149	.040	.0000	.0002	.006	.0006	.0030
%RSD	3.079	3.131	3.128	2.918	.2837	5.715	.3812	2.500	2.939
#1	114.1	11.89	4.837	1.409	.0153	.0038	1.657	.0258	.1048
#2	113.7	11.90	4.847	1.397	.0152	.0041	1.663	.0247	.1038
#3	108.0	11.26	4.584	1.334	.0152	.0037	1.651	.0248	.0992

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8007**	**.0036**	**.0236**	**.3901**	**.0012**	**.0861**	**4.824**
Stddev	.0032	.0006	.0000	.0018	.0008	.0033	.012
%RSD	.4026	15.75	.1084	.4558	66.41	3.836	.2441
#1	.8044	.0042	.0236	.3899	.0020	.0878	4.820
#2	.7985	.0030	.0237	.3920	.0010	.0883	4.838
#3	.7992	.0036	.0237	.3885	.0005	.0823	4.816

Zoom In Zoom Out

Sample Name: jc86406-14 Acquired: 4/22/2019 22:55:07 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114340.**	**8147.2**	**4302.6**	**9108.9**
Stddev	269.	210.8	10.6	16.0
%RSD	.23518	2.5876	.24636	.17574
#1	114050.	8050.7	4301.8	9096.9
#2	114580.	8001.9	4292.4	9102.6
#3	114380.	8389.0	4313.5	9127.1

Zoom In Zoom Out

Sample Name: jc86406-15 Acquired: 4/22/2019 23:00:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.010**	**.0148**	**.0088**	**.0717**	**.3579**	**.6079**	**2.889**	**.1557**	**.0010**
Stddev	.002	.0001	.0003	.0011	.0004	.0009	.005	.0016	.0001
%RSD	.1602	.9085	3.429	1.467	.1143	.1478	.1693	1.017	14.60
#1	1.011	.0148	.0091	.0729	.3583	.6071	2.889	.1575	.0011
#2	1.010	.0146	.0086	.0711	.3579	.6089	2.893	.1550	.0010
#3	1.008	.0149	.0087	.0710	.3575	.6076	2.884	.1546	.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2074**	**2.690**	**.0887**	**-.0012**	**1.179**	**.0158**	**.0040**	**91.42**	**195.4**
Stddev	.0008	.039	.0015	.0006	.013	.0009	.0004	.12	.3
%RSD	.4090	1.457	1.708	53.42	1.107	5.940	8.929	.1358	.1290
#1	.2074	2.735	.0883	-.0019	1.194	.0168	.0038	91.52	195.6
#2	.2083	2.672	.0904	-.0006	1.173	.0149	.0044	91.46	195.6
#3	.2066	2.663	.0874	-.0012	1.170	.0158	.0038	91.28	195.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.3**	**47.62**	**9.279**	**5.803**	**.0687**	**.0122**	**2.197**	**.0846**	**.7673**
Stddev	.2	.14	.040	.013	.0007	.0002	.033	.0020	.0017
%RSD	.0939	.2897	.4295	.2256	1.058	1.654	1.498	2.328	.2216
#1	160.2	47.47	9.317	5.801	.0687	.0123	2.235	.0866	.7692
#2	160.2	47.74	9.237	5.817	.0695	.0120	2.179	.0847	.7660
#3	160.5	47.64	9.283	5.791	.0680	.0123	2.177	.0826	.7667

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.120**	**.0107**	**.1076**	**21.09**	**.0065**	**.0972**	**3.551**
Stddev	.005	.0005	.0003	.37	.0011	.0014	.063
%RSD	.1620	4.276	.3030	1.749	16.95	1.472	1.781
#1	3.119	.0109	.1073	21.51	.0071	.0984	3.624
#2	3.125	.0102	.1079	20.95	.0072	.0976	3.522
#3	3.115	.0111	.1078	20.82	.0052	.0956	3.508

Zoom In Zoom Out

Sample Name: jc86406-15 Acquired: 4/22/2019 23:00:24 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113430.**	**8132.4**	**4195.1**	**8374.8**
Stddev	173.	31.1	56.7	96.1
%RSD	.15285	.38219	1.3520	1.1474
#1	113470.	8168.3	4130.0	8264.3
#2	113240.	8113.9	4222.3	8420.7
#3	113580.	8115.1	4233.2	8439.3

Zoom In Zoom Out

Sample Name: jc86600-1 Acquired: 4/22/2019 23:05:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3949**	**.0046**	**.0002**	**.0779**	**.1444**	**.1532**	**3.610**	**.1392**	**-.0015**
Stddev	.0005	.0001	.0001	.0011	.0007	.0002	.003	.0020	.0006
%RSD	.1268	1.899	64.05	1.356	.5105	.1398	.0916	1.454	39.09
#1	.3944	.0046	.0003	.0789	.1440	.1534	3.607	.1412	-.0016
#2	.3949	.0045	.0001	.0768	.1452	.1532	3.610	.1371	-.0008
#3	.3954	.0046	.0003	.0779	.1440	.1530	3.614	.1392	-.0020

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1952**	**.4872**	**.0447**	**.0005**	**.0857**	**.0014**	**-.0021**	**157.6**	**16.85**
Stddev	.0008	.0083	.0010	.0012	.0020	.0012	.0007	.1	.04
%RSD	.4301	1.702	2.145	258.6	2.281	88.13	35.02	.0743	.2077
#1	.1943	.4952	.0455	.0017	.0864	.0018	-.0015	157.5	16.81
#2	.1955	.4787	.0436	.0005	.0835	.0023	-.0030	157.6	16.87
#3	.1958	.4876	.0450	-.0008	.0871	.0000	-.0019	157.7	16.87

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**195.6**	**42.47**	**6.290**	**2.356**	**.0127**	**.0069**	**1.461**	**.0215**	**.0538**
Stddev	.2	.29	.009	.001	.0008	.0003	.017	.0006	.0002
%RSD	.1085	.6722	.1502	.0302	5.978	4.007	1.167	2.572	.3759
#1	195.6	42.26	6.280	2.357	.0119	.0072	1.475	.0213	.0537
#2	195.8	42.80	6.299	2.356	.0128	.0067	1.442	.0211	.0540
#3	195.4	42.36	6.290	2.356	.0134	.0069	1.466	.0222	.0537

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6915**	**.0085**	**.0636**	**1.050**	**.0002**	**.2143**	**1.982**
Stddev	.0008	.0007	.0002	.013	.0009	.0023	.028
%RSD	.1123	8.394	.3929	1.205	367.5	1.062	1.396
#1	.6911	.0077	.0636	1.062	-.0005	.2117	2.009
#2	.6924	.0087	.0634	1.037	.0000	.2151	1.954
#3	.6910	.0091	.0639	1.049	.0012	.2161	1.982

Zoom In Zoom Out

Sample Name: jc86600-1 Acquired: 4/22/2019 23:05:39 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115020.**	**8104.7**	**4310.6**	**8849.0**
Stddev	142.	23.1	59.5	120.3
%RSD	.12388	.28506	1.3792	1.3597
#1	115170.	8122.6	4255.9	8735.6
#2	115000.	8078.6	4373.9	8975.2
#3	114880.	8112.7	4301.9	8836.3

Zoom In Zoom Out

Sample Name: jc86600-2 Acquired: 4/22/2019 23:10:54 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8591**	**.0092**	**.0024**	**.1424**	**.1977**	**.3383**	F **25.08**	**.2666**	**.0028**
Stddev	.0653	.0006	.0003	.0007	.0012	.0041	.07	.0008	.0070
%RSD	7.599	6.226	11.63	.5150	.6060	1.206	.2624	.2825	248.8
#1	.8063	.0088	.0023	.1424	.1978	.3351	25.16	.2664	-.0024
#2	.9321	.0099	.0028	.1431	.1965	.3429	25.05	.2659	.0108
#3	.8388	.0090	.0023	.1416	.1989	.3369	25.04	.2674	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2133**	**.9197**	**.1163**	**.0027**	**.3734**	**.0021**	**-.0018**	**206.6**	**62.65**
Stddev	.0001	.0023	.0008	.0022	.0022	.0105	.0009	16.2	4.97
%RSD	.0658	.2489	.6509	82.86	.5862	501.6	52.67	7.823	7.930
#1	.2132	.9188	.1156	.0007	.3724	-.0070	-.0027	193.8	58.74
#2	.2134	.9223	.1171	.0052	.3759	.0136	-.0009	224.8	68.24
#3	.2135	.9179	.1161	.0023	.3719	-.0004	-.0017	201.3	60.96

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **290.5**	**99.42**	**13.68**	**5.315**	**.0232**	**.0377**	**1.812**	**.0225**	**.1174**
Stddev	22.9	8.15	1.08	.412	.0009	.0005	.002	.0006	.0092
%RSD	7.875	8.200	7.867	7.756	3.773	1.338	.1113	2.795	7.867
#1	272.6	93.12	12.86	4.987	.0240	.0372	1.813	.0232	.1100
#2	316.3	108.6	14.90	5.777	.0233	.0382	1.810	.0223	.1277
#3	282.6	96.52	13.28	5.179	.0223	.0377	1.814	.0220	.1144

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4918**	**.0096**	**.0224**	**1.699**	**.0061**	**.3188**	**7.205**
Stddev	.0015	.0006	.0015	.003	.0027	.0258	.004
%RSD	.3038	5.826	6.736	.2017	43.74	8.085	.0622
#1	.4925	.0098	.0214	1.697	.0088	.2978	7.210
#2	.4900	.0101	.0242	1.703	.0035	.3476	7.201
#3	.4928	.0090	.0217	1.698	.0059	.3110	7.205

Zoom In Zoom Out

Sample Name: jc86600-2 Acquired: 4/22/2019 23:10:54 Type: Unk
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115810.**	**8080.6**	**4297.0**	**8522.9**
Stddev	326.	556.5	4.0	10.6
%RSD	.28145	6.8871	.09199	.12463
#1	115590.	8522.8	4299.3	8528.2
#2	116190.	7455.7	4292.5	8510.7
#3	115660.	8263.3	4299.3	8529.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 23:16:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.020**	**2.018**	**2.007**	**2.026**	**2.032**	**1.977**	**2.050**	**2.024**	**.2490**
Stddev	.004	.006	.002	.005	.002	.004	.003	.003	.0003
%RSD	.2119	.3017	.0811	.2559	.0729	.1805	.1240	.1220	.1404
#1	2.025	2.023	2.008	2.023	2.034	1.973	2.053	2.023	.2486
#2	2.020	2.019	2.006	2.022	2.031	1.980	2.048	2.023	.2493
#3	2.016	2.011	2.008	2.032	2.032	1.979	2.049	2.027	.2491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.020**	**2.051**	**2.016**	**2.083**	**2.049**	**2.004**	**2.035**	**39.30**	**39.97**
Stddev	.001	.001	.003	.004	.003	.004	.001	.16	.12
%RSD	.0694	.0248	.1362	.1802	.1403	.1901	.0687	.4077	.3095
#1	2.021	2.051	2.019	2.080	2.052	2.000	2.034	39.48	40.11
#2	2.018	2.052	2.015	2.081	2.046	2.006	2.035	39.22	39.92
#3	2.020	2.052	2.014	2.087	2.049	2.006	2.036	39.19	39.87
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.98**	**39.79**	**40.70**	**39.92**	**2.047**	**2.052**	**5.265**	**2.080**	**2.015**
Stddev	.09	.24	.14	.06	.001	.002	.001	.001	.005
%RSD	.2171	.6136	.3500	.1448	.0536	.1129	.0131	.0338	.2421
#1	40.08	40.07	40.82	39.98	2.047	2.049	5.264	2.079	2.020
#2	39.94	39.67	40.73	39.91	2.047	2.052	5.265	2.079	2.015
#3	39.92	39.63	40.54	39.87	2.049	2.054	5.266	2.081	2.010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/22/2019 23:16:15 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.014**	**2.018**	**2.018**	**2.005**	**2.048**	**2.003**	**2.047**
Stddev	.002	.004	.002	.005	.002	.005	.000
%RSD	.1131	.1931	.1000	.2331	.0760	.2733	.0164
#1	2.015	2.015	2.016	2.000	2.049	2.004	2.047
#2	2.012	2.022	2.019	2.005	2.046	2.008	2.046
#3	2.016	2.018	2.020	2.009	2.048	1.997	2.047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111140.**	**7710.8**	**4143.2**	**8624.9**
Stddev	311.	48.4	1.9	9.2
%RSD	.27958	.62774	.04491	.10716
#1	110780.	7655.0	4144.0	8628.2
#2	111360.	7741.2	4144.6	8632.0
#3	111280.	7736.2	4141.1	8614.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 23:21:16 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**F .0002**	**.0001**	**.0003**	**-.0003**	**-.0003**	**.0003**	**.0001**	**-.0004**
Stddev	.0004	.0001	.0001	.0001	.0003	.0002	.0001	.0002	.0003
%RSD	91.68	27.64	57.52	20.99	79.89	71.42	18.94	356.2	70.57
#1	.0002	.0001	.0001	.0003	-.0001	-.0006	.0003	.0001	-.0001
#2	.0002	.0002	.0002	.0003	-.0003	-.0002	.0002	-.0002	-.0008
#3	.0008	.0002	.0001	.0002	-.0006	-.0002	.0003	.0003	-.0004
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002							
Low Limit		-.0002							

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**.0010**	**.0004**	**-.0001**	**.0018**	**.0003**	**-.0009**	**-.0003**
Stddev	.0000	.0000	.0005	.0004	.0003	.0010	.0009	.0096	.0025
%RSD	12.98	10.61	49.64	92.74	691.6	55.51	339.0	1021.	765.1
#1	.0002	.0004	.0009	.0002	.0002	.0025	.0001	-.0089	.0021
#2	.0003	.0003	.0016	.0002	.0001	.0023	.0012	.0097	-.0001
#3	.0002	.0004	.0006	.0009	-.0004	.0007	-.0005	-.0036	-.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049**	**-.0310**	**.0654**	**.0352**	**.0014**	**.0003**	**.0001**	**-.0000**	**.0002**
Stddev	.0012	.0342	.0119	.0048	.0003	.0002	.0002	.0002	.0001
%RSD	24.99	110.4	18.25	13.49	21.97	69.30	294.7	772.0	56.99
#1	.0054	-.0334	.0758	.0300	.0011	.0003	.0003	.0000	.0001
#2	.0059	.0044	.0681	.0392	.0015	.0005	-.0001	.0001	.0003
#3	.0035	-.0639	.0524	.0366	.0017	.0001	-.0000	-.0002	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/22/2019 23:21:16 Type: QC
Method: SGS 3(v310) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0003**	**.0001**	**.0003**	**-.0005**	**.0012**	**.0029**
Stddev	.0002	.0003	.0002	.0008	.0005	.0012	.0003
%RSD	1604.	93.28	113.2	267.7	83.25	100.8	11.27
#1	.0002	.0006	.0002	-.0006	-.0007	-.0000	.0031
#2	-.0001	.0004	.0002	.0008	-.0000	.0012	.0030
#3	-.0001	-.0000	-.0000	.0006	-.0009	.0023	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116170.**	**7769.2**	**4293.3**	**9622.7**
Stddev	257.	29.4	2.2	8.0
%RSD	.22112	.37816	.05095	.08329
#1	115980.	7749.7	4295.7	9631.9
#2	116460.	7803.0	4293.0	9619.2
#3	116060.	7754.8	4291.3	9617.0

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	☒	3	Mg	0.000001	0.000000	No
			Al	0.000002	0.000000	No
			Zr	0.000727	0.000000	No
Be 313.042 {108}	☒	9	V	0.000221	0.000000	No
			Mo	-0.000030	0.000000	No
			Ti	-0.000580	0.000000	No
			Mn	-0.000018	0.000000	No
			Ni	0.000001	0.000000	No
			Ca	-0.000000	0.000000	No
			Cu	0.000014	0.000000	No
			Zn	-0.000010	0.000000	No
			Fe	-0.000002	0.000000	No
Cd 228.802 {448}	☒	13	As	0.004662	0.000000	No
			Ni	-0.000900	0.000000	No
			Fe	-0.000010	0.000000	No
			V	0.000110	0.000000	No
			Ba	0.000054	0.000000	No
			Co	-0.000709	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	0.000014	0.000000	No
			Cr	0.000007	0.000000	No
			Cu	0.000024	0.000000	No
			Al	0.000000	0.000000	No
			Mo	0.000004	0.000000	No
			W	0.000000	0.000000	No
Co 228.616 {448}	☒	9	Fe	-0.000001	0.000000	No
			Cr	-0.000046	0.000000	No
			Mo	-0.001750	0.000000	No
			Ni	0.000084	0.000000	No
			Ti	0.002220	0.000000	No
			W	0.000160	0.000000	No
			Cd	-0.000188	0.000000	No
			Ca	0.000000	0.000000	No
			As	0.000150	0.000000	No
Cr 267.716 {126}	☒	11	Mn	0.000474	0.000000	No
			Mo	0.000033	0.000000	No
			Fe	-0.000009	0.000000	No
			Cd	-0.000050	0.000000	No
			Al	-0.000000	0.000000	No
			Ca	0.000002	0.000000	No
			Mg	0.000001	0.000000	No
			Ti	0.000050	0.000000	No
			Ba	0.000013	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
Cu 324.754 {104}2	☒	17	Cr	0.000000	0.000000	No
			V	-0.000408	0.000000	No
			Mo	0.000572	0.000000	No
			Ti	-0.000330	0.000000	No
			Fe	-0.000127	0.000000	No
			Al	0.000000	0.000000	No
			Sn	-0.000097	0.000000	No
			Co	-0.000980	0.000000	No
			Zr	-0.000500	0.000000	No
			Si	-0.000002	0.000000	No
			Mn	-0.000072	0.000000	No
			Se	0.000050	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ag	0.000166	0.000000	No
			Sb	0.000024	0.000000	No
			Pb	0.000040	0.000000	No
			Be	-0.000031	0.000000	No
			W	0.000000	0.000000	No
Mn 257.610 {131}	☒	6	Fe	-0.000094	0.000000	No
			Si	0.000044	0.000000	No
			Ba	0.000012	0.000000	No
			Ni	0.000028	0.000000	No
			Mo	0.000000	0.000000	No
			Cr	-0.000114	0.000000	No
Ni 231.604 {446}	☒	11	Fe	0.000030	0.000000	No
			Zn	-0.000021	0.000000	No
			Be	-0.000112	0.000000	No
			Co	-0.000360	0.000000	No
			Tl	0.000209	0.000000	No
			V	-0.000032	0.000000	No
			Cu	0.000100	0.000000	No
			Cr	-0.000014	0.000000	No
			Si	-0.000030	0.000000	No
			Sn	0.000079	0.000000	No
			W	0.000830	0.000000	No
Ag 328.068 {103}	☒	15	Mn	-0.000009	0.000000	No
			Mo	-0.000154	0.000000	No
			Ti	-0.000213	0.000000	No
			Fe	-0.000305	0.000000	No
			V	-0.000662	0.000000	No
			Zn	0.000170	0.000000	No
			Ca	-0.000004	0.000000	No
			Al	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Ba	-0.000189	0.000000	No
			Cr	-0.000038	0.000000	No
			Zr	0.005170	0.000000	No
			Sn	-0.000100	0.000000	No
			W	0.000000	0.000000	No
			K	-0.000080	0.000000	No
V 292.402 {115}	☒	7	Ti	0.000776	0.000000	No
			Mo	-0.013400	0.000000	No
			Fe	0.000010	0.000000	No
			Sr	0.000000	0.000000	No
			Cr	-0.002590	0.000000	No
			Mn	-0.002844	0.000000	No
			W	0.000050	0.000000	No
Zn 206.200 {464}	☒	15	Cr	-0.000874	0.000000	No
			Mo	-0.000228	0.000000	No
			Fe	0.000010	0.000000	No
			Al	0.000000	0.000000	No
			Si	0.000065	0.000000	No
			Ba	-0.000060	0.000000	No
			Ca	0.000004	0.000000	No
			Sr	0.000017	0.000000	No
			Sn	0.000069	0.000000	No
			Cu	0.000056	0.000000	No
			As	-0.000050	0.000000	No
			Be	0.000071	0.000000	No
			Bi	-0.000400	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			W	0.000000	0.000000	No
			Ti	0.000030	0.000000	No
As 189.042 {478}	☒	23	Al	-0.000001	0.000000	No
			Fe	-0.000038	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	-0.000010	0.000000	No
			Mo	0.002364	0.000000	No
			Cr	0.001390	0.000000	No
			V	0.000052	0.000000	No
			Co	-0.000029	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000123	0.000000	No
			Cd	-0.000194	0.000000	No
			Tl	0.000385	0.000000	No
			Be	-0.000017	0.000000	No
			Mg	0.000002	0.000000	No
			Si	0.000007	0.000000	No
			Zn	0.000070	0.000000	No
			Sr	-0.000080	0.000000	No
			Zr	0.000074	0.000000	No
			Ti	0.000009	0.000000	No
			Cu	0.000077	0.000000	No
			K	0.000000	0.000000	No
			B	-0.000030	0.000000	No
			S	0.000005	0.000000	No
Tl 190.856 {477}	☒	24	Cr	0.000289	0.000000	No
			Mo	-0.002100	0.000000	No
			Al	-0.000004	0.000000	No
			Fe	-0.000052	0.000000	No
			V	-0.019420	0.000000	No
			Mn	0.001620	0.000000	No
			Si	-0.000016	0.000000	No
			Ca	-0.000003	0.000000	No
			Ti	-0.003000	0.000000	No
			Mg	-0.000000	0.000000	No
			Co	0.004840	0.000000	No
			Sr	-0.000222	0.000000	No
			B	0.000120	0.000000	No
			Ba	0.000110	0.000000	No
			Zn	0.000025	0.000000	No
			As	0.000015	0.000000	No
			Ni	0.000051	0.000000	No
			Cu	-0.000032	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000080	0.000000	No
			Se	0.000040	0.000000	No
			S	0.000010	0.000000	No
			K	0.000000	0.000000	No
			P	0.000000	0.000000	No
Pb 220.353 {453}	☒	23	Al	-0.000112	0.000000	No
			Fe	0.000044	0.000000	No
			Ca	-0.000007	0.000000	No
			Mn	0.000145	0.000000	No
			Zn	-0.000036	0.000000	No
			Mo	-0.001670	0.000000	No
			Cu	0.000410	0.000000	No
			V	0.000013	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Co	0.000116	0.000000	No
			Ti	0.000060	0.000000	No
			Si	0.000116	0.000000	No
			Ba	-0.000012	0.000000	No
			Sb	0.000006	0.000000	No
			Sr	-0.000050	0.000000	No
			W	0.000000	0.000000	No
			Mg	0.000003	0.000000	No
			Cd	0.000476	0.000000	No
			Zr	-0.000300	0.000000	No
			Ni	0.000320	0.000000	No
			S	-0.000010	0.000000	No
			Se	0.000036	0.000000	No
			As	0.000200	0.000000	No
			Cr	-0.000150	0.000000	No
Se 196.090 {472}	☒	22	Al	0.000001	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	0.000651	0.000000	No
			Mo	0.000277	0.000000	No
			Fe	-0.000434	0.000000	No
			Co	-0.000729	0.000000	No
			V	0.000207	0.000000	No
			Sr	-0.000008	0.000000	No
			Cu	-0.000113	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000157	0.000000	No
			Tl	0.000180	0.000000	No
			Be	-0.000143	0.000000	No
			Zn	-0.000250	0.000000	No
			B	-0.000141	0.000000	No
			Ti	0.000016	0.000000	No
			Cd	0.000090	0.000000	No
			Zr	-0.000280	0.000000	No
			Ba	0.000180	0.000000	No
			Mg	-0.000002	0.000000	No
			Cr	-0.000039	0.000000	No
			S	-0.000012	0.000000	No
Sb 206.833 {463}	☒	15	Fe	0.000023	0.000000	No
			Al	-0.000011	0.000000	No
			Ca	-0.000006	0.000000	No
			Ni	-0.001077	0.000000	No
			Cr	0.021770	0.000000	No
			V	-0.001909	0.000000	No
			Zn	-0.000200	0.000000	No
			Mo	-0.000900	0.000000	No
			Ti	0.001000	0.000000	No
			Sn	-0.015200	0.000000	No
			Mg	0.000004	0.000000	No
			Zr	-0.000627	0.000000	No
			Sr	0.000209	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000000	0.000000	No
Al 396.152 { 85}	☒	5	Si	0.000913	0.000000	No
			Ca	0.000078	0.000000	No
			Mo	0.046534	0.000000	No
			Zr	-0.006000	0.000000	No
			Ti	-0.000017	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ca 317.933 {106}	☒	13	Fe	0.000130	0.000000	No
			W	0.003960	0.000000	No
			Tl	0.004950	0.000000	No
			Be	0.001840	0.000000	No
			Ba	0.003500	0.000000	No
			Cu	-0.001800	0.000000	No
			Cd	0.003700	0.000000	No
			Ni	0.001513	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.002000	0.000000	No
			Co	0.000540	0.000000	No
			Cr	0.000640	0.000000	No
			Al	0.000026	0.000000	No
Fe 259.940 {130}	☒	13	Co	0.000004	0.000000	No
			Si	-0.000100	0.000000	No
			Tl	-0.002590	0.000000	No
			Se	-0.000050	0.000000	No
			Cr	-0.000566	0.000000	No
			Mn	-0.001433	0.000000	No
			V	-0.000064	0.000000	No
			Cu	0.000953	0.000000	No
			K	-0.000200	0.000000	No
			Zn	0.000046	0.000000	No
			Ti	-0.000631	0.000000	No
			Ca	0.000020	0.000000	No
			Ba	0.001000	0.000000	No
Mg 279.079 {121}	☒	1	Mo	-0.020780	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000340	0.000000	No
			Al	0.000301	0.000000	No
			Ca	0.000448	0.000000	No
			Mn	0.001430	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Na	0.000300	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.010000	0.000000	No
			Mg	0.000400	0.000000	No
Na 589.592 { 57}	☒	5	K	0.000038	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000055	0.000000	No
			Al	0.000040	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.037210	0.000000	No
Mo 202.030 {467}	☒	5	Fe	-0.000010	0.000000	No
			Mg	-0.000001	0.000000	No
			Ca	0.000003	0.000000	No
			W	0.000000	0.000000	No
			V	-0.000230	0.000000	No
Si 212.412 {459}	☒	14	Sr	0.000366	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	0.028950	0.000000	No
			Ti	0.006320	0.000000	No
			Al	0.000012	0.000000	No
			Cd	0.001043	0.000000	No
			Ba	0.000170	0.000000	No
			Fe	0.000040	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Sn	0.002213	0.000000	No
			Zn	0.000385	0.000000	No
			As	-0.000560	0.000000	No
			Pb	0.000471	0.000000	No
			V	0.006165	0.000000	No
			W	-0.025000	0.000000	No
Sn 189.989 {478}	☒	6	Ti	-0.000621	0.000000	No
			Mo	0.000011	0.000000	No
			Fe	0.000005	0.000000	No
			Mn	0.000060	0.000000	No
			Si	0.000089	0.000000	No
			W	-0.010000	0.000000	No
Sr 407.771 { 83}	☒	2	Fe	0.000002	0.000000	No
			Ca	0.000023	0.000000	No
Ti 334.904 {101}	☒	4	Cr	-0.000084	0.000000	No
			Mo	0.001569	0.000000	No
			Si	0.000035	0.000000	No
			Ca	-0.000003	0.000000	No
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
In 230.606 {446}*	☒	None				
W 207.911 {462}	☒	25	Al	0.000002	0.000000	No
			Si	-0.000900	0.000000	No
			Fe	-0.000007	0.000000	No
			As	-0.000200	0.000000	No
			Mg	0.000000	0.000000	No
			Mn	-0.000110	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.012200	0.000000	No
			Sn	0.000078	0.000000	No
			Zr	-0.020000	0.000000	No
			B	-0.001000	0.000000	No
			Sb	-0.003000	0.000000	No
			Co	0.000041	0.000000	No
			Ni	-0.000263	0.000000	No
			Be	-0.000130	0.000000	No
			Se	-0.000080	0.000000	No
			Cu	-0.000118	0.000000	No
			Ba	-0.000090	0.000000	No
			Tl	-0.000110	0.000000	No
			Ag	0.000224	0.000000	No
Zr 339.198 { 99}	☒	9	Mo	0.000323	0.000000	No
			Ti	-0.000010	0.000000	No
			Fe	-0.000060	0.000000	No
			Si	0.000070	0.000000	No
			Bi	0.000295	0.000000	No
			Cr	-0.000900	0.000000	No
			V	0.000200	0.000000	No
			W	0.019000	0.000000	No
			Sn	-0.000400	0.000000	No
S 182.034 {485}	☒	11	Ca	0.000001	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Mo	-0.000040	0.000000	No
				Al	-0.000110	0.000000	No
				Fe	-0.000023	0.000000	No
				Mn	0.003900	0.000000	No
				W	0.000000	0.000000	No
				Zn	-0.001538	0.000000	No
				Cr	-0.000200	0.000000	No
				Mg	0.000015	0.000000	No
				Ti	0.000300	0.000000	No
				Li	0.000200	0.000000	No
	Bi 223.061 {451}	☒	9	V	-0.000680	0.000000	No
				Co	-0.002200	0.000000	No
				Ca	-0.000005	0.000000	No
				Mg	-0.000002	0.000000	No
				W	0.000000	0.000000	No
				Cu	-0.001186	0.000000	No
				Fe	0.000097	0.000000	No
				Cr	0.001500	0.000000	No
				Ti	-0.004530	0.000000	No
	Li 670.784 { 50}	☒	1	Ca	0.000051	0.000000	No
	P 177.495 {490}	☒	2	Mn	-0.005600	0.000000	No
				Ca	0.000034	0.000000	No

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
	Ba 455.403 { 74}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.003961	1.719082	0.000000	1.000000
	Be 313.042 {108}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000284	1.565833	0.000000	1.000000
	Cd 228.802 {448}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000133	0.893418	0.000000	1.000000
	Co 228.616 {448}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000409	0.489187	0.000000	1.000000
	Cr 267.716 {126}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000006	0.045471	0.000000	1.000000
	Cu 324.754 {104}2	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.002437	0.170589	0.000000	1.000000
	Mn 257.610 {131}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000016	0.272786	0.000000	1.000000
	Ni 231.604 {446}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000102	0.357585	0.000000	1.000000
	Ag 328.068 {103}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000325	0.086397	0.000000	1.000000
	V 292.402 {115}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000007	0.091924	0.000000	1.000000
	Zn 206.200 {464}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000136	1.199727	0.000000	1.000000
	As 189.042 {478}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000196	0.121539	0.000000	1.000000
	Tl 190.856 {477}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000150	0.063005	0.000000	1.000000
	Pb 220.353 {453}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000162	0.170395	0.000000	1.000000
	Se 196.090 {472}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000227	0.098294	0.000000	1.000000
	Sb 206.833 {463}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000445	0.173203	0.000000	1.000000
	Al 396.152 { 85}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.001045	0.032287	0.000000	1.000000
	Ca 317.933 {106}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.005107	0.045471	0.000000	1.000000
	Fe 259.940 {130}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000093	0.018166	0.000000	1.000000
	Mg 279.079 {121}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000006	0.003543	0.000000	1.000000
	K 766.490 { 44}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.003138	0.028566	0.000000	1.000000
	Na 589.592 { 57}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000772	0.086575	0.000000	1.000000
	B 208.959 {462}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000226	0.208562	0.000000	1.000000
	Mo 202.030 {467}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000061	0.881051	0.000000	1.000000
	Si 212.412 {459}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.002742	0.225928	0.000000	1.000000
	Sn 189.989 {478}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000100	0.200817	0.000000	1.000000
	Sr 407.771 { 83}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000557	3.325412	0.000000	1.000000
	Ti 334.904 {101}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000062	0.111843	0.000000	1.000000
	Y 360.073 { 94}*	4/23/2019 8:25:51	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 371.030 { 91}*	4/23/2019 8:25:51	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 224.306 {451}*	4/23/2019 8:25:51	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	In 230.606 {446}*	4/23/2019 8:25:51	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	W 207.911 {462}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.001204	0.446369	0.000000	1.000000
	Zr 339.198 { 99}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000140	0.288058	0.000000	1.000000
	S 182.034 {485}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.001489	0.052752	0.000000	1.000000
	Bi 223.061 {451}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.000839	0.208799	0.000000	1.000000
	Li 670.784 { 50}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	0.000752	0.585026	0.000000	1.000000
	P 177.495 {490}	4/23/2019 8:25:51	4/22/2019 12:37:45	Linear	1/Conc	-0.007829	0.123106	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ba 455.403 { 74}	1.000000	0.000000	0.000288	0.000961	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	1.000000	0.000000	0.000119	0.000395	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	1.000000	0.000000	0.000196	0.000655	OK.	1.000000	0.000000	1	0
	Co 228.616 {448}	1.000000	0.000000	0.000259	0.000865	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	1.000000	0.000000	0.000486	0.001619	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}2	1.000000	0.000000	0.000379	0.001263	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	1.000000	0.000000	0.000072	0.000241	OK.	1.000000	0.000000	1	0
	Ni 231.604 {446}	1.000000	0.000000	0.000305	0.001017	OK.	1.000000	0.000000	1	0
	Ag 328.068 {103}	1.000000	0.000000	0.000494	0.001647	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	1.000000	0.000000	0.000359	0.001197	OK.	1.000000	0.000000	1	0
	Zn 206.200 {464}	1.000000	0.000000	0.000135	0.000449	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	1.000000	0.000000	0.001156	0.003854	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	1.000000	0.000000	0.001054	0.003514	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	1.000000	0.000000	0.000964	0.003214	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	1.000000	0.000000	0.001768	0.005894	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	1.000000	0.000000	0.001286	0.004286	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	1.000000	0.000000	0.014255	0.047515	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	1.000000	0.000000	0.004708	0.015695	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	1.000000	0.000000	0.005469	0.018230	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	1.000000	0.000000	0.036964	0.123214	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	1.000000	0.000000	0.036531	0.121771	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	1.000000	0.000000	0.010931	0.036437	OK.	1.000000	0.000000	1	0
	B 208.959 {462}	1.000000	0.000000	0.000685	0.002283	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	1.000000	0.000000	0.000219	0.000730	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	1.000000	0.000000	0.000945	0.003150	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	1.000000	0.000000	0.000630	0.002099	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	1.000000	0.000000	0.000118	0.000393	OK.	1.000000	0.000000	1	0
	Ti 334.904 {101}	1.000000	0.000000	0.000363	0.001211	OK.	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 224.306 {451}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	W 207.911 {462}	1.000000	0.000000	0.000867	0.002889	OK.	1.000000	0.000000	1	0
	Zr 339.198 { 99}	1.000000	0.000000	0.000187	0.000622	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	1.000000	0.000000	0.002700	0.009000	OK.	1.000000	0.000000	1	0
	Bi 223.061 {451}	1.000000	0.000000	0.001379	0.004598	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	1.000000	0.000000	0.001775	0.005916	OK.	1.000000	0.000000	1	0
	P 177.495 {490}	1.000000	0.000000	0.001246	0.004153	OK.	1.000000	0.000000	1	0

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/23/2019 11:42:24 Type: Cal
Method: SGS 3(v314) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0044**	**-.0001**	**.0000**	**-.0003**	**-.0000**	**.0024**	**.0000**	**-.0002**	**-.0003**
Stddev	.0006	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0000
%RSD	13.42	56.60	275.8	36.44	175.0	.6148	79.24	42.02	6.994
#1	.0051	-.0001	.0001	-.0003	-.0000	.0024	.0000	-.0002	-.0004
#2	.0040	-.0001	.0001	-.0003	.0000	.0023	.0000	-.0001	-.0003
#3	.0041	-.0002	-.0001	-.0002	-.0000	.0024	.0000	-.0003	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0000**	**.0003**	**-.0003**	**-.0002**	**.0000**	**.0003**	**-.0005**	**-.0012**	**.0049**
Stddev	.0000	.0001	.0002	.0000	.0000	.0000	.0002	.0003	.0001
%RSD	499.5	47.30	51.91	16.99	646.0	9.046	41.15	25.72	1.228
#1	.0000	.0003	-.0003	-.0002	.0000	.0003	-.0005	-.0015	.0048
#2	-.0000	.0004	-.0001	-.0002	-.0000	.0003	-.0003	-.0012	.0049
#3	.0000	.0001	-.0004	-.0002	.0000	.0003	-.0006	-.0009	.0049

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**-.0002**	**.0039**	**.0003**	**.0002**	**.0000**	**.0027**	**.0002**	**.0008**
Stddev	.0000	.0000	.0006	.0006	.0001	.0001	.0001	.0000	.0002
%RSD	37.03	15.18	15.54	209.8	36.10	402.9	2.889	27.09	20.11
#1	.0001	-.0001	.0033	-.0004	.0001	.0002	.0027	.0002	.0008
#2	.0001	-.0001	.0045	.0006	.0001	.0001	.0028	.0001	.0009
#3	.0001	-.0002	.0037	.0008	.0002	-.0001	.0026	.0002	.0006

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0001**	**.0008**	**-.0001**	**-.0015**	**-.0006**	**.0016**	**-.0075**
Stddev	.0000	.0001	.0000	.0000	.0002	.0011	.0000
%RSD	5.331	17.99	28.04	3.117	34.49	67.56	.6502
#1	-.0001	.0008	-.0002	-.0016	-.0004	.0016	-.0075
#2	-.0001	.0007	-.0001	-.0015	-.0005	.0027	-.0075
#3	-.0001	.0010	-.0001	-.0015	-.0008	.0005	-.0074

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/23/2019 11:42:24 Type: Cal
Method: SGS 3(v314) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111240.**	**7249.4**	**4078.4**	**9309.6**
Stddev	54.	19.9	4.2	4.6
%RSD	.04895	.27481	.10238	.04951
#1	111300.	7269.0	4079.8	9313.1
#2	111190.	7229.1	4081.7	9311.3
#3	111240.	7250.0	4073.7	9304.3

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/23/2019 11:47:53 Type: Cal
Method: SGS 3(v314) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.277**	**6.387**	**3.704**	**2.031**	**.1891**	**.7166**	**1.132**	**1.459**	**.0436**
Stddev	.001	.007	.005	.001	.0004	.0008	.003	.001	.0000
%RSD	.0145	.1102	.1492	.0424	.1920	.1153	.2278	.0357	.0160
#1	7.277	6.382	3.708	2.032	.1893	.7175	1.134	1.459	.0436
#2	7.275	6.384	3.698	2.030	.1887	.7161	1.129	1.459	.0436
#3	7.277	6.395	3.707	2.030	.1892	.7160	1.133	1.459	.0436

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3767**	**4.998**	**.5135**	**.2555**	**.7001**	**.4095**	**.7337**	**2.643**	**3.731**
Stddev	.0008	.010	.0010	.0003	.0005	.0009	.0015	.003	.006
%RSD	.2193	.1919	.1958	.1328	.0728	.2306	.2018	.0928	.1588
#1	.3774	5.005	.5140	.2552	.7006	.4105	.7338	2.642	3.725
#2	.3758	4.987	.5124	.2556	.7002	.4088	.7322	2.646	3.737
#3	.3770	5.002	.5142	.2559	.6996	.4090	.7352	2.642	3.732

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.216**	**.1961**	**2.459**	**7.308**	**.9109**	**3.702**	**2.418**	**.8360**	**13.96**
Stddev	.002	.0007	.002	.007	.0004	.005	.002	.0021	.00
%RSD	.1467	.3443	.0630	.1020	.0446	.1237	.0959	.2522	.0079
#1	1.214	.1953	2.458	7.308	.9114	3.704	2.419	.8364	13.96
#2	1.217	.1963	2.459	7.315	.9106	3.697	2.416	.8337	13.96
#3	1.217	.1967	2.461	7.300	.9108	3.705	2.420	.8378	13.96

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4650**	**1.833**	**1.228**	**.2233**	**.8818**	**2.478**	**.5232**
Stddev	.0009	.003	.002	.0000	.0011	.005	.0020
%RSD	.2026	.1743	.1390	.0221	.1293	.2027	.3778
#1	.4659	1.835	1.229	.2233	.8831	2.482	.5241
#2	.4640	1.830	1.226	.2232	.8812	2.481	.5210
#3	.4651	1.835	1.228	.2233	.8811	2.473	.5246

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/23/2019 11:47:53 Type: Cal
Method: SGS 3(v314) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103970.**	**7083.2**	**3827.7**	**8008.3**
Stddev	413.	20.0	4.4	3.2
%RSD	.39733	.28213	.11518	.03947
#1	103860.	7105.2	3825.2	8011.7
#2	104430.	7078.5	3832.8	8005.6
#3	103630.	7066.0	3825.1	8007.5

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 4/23/2019 11:52:55 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.015**	**2.029**	**2.032**	**2.016**	**2.052**	**1.983**	**2.054**	**2.039**	**.2488**
Stddev	.001	.003	.002	.005	.009	.004	.005	.003	.0005
%RSD	.0304	.1438	.1178	.2345	.4202	.2198	.2507	.1660	.2006
#1	2.015	2.032	2.034	2.021	2.061	1.985	2.060	2.042	.2493
#2	2.015	2.026	2.029	2.016	2.044	1.986	2.050	2.039	.2486
#3	2.014	2.028	2.032	2.012	2.052	1.978	2.053	2.035	.2484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.019**	**2.064**	**1.989**	**2.086**	**2.055**	**2.025**	**1.998**	**40.05**	**40.81**
Stddev	.004	.001	.001	.001	.005	.004	.004	.08	.02
%RSD	.1860	.0658	.0556	.0673	.2305	.1833	.2212	.1936	.0563
#1	2.023	2.065	1.989	2.087	2.061	2.021	2.002	39.97	40.82
#2	2.017	2.065	1.990	2.086	2.052	2.024	1.993	40.13	40.78
#3	2.017	2.063	1.987	2.084	2.053	2.029	1.999	40.05	40.81
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.93**	**40.15**	**39.65**	**40.20**	**2.046**	**2.021**	**5.121**	**2.048**	**2.010**
Stddev	.14	.09	.02	.02	.005	.004	.002	.002	.002
%RSD	.3333	.2301	.0407	.0589	.2346	.1744	.0414	.0926	.1039
#1	41.03	40.26	39.64	40.19	2.048	2.025	5.123	2.049	2.011
#2	40.78	40.09	39.67	40.17	2.040	2.018	5.119	2.046	2.011
#3	40.99	40.10	39.65	40.22	2.049	2.020	5.120	2.050	2.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 4/23/2019 11:52:55 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.998**	**1.997**	**1.987**	**1.974**	**2.034**	**1.996**	**2.027**
Stddev	.004	.002	.003	.004	.002	.004	.005
%RSD	.2202	.0799	.1305	.2140	.0987	.2187	.2295
#1	2.003	1.999	1.990	1.972	2.036	1.993	2.026
#2	1.995	1.998	1.986	1.971	2.032	1.995	2.023
#3	1.996	1.996	1.985	1.979	2.036	2.001	2.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106770.**	**7241.0**	**3943.9**	**8359.7**
Stddev	290.	25.1	5.0	11.1
%RSD	.27195	.34717	.12698	.13287
#1	106450.	7212.6	3938.6	8347.7
#2	106840.	7260.3	3948.6	8361.6
#3	107020.	7250.2	3944.6	8369.7

Zoom In Zoom Out

Sample Name: ccbconf Acquired: 4/23/2019 11:57:57 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0000**	**.0003**	**.0001**	**.0002**	**-.0000**	**.0002**	**.0002**	**-.0006**
Stddev	.0000	.0001	.0002	.0001	.0003	.0001	.0001	.0000	.0002
%RSD	7.989	685.1	47.62	147.3	215.3	189.8	22.64	9.283	31.97
#1	.0003	-.0000	.0005	.0002	.0001	.0000	.0003	.0002	-.0004
#2	.0002	.0001	.0004	.0000	-.0001	-.0001	.0003	.0002	-.0006
#3	.0003	-.0000	.0002	-.0000	.0005	-.0001	.0002	.0002	-.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**.0001**	**.0005**	**.0004**	**-.0004**	**.0009**	**.0054**	**.0053**
Stddev	.0005	.0001	.0007	.0006	.0002	.0011	.0003	.0079	.0045
%RSD	503.6	73.26	542.1	123.2	49.90	239.1	31.70	146.3	83.64
#1	.0007	-.0001	-.0007	.0012	.0004	.0000	.0006	.0008	.0064
#2	-.0001	-.0003	.0007	.0004	.0002	-.0017	.0010	.0146	.0004
#3	-.0003	-.0001	.0004	-.0001	.0006	.0003	.0011	.0009	.0092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0125**	**.0640**	**.0157**	**.0028**	**.0000**	**.0006**	**-.0005**	**.0000**
Stddev	.0008	.0228	.0270	.0163	.0004	.0001	.0005	.0003	.0000
%RSD	17.62	181.8	42.19	103.4	14.69	582.6	79.48	57.65	89.92
#1	.0044	.0223	.0330	-.0017	.0031	-.0000	.0001	-.0006	.0001
#2	.0039	.0288	.0824	.0184	.0023	.0001	.0008	-.0002	.0000
#3	.0055	-.0135	.0767	.0305	.0029	-.0001	.0011	-.0007	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccbconf Acquired: 4/23/2019 11:57:57 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0007**	**.0003**	**-.0002**	**-.0016**	**.0002**	**.0011**
Stddev	.0002	.0006	.0001	.0016	.0006	.0014	.0004
%RSD	52.16	96.33	54.09	796.1	34.92	563.4	32.39
#1	.0005	-.0000	.0004	.0002	-.0022	.0002	.0013
#2	.0001	.0008	.0003	-.0020	-.0011	.0016	.0013
#3	.0004	.0012	.0001	.0011	-.0015	-.0011	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112020.**	**7260.1**	**4091.2**	**9312.2**
Stddev	264.	21.1	3.6	11.4
%RSD	.23590	.29024	.08879	.12247
#1	112320.	7283.0	4095.3	9323.4
#2	111820.	7255.7	4088.3	9300.6
#3	111920.	7241.5	4090.1	9312.6

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 4/23/2019 12:03:30 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.970**	**1.979**	**1.982**	**2.004**	**1.979**	**1.924**	**1.991**	**1.982**	**.2519**
Stddev	.002	.004	.003	.001	.001	.003	.004	.001	.0003
%RSD	.1022	.2249	.1367	.0274	.0491	.1379	.1913	.0399	.1308
#1	1.967	1.976	1.982	2.004	1.980	1.923	1.994	1.981	.2522
#2	1.971	1.984	1.979	2.005	1.978	1.927	1.992	1.982	.2519
#3	1.970	1.978	1.985	2.004	1.980	1.923	1.987	1.982	.2515
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.966**	**2.000**	**1.989**	**2.023**	**1.988**	**1.966**	**1.977**	**39.67**	**39.64**
Stddev	.004	.002	.003	.005	.000	.002	.004	.02	.04
%RSD	.1963	.1174	.1458	.2712	.0102	.0819	.1913	.0528	.0950
#1	1.967	2.002	1.989	2.028	1.988	1.967	1.975	39.66	39.60
#2	1.969	1.999	1.986	2.017	1.988	1.967	1.974	39.69	39.68
#3	1.961	1.998	1.992	2.024	1.988	1.964	1.981	39.65	39.63
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.43**	**39.83**	**39.53**	**39.48**	**2.014**	**2.001**	F **5.267**	**2.028**	**1.957**
Stddev	.10	.09	.11	.03	.006	.001	.005	.003	.002
%RSD	.2467	.2224	.2719	.0688	.2978	.0554	.0938	.1458	.0879
#1	40.50	39.78	39.42	39.45	2.008	2.000	5.267	2.029	1.955
#2	40.46	39.93	39.63	39.50	2.014	2.001	5.262	2.025	1.958
#3	40.31	39.78	39.55	39.48	2.020	2.002	5.272	2.031	1.959
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							5.000		
Range							5.000%		

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 4/23/2019 12:03:30 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.984**	**1.954**	**1.958**	**2.009**	**1.983**	**1.998**	**2.009**
Stddev	.002	.002	.002	.002	.005	.004	.004
%RSD	.0927	.1237	.1096	.1083	.2492	.1923	.2192
#1	1.986	1.952	1.960	2.008	1.980	1.993	2.007
#2	1.983	1.954	1.959	2.012	1.981	2.000	2.005
#3	1.984	1.957	1.956	2.008	1.989	2.000	2.014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**107390.**	**7233.2**	**3947.9**	**8374.2**
Stddev	169.	14.7	.9	3.6
%RSD	.15749	.20321	.02353	.04355
#1	107390.	7245.4	3947.9	8372.3
#2	107230.	7216.9	3948.8	8371.9
#3	107570.	7237.3	3947.0	8378.4

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 4/23/2019 12:12:28 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**.0003**	**-.0001**	**-.0002**	**-.0002**	**.0001**	**.0002**	**-.0012**
Stddev	.0004	.0001	.0001	.0001	.0004	.0003	.0001	.0002	.0002
%RSD	1397.	82.15	29.65	93.13	220.7	132.1	116.8	108.9	14.40
#1	.0002	-.0000	.0003	.0000	.0000	-.0006	.0001	.0000	-.0012
#2	-.0005	-.0002	.0002	-.0001	.0001	-.0000	-.0000	.0001	-.0014
#3	.0002	-.0001	.0003	-.0001	-.0006	-.0001	.0001	.0004	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0002**	**-.0006**	**.0006**	**.0000**	**-.0000**	**.0000**	**-.0041**	**-.0023**
Stddev	.0001	.0001	.0003	.0001	.0005	.0007	.0003	.0010	.0016
%RSD	53.26	68.36	56.92	18.25	3859.	1734.	1137.	24.01	69.59
#1	-.0003	-.0001	-.0007	.0006	.0004	.0000	.0004	-.0051	-.0035
#2	-.0001	-.0001	-.0008	.0005	-.0006	-.0008	-.0002	-.0042	-.0028
#3	-.0004	-.0003	-.0002	.0007	.0002	.0006	-.0001	-.0031	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0338**	**.0321**	**.0072**	**.0014**	**-.0002**	**-.0003**	**-.0003**	**-.0000**
Stddev	.0023	.0425	.0102	.0058	.0003	.0002	.0003	.0007	.0001
%RSD	68.50	125.7	31.90	80.84	21.79	113.4	104.9	213.5	210.6
#1	.0007	.0798	.0438	.0099	.0011	-.0002	-.0001	-.0004	.0000
#2	.0046	.0255	.0247	.0112	.0017	.0000	-.0001	-.0010	-.0001
#3	.0047	-.0039	.0278	.0005	.0014	-.0003	-.0006	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 4/23/2019 12:12:28 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0007**	**.0001**	**-.0019**	**-.0023**	**-.0004**	**.0015**
Stddev	.0002	.0005	.0002	.0010	.0003	.0010	.0003
%RSD	40.38	71.35	166.7	51.36	10.81	264.4	23.83
#1	.0004	.0004	.0002	-.0022	-.0021	-.0002	.0018
#2	.0006	.0004	.0001	-.0026	-.0023	.0005	.0011
#3	.0002	.0012	-.0001	-.0008	-.0026	-.0014	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112500.**	**7354.1**	**4117.7**	**9379.0**
Stddev	407.	44.8	2.8	14.9
%RSD	.36202	.60943	.06799	.15838
#1	112650.	7306.2	4114.5	9368.8
#2	112040.	7395.0	4119.7	9396.0
#3	112800.	7361.0	4118.9	9372.1

Zoom In Zoom Out

Sample Name: ICCV Acquired: 4/23/2019 12:21:04 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.981**	**1.994**	**2.010**	**1.997**	**2.036**	**1.958**	**2.034**	**2.019**	**.2452**
Stddev	.004	.005	.006	.005	.006	.003	.003	.002	.0008
%RSD	.2191	.2417	.3031	.2334	.3091	.1432	.1242	.1133	.3202
#1	1.977	1.990	2.008	1.998	2.043	1.958	2.036	2.019	.2455
#2	1.982	2.000	2.012	2.002	2.031	1.955	2.031	2.020	.2443
#3	1.978	1.990	2.017	1.998	2.038	1.961	2.036	2.022	.2461
#4	1.987	1.997	2.003	1.991	2.030	1.956	2.032	2.016	.2449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.994**	**2.052**	**1.975**	**2.065**	**2.037**	**2.005**	**1.976**	**39.65**	**40.47**
Stddev	.001	.004	.006	.003	.003	.005	.004	.08	.03
%RSD	.0586	.2088	.3075	.1655	.1514	.2616	.2097	.2060	.0660
#1	1.995	2.055	1.972	2.063	2.038	2.002	1.976	39.66	40.46
#2	1.992	2.050	1.979	2.067	2.037	2.007	1.981	39.58	40.48
#3	1.993	2.055	1.980	2.069	2.041	2.012	1.978	39.59	40.44
#4	1.994	2.046	1.967	2.062	2.033	2.001	1.971	39.76	40.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICCV Acquired: 4/23/2019 12:21:04 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.40**	**39.66**	**39.04**	**39.71**	**2.023**	**2.000**	**5.071**	**2.033**	**1.975**
Stddev	.18	.31	.07	.08	.005	.006	.013	.004	.002
%RSD	.4335	.7921	.1846	.2035	.2448	.2996	.2466	.2215	.1217
#1	40.15	39.29	38.97	39.69	2.020	1.997	5.066	2.033	1.972
#2	40.55	40.05	39.10	39.66	2.026	2.003	5.077	2.033	1.977
#3	40.45	39.68	38.99	39.65	2.029	2.007	5.086	2.039	1.974
#4	40.46	39.60	39.11	39.82	2.018	1.993	5.057	2.028	1.977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.975**	**1.979**	**1.964**	**1.962**	**2.011**	**1.966**	**2.014**
Stddev	.003	.004	.002	.004	.005	.005	.003
%RSD	.1267	.1749	.0945	.1936	.2536	.2582	.1398
#1	1.978	1.977	1.967	1.957	2.010	1.964	2.013
#2	1.976	1.980	1.965	1.964	2.011	1.965	2.014
#3	1.974	1.983	1.963	1.965	2.018	1.961	2.018
#4	1.972	1.975	1.963	1.961	2.006	1.973	2.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Zoom In Zoom Out

Sample Name: ICCV Acquired: 4/23/2019 12:21:04 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**107670.**	**7287.4**	**3977.7**	**8426.0**
Stddev	307.	13.6	8.8	12.0
%RSD	.28547	.18606	.22247	.14220
#1	107450.	7299.2	3979.8	8430.5
#2	108090.	7268.5	3977.8	8417.8
#3	107420.	7287.2	3966.0	8414.8
#4	107710.	7294.8	3987.4	8440.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 12:34:41 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0002**	**-.0002**	**.0001**	**-.0001**	**.0001**	**.0002**	**-.0006**
Stddev	.0001	.0001	.0001	.0001	.0001	.0002	.0000	.0001	.0003
%RSD	92.87	282.1	32.37	51.37	57.20	263.9	65.01	46.95	50.44
#1	.0003	-.0000	.0001	-.0004	.0002	.0001	.0001	.0004	-.0003
#2	.0001	.0001	.0001	-.0003	.0001	.0000	.0000	.0001	-.0007
#3	.0000	-.0000	.0002	-.0001	.0001	-.0003	.0001	.0002	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**-.0003**	**.0006**	**.0007**	**.0001**	**.0008**	**.0077**	**-.0028**
Stddev	.0002	.0000	.0008	.0007	.0009	.0007	.0006	.0116	.0010
%RSD	112.9	21.46	290.9	112.6	132.6	889.1	79.17	149.6	34.57
#1	.0001	-.0002	-.0012	.0007	.0017	-.0007	.0005	.0121	-.0027
#2	.0005	-.0002	.0001	.0012	.0002	.0007	.0004	-.0054	-.0039
#3	.0001	-.0001	.0003	-.0001	.0001	.0002	.0015	.0165	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.0209**	**.0213**	**-.0003**	**.0011**	**.0002**	**.0007**	**.0000**	**-.0001**
Stddev	.0022	.0457	.0263	.0071	.0003	.0003	.0006	.0005	.0000
%RSD	208.8	219.2	123.7	2594.	26.56	158.1	80.15	1698.	38.21
#1	-.0004	.0170	.0043	-.0021	.0009	.0004	.0002	.0004	-.0001
#2	.0008	-.0228	.0080	.0076	.0009	-.0001	.0014	-.0005	-.0001
#3	-.0035	.0684	.0516	-.0063	.0014	.0003	.0007	.0002	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 12:34:41 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0003**	**.0000**	**-.0020**	**-.0012**	**.0004**	**.0012**
Stddev	.0003	.0002	.0000	.0019	.0005	.0009	.0006
%RSD	234.0	71.53	161.1	94.83	41.11	247.9	45.41
#1	.0005	-.0001	-.0000	-.0013	-.0018	.0012	.0006
#2	-.0002	-.0004	.0000	-.0041	-.0009	-.0007	.0013
#3	.0001	-.0006	.0001	-.0005	-.0010	.0006	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113120.**	**7377.7**	**4137.3**	**9417.2**
Stddev	221.	64.7	7.0	20.3
%RSD	.19544	.87658	.16800	.21583
#1	113370.	7305.0	4129.3	9394.2
#2	113050.	7428.6	4140.5	9432.5
#3	112940.	7399.6	4142.1	9425.0

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/23/2019 12:41:20 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2048**	**.0020**	**.0034**	**.0489**	**.0107**	**.0096**	**.0159**	**.0102**	**.0042**
Stddev	.0003	.0001	.0002	.0001	.0005	.0001	.0001	.0001	.0002
%RSD	.1277	2.782	7.078	.2278	4.440	.8691	.8766	.7606	3.843
#1	.2046	.0020	.0037	.0490	.0111	.0096	.0161	.0103	.0042
#2	.2048	.0020	.0032	.0488	.0108	.0096	.0160	.0101	.0044
#3	.2051	.0021	.0034	.0490	.0102	.0095	.0158	.0102	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0513**	**.0212**	**.0076**	**.0095**	**.0029**	**.0106**	**.0070**	**.2057**	**5.306**
Stddev	.0002	.0001	.0005	.0002	.0005	.0003	.0012	.0061	.012
%RSD	.4386	.3023	6.012	2.364	18.62	2.543	17.94	2.965	.2212
#1	.0515	.0211	.0074	.0094	.0023	.0106	.0055	.2122	5.299
#2	.0510	.0212	.0081	.0093	.0033	.0109	.0078	.2047	5.299
#3	.0513	.0213	.0073	.0097	.0032	.0103	.0076	.2002	5.319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1127**	**5.286**	**5.131**	**5.193**	**.1022**	**.0214**	**.2166**	**.0116**	**.0100**
Stddev	.0052	.078	.045	.013	.0008	.0001	.0004	.0005	.0001
%RSD	4.601	1.472	.8819	.2518	.7921	.6485	.1890	4.591	.5420
#1	.1068	5.357	5.102	5.191	.1020	.0216	.2169	.0122	.0100
#2	.1163	5.299	5.108	5.182	.1031	.0213	.2166	.0112	.0099
#3	.1152	5.203	5.183	5.207	.1016	.0214	.2161	.0114	.0100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/23/2019 12:41:20 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0103**	**.0527**	**.0099**	**.0495**	**.0190**	**.0546**	**.0515**
Stddev	.0003	.0011	.0001	.0018	.0004	.0005	.0008
%RSD	2.535	2.028	1.488	3.596	2.086	.9099	1.462
#1	.0105	.0539	.0098	.0479	.0189	.0551	.0510
#2	.0104	.0519	.0101	.0492	.0194	.0542	.0524
#3	.0100	.0524	.0098	.0514	.0186	.0543	.0511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109980.**	**7203.6**	**4024.4**	**9022.2**
Stddev	189.	40.8	8.0	15.5
%RSD	.17229	.56700	.19820	.17148
#1	109800.	7210.0	4018.8	9013.9
#2	109970.	7240.8	4033.5	9040.1
#3	110180.	7159.9	4020.8	9012.8

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/23/2019 12:46:49 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0010**	F **.0014**	**.0031**	**.0026**	F **-.0003**	**.0035**	**.0046**
Stddev	.0003	.0001	.0000	.0000	.0005	.0003	.0001	.0004
%RSD	6.999	6.061	3.149	.9436	17.95	103.1	3.648	8.890
#1	.0049	.0011	.0014	.0031	.0030	-.0006	.0034	.0042
#2	.0043	.0010	.0014	.0031	.0026	-.0001	.0035	.0050
#3	.0047	.0011	.0015	.0031	.0021	-.0001	.0037	.0045
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			.0010			.0020		
Range			30.00%			-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0004**	**.0021**	**.0117**	**.0032**	F **.0025**	F **-.0003**	**.0058**	F **.0003**
Stddev	.0002	.0003	.0001	.0005	.0012	.0007	.0015	.0011
%RSD	39.56	12.51	.8813	15.18	48.94	222.2	26.15	422.0
#1	-.0006	.0024	.0118	.0031	.0011	.0001	.0074	-.0009
#2	-.0003	.0019	.0118	.0038	.0035	-.0011	.0045	.0003
#3	-.0004	.0021	.0116	.0028	.0030	.0001	.0054	.0013
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail
Value	.0020				.0020	.0025		.0030
Range	-30.00%				20.00%	-30.00%		-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1220**	**1.159**	**-.0004**	**.1121**	**2.248**	**1.141**	F **.0009**	**-.0000**
Stddev	.0075	.009	.0028	.0189	.010	.007	.0003	.0002
%RSD	6.126	.7777	716.1	16.84	.4314	.5858	39.84	1720.
#1	.1249	1.155	.0027	.1041	2.251	1.135	.0012	-.0002
#2	.1276	1.170	-.0026	.0986	2.238	1.140	.0010	.0001
#3	.1135	1.153	-.0013	.1337	2.257	1.148	.0005	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None
Value							.0100	
Range							-30.00%	

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/23/2019 12:46:49 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**-.0006**	**-.0001**	**-.0000**	F **.0003**	F **-.0001**	F **.0001**	F **-.0013**
Stddev	.0004	.0006	.0001	.0002	.0006	.0001	.0032	.0004
%RSD	14.02	93.93	145.4	557.4	196.2	78.88	4626.	28.86
#1	.0027	-.0001	.0000	.0000	-.0004	-.0001	-.0008	-.0014
#2	.0036	-.0004	-.0000	.0001	.0006	-.0002	.0036	-.0016
#3	.0032	-.0012	-.0002	-.0003	.0007	-.0000	-.0026	-.0009
Check ?	None	None	None	None	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value					.0040	.0040	.0040	.0040
Range					-30.00%	-30.00%	-30.00%	-30.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0012**	F **.0025**
Stddev	.0000	.0008
%RSD	3.613	32.74
#1	-.0012	.0020
#2	-.0012	.0035
#3	-.0011	.0021
Check ?	Chk Fail	Chk Fail
Value	.0040	.0040
Range	-30.00%	-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113050.**	**7365.1**	**4131.1**	**9357.0**
Stddev	341.	42.5	4.4	4.4
%RSD	.30138	.57696	.10533	.04754
#1	112660.	7382.7	4135.7	9360.8
#2	113170.	7316.6	4127.1	9358.1
#3	113310.	7395.9	4130.3	9352.1

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/23/2019 12:52:20 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0006**	**.0004**	**-.0005**	**.0013**	**.0024**	**.0015**	**.0009**	**-.0002**
Stddev	.0002	.0001	.0002	.0002	.0002	.0002	.0001	.0003	.0005
%RSD	91.50	18.39	49.04	40.67	13.04	8.649	9.083	38.12	228.0
#1	.0000	.0006	.0004	-.0003	.0013	.0026	.0013	.0012	-.0007
#2	-.0003	.0007	.0006	-.0007	.0012	.0026	.0016	.0008	.0004
#3	-.0003	.0005	.0002	-.0006	.0015	.0022	.0015	.0006	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**-.0008**	**-.0006**	**.0001**	**.0025**	**-.0047**	**.0012**	**510.7**	**380.4**
Stddev	.0005	.0002	.0003	.0020	.0019	.0029	.0012	.6	.6
%RSD	20.93	23.97	59.37	2816.	75.34	61.47	96.27	.1156	.1454
#1	.0026	-.0011	-.0009	.0008	.0015	-.0032	-.0000	511.0	380.4
#2	.0021	-.0007	-.0006	.0016	.0013	-.0081	.0014	510.0	379.8
#3	.0018	-.0008	-.0002	-.0022	.0047	-.0030	.0023	511.1	380.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**187.4**	**496.2**	**-.3698**	**.0241**	**-.0028**	**-.0012**	**-.0139**	**-.0017**	**-.0029**
Stddev	.2	1.6	.0264	.0104	.0003	.0007	.0007	.0012	.0002
%RSD	.1157	.3268	7.128	43.31	10.01	56.97	4.874	69.20	5.997
#1	187.2	494.8	-.3745	.0151	-.0025	-.0005	-.0143	-.0023	-.0031
#2	187.3	495.7	-.3935	.0355	-.0031	-.0019	-.0131	-.0025	-.0027
#3	187.6	498.0	-.3414	.0216	-.0027	-.0012	-.0142	-.0004	-.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/23/2019 12:52:20 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0057**	**-.0020**	**-.0298**	**.0056**	**-.0127**	**.0036**
Stddev	.0003	.0020	.0003	.0049	.0012	.0013	.0004
%RSD	3356.	34.83	12.76	16.35	21.39	10.53	10.74
#1	.0003	.0069	-.0022	-.0301	.0061	-.0138	.0037
#2	-.0001	.0068	-.0021	-.0248	.0042	-.0112	.0040
#3	-.0002	.0034	-.0017	-.0345	.0065	-.0132	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**99975.**	**7054.1**	**3669.4**	**7384.6**
Stddev	313.	39.5	4.0	7.8
%RSD	.31303	.56028	.10819	.10555
#1	99624.	7075.2	3665.4	7375.6
#2	100220.	7078.6	3669.4	7388.3
#3	100080.	7008.5	3673.4	7389.8

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/23/2019 12:57:42 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4978**	**.4883**	**1.004**	**.4836**	**.4790**	**.4978**	**.4907**	**.9693**	**1.087**
Stddev	.0007	.0002	.000	.0003	.0003	.0009	.0003	.0007	.000
%RSD	.1327	.0354	.0126	.0668	.0600	.1731	.0529	.0756	.0378
#1	.4986	.4884	1.004	.4836	.4792	.4987	.4907	.9694	1.087
#2	.4974	.4883	1.004	.4839	.4792	.4970	.4905	.9700	1.086
#3	.4974	.4881	1.004	.4832	.4787	.4977	.4910	.9685	1.087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4851**	**.9422**	**1.057**	**.9550**	**.9669**	**1.023**	**1.064**	**507.9**	**379.3**
Stddev	.0002	.0008	.003	.0012	.0004	.003	.000	.6	.4
%RSD	.0500	.0799	.3176	.1207	.0412	.2951	.0323	.1132	.1060
#1	.4849	.9429	1.060	.9556	.9665	1.020	1.064	508.3	378.9
#2	.4851	.9423	1.058	.9558	.9673	1.025	1.063	508.1	379.7
#3	.4854	.9414	1.054	.9537	.9669	1.025	1.064	507.2	379.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**194.2**	**504.5**	**-.4130**	**.0040**	**.4704**	**.4785**	**.5076**	**.4662**	**.4939**
Stddev	.3	1.2	.0065	.0027	.0009	.0007	.0017	.0013	.0010
%RSD	.1391	.2409	1.569	67.75	.1926	.1433	.3306	.2859	.2099
#1	194.1	503.4	-.4180	.0017	.4706	.4779	.5078	.4673	.4951
#2	193.9	504.3	-.4057	.0069	.4694	.4792	.5058	.4665	.4933
#3	194.4	505.8	-.4153	.0033	.4712	.4783	.5091	.4647	.4933
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/23/2019 12:57:42 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4924**	**.4783**	**.4766**	**.4806**	**.5054**	**.5198**	**.5113**
Stddev	.0005	.0022	.0000	.0029	.0023	.0007	.0013
%RSD	.0932	.4686	.0049	.5984	.4496	.1318	.2569
#1	.4926	.4764	.4766	.4812	.5065	.5204	.5125
#2	.4919	.4776	.4766	.4831	.5069	.5200	.5116
#3	.4927	.4808	.4767	.4775	.5028	.5190	.5099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**99969.**	**7057.6**	**3664.2**	**7387.9**
Stddev	99.	28.6	3.3	3.1
%RSD	.09892	.40585	.09040	.04262
#1	100080.	7089.3	3663.2	7387.8
#2	99880.	7033.4	3661.5	7384.7
#3	99951.	7050.2	3667.9	7391.0

Zoom In Zoom Out

Sample Name: HSTD 7 Acquired: 4/23/2019 13:02:45 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.842**	**7.882**	**7.696**	**7.850**	**8.256**	**8.022**	**7.895**	**7.792**	**.6510**
Stddev	.006	.019	.009	.006	.003	.004	.034	.004	.0010
%RSD	.0739	.2392	.1135	.0784	.0375	.0549	.4363	.0546	.1466
#1	7.849	7.904	7.704	7.851	8.253	8.025	7.921	7.788	.6511
#2	7.839	7.868	7.698	7.843	8.255	8.017	7.909	7.792	.6519
#3	7.838	7.875	7.686	7.855	8.259	8.023	7.856	7.797	.6500
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.018**	**8.165**	**8.063**	**8.107**	**7.986**	**7.957**	**8.207**	**.1566**	**-.1235**
Stddev	.006	.009	.011	.005	.002	.007	.009	.0160	.0011
%RSD	.0728	.1120	.1389	.0665	.0266	.0945	.1073	10.21	.8735
#1	8.017	8.173	8.061	8.113	7.988	7.964	8.213	.1519	-.1247
#2	8.024	8.166	8.074	8.105	7.987	7.958	8.211	.1435	-.1228
#3	8.012	8.155	8.052	8.103	7.984	7.949	8.197	.1744	-.1229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0363**	**-.0572**	**.2398**	**.0684**	**7.967**	**8.247**	**25.67**	**8.518**	**7.763**
Stddev	.0055	.0049	.0117	.0108	.006	.005	.00	.009	.007
%RSD	15.07	8.619	4.887	15.78	.0745	.0565	.0177	.1056	.0892
#1	.0380	-.0543	.2381	.0621	7.971	8.250	25.68	8.525	7.770
#2	.0301	-.0629	.2523	.0622	7.970	8.249	25.67	8.522	7.763
#3	.0406	-.0545	.2291	.0809	7.960	8.241	25.67	8.508	7.756
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD 7 Acquired: 4/23/2019 13:02:45 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.234**	**8.432**	**7.959**	**99.71**	**8.277**	**7.971**	**7.829**
Stddev	.001	.005	.025	.06	.008	.002	.009
%RSD	.0108	.0573	.3100	.0595	.0984	.0206	.1185
#1	8.235	8.435	7.931	99.76	8.278	7.971	7.838
#2	8.233	8.426	7.978	99.73	8.285	7.969	7.830
#3	8.234	8.434	7.967	99.65	8.269	7.973	7.820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109860.**	**7407.6**	**4053.7**	**9076.7**
Stddev	256.	12.8	2.9	.6
%RSD	.23335	.17245	.07109	.00676
#1	110130.	7397.8	4052.3	9076.1
#2	109620.	7403.0	4051.7	9077.3
#3	109850.	7422.1	4057.0	9076.6

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/23/2019 13:08:06 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0008**	**-.0001**	**-.0014**	**.0009**	**.0022**	**.0012**	**.0005**	**.0152**
Stddev	.0002	.0001	.0001	.0001	.0004	.0003	.0000	.0001	.0003
%RSD	167.8	8.893	47.39	6.720	50.03	15.74	2.290	27.46	2.292
#1	.0000	.0007	-.0001	-.0013	.0008	.0021	.0012	.0007	.0156
#2	-.0000	.0008	-.0002	-.0015	.0013	.0026	.0012	.0004	.0150
#3	-.0003	.0008	-.0002	-.0013	.0005	.0019	.0012	.0005	.0150
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**-.0007**	**-.0004**	**-.0003**	**.0002**	**-.0042**	**.0025**	**316.0**	**200.2**
Stddev	.0001	.0001	.0018	.0013	.0004	.0030	.0016	.2	.3
%RSD	5.714	12.82	456.5	412.0	181.0	72.88	66.06	.0578	.1381
#1	.0022	-.0007	-.0009	.0006	.0002	-.0046	.0041	315.9	200.0
#2	.0021	-.0006	-.0019	.0003	.0006	-.0070	.0009	316.2	200.5
#3	.0024	-.0008	.0016	-.0018	-.0001	-.0009	.0024	315.9	200.1
Check ?	None	None	None	None	None	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**196.3**	**304.7**	**200.5**	**199.7**	**.0007**	**.0004**	**.0011**	**-.0016**	**-.0021**
Stddev	.4	1.1	.5	.2	.0010	.0001	.0031	.0009	.0001
%RSD	.2036	.3452	.2701	.1075	153.1	23.82	295.1	54.83	2.795
#1	196.1	303.6	200.6	199.7	-.0000	.0003	.0008	-.0012	-.0021
#2	196.7	305.7	201.0	200.0	.0019	.0003	-.0019	-.0010	-.0020
#3	196.0	304.9	199.9	199.5	.0002	.0005	.0044	-.0026	-.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/23/2019 13:08:06 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0048**	**-.0017**	**-.0148**	**.0049**	**.0007**	**.0056**
Stddev	.0002	.0017	.0003	.0009	.0005	.0013	.0017
%RSD	45.71	34.80	17.40	5.909	10.88	188.7	29.79
#1	-.0002	.0036	-.0016	-.0138	.0055	-.0008	.0070
#2	-.0006	.0068	-.0014	-.0151	.0044	.0014	.0060
#3	-.0003	.0042	-.0020	-.0155	.0049	.0015	.0037
Check ?	None	None	None	None	None	None	None
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**100560.**	**7048.4**	**3684.3**	**7399.4**
Stddev	95.	24.9	1.5	4.4
%RSD	.09433	.35281	.04117	.05926
#1	100480.	7075.0	3686.0	7394.4
#2	100670.	7025.7	3683.7	7402.5
#3	100530.	7044.5	3683.2	7401.3

Zoom In Zoom Out

Sample Name: feconf Acquired: 4/23/2019 13:13:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0004**	**-.0001**	**-.0006**	**.0004**	**.0005**	**.0017**	**.0008**
Stddev	.0001	.0001	.0000	.0002	.0001	.0004	.0001	.0003
%RSD	134.0	37.83	62.41	27.22	23.36	93.34	6.292	37.72
#1	.0001	.0003	-.0001	-.0008	.0003	.0009	.0016	.0010
#2	-.0000	.0005	-.0000	-.0006	.0004	.0000	.0018	.0008
#3	.0001	.0002	-.0001	-.0005	.0005	.0005	.0017	.0004

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0029**	**.0003**	**.0006**	**-.0003**	**-.0002**	**-.0044**	**.0016**
Stddev	.0003	.0001	.0002	.0008	.0009	.0005	.0010	.0003
%RSD	162.0	5.094	73.89	148.4	265.1	200.4	23.26	17.08
#1	-.0001	.0027	.0001	.0015	.0005	-.0006	-.0049	.0014
#2	.0004	.0030	.0002	.0000	-.0003	.0003	-.0050	.0015
#3	.0002	.0029	.0005	.0002	-.0012	-.0004	-.0032	.0019

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0190**	**-.0236**	F **215.4**	**.0226**	**.2131**	**.0524**	**.0001**	**.0007**
Stddev	.0168	.0018	.3	.0076	.0364	.0104	.0002	.0002
%RSD	88.60	7.499	.1454	33.57	17.10	19.86	283.4	33.62
#1	.0000	-.0243	215.6	.0180	.1974	.0642	.0003	.0004
#2	-.0251	-.0248	215.0	.0313	.2547	.0485	-.0001	.0009
#3	-.0319	-.0215	215.5	.0184	.1870	.0445	.0000	.0008

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0006**	**-.0006**	**.0003**	**.0032**	W **-.0022**	**-.0064**	**.0067**
Stddev	.0001	.0005	.0001	.0002	.0004	.0001	.0007	.0018
%RSD	83.21	81.90	10.15	62.45	12.21	4.133	10.75	27.07
#1	-.0000	.0010	-.0005	.0001	.0027	-.0022	-.0058	.0073
#2	-.0002	.0000	-.0007	.0003	.0035	-.0022	-.0072	.0047
#3	-.0003	.0008	-.0006	.0004	.0033	-.0021	-.0063	.0081

Zoom In Zoom Out

Sample Name: feconf Acquired: 4/23/2019 13:13:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0003**	**.0038**
Stddev	.0005	.0009
%RSD	176.7	24.06
#1	.0009	.0029
#2	.0001	.0047
#3	-.0001	.0038

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111180.**	**7297.6**	**4045.8**	**9233.3**
Stddev	342.	37.7	2.1	2.9
%RSD	.30728	.51675	.05295	.03151
#1	111130.	7324.7	4044.2	9232.4
#2	111540.	7313.6	4048.3	9231.0
#3	110860.	7254.6	4045.0	9236.6

Zoom In Zoom Out

Sample Name: crconf Acquired: 4/23/2019 13:19:02 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**.0000**	**.0008**	F **10.00**	**-.0003**	**-.0000**	**.0004**	**-.0006**
Stddev	.0002	.0001	.0000	.0001	.01	.0002	.0000	.0001	.0003
%RSD	433.0	65.83	142.4	9.215	.0713	78.10	178.8	22.89	43.29
#1	-.0000	-.0001	.0001	.0008	10.00	-.0004	-.0000	.0004	-.0009
#2	-.0003	-.0000	.0001	.0007	10.01	-.0004	-.0000	.0005	-.0003
#3	.0001	-.0001	-.0000	.0008	10.00	-.0000	.0000	.0003	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0001**	**-.0005**	**.0004**	**.0015**	**.0014**	**-.0015**	**.0013**	**-.0060**
Stddev	.0001	.0002	.0002	.0005	.0005	.0014	.0009	.0029	.0003
%RSD	1388.	220.2	41.47	121.0	31.12	96.69	59.50	224.9	5.722
#1	-.0001	-.0002	-.0006	-.0001	.0010	.0022	-.0022	.0013	-.0063
#2	.0001	.0001	-.0006	.0010	.0016	-.0002	-.0017	.0042	-.0056
#3	.0001	-.0001	-.0003	.0004	.0019	.0021	-.0005	-.0016	-.0061

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0110**	**.0035**	**.0390**	**.0190**	**.0019**	**.0007**	**.0111**	**-.0004**	**-.0000**
Stddev	.0046	.0540	.0068	.0082	.0007	.0002	.0009	.0004	.0000
%RSD	41.78	1544.	17.56	43.13	37.28	24.78	7.850	99.67	92.43
#1	.0067	-.0505	.0316	.0259	.0024	.0006	.0120	-.0009	-.0001
#2	.0159	.0035	.0402	.0210	.0023	.0006	.0103	-.0000	-.0000
#3	.0104	.0575	.0451	.0100	.0011	.0009	.0108	-.0004	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0036**	**.0055**	**.0010**	**-.0038**	**-.0000**	**.0018**
Stddev	.0001	.0000	.0001	.0016	.0011	.0015	.0007
%RSD	17.10	.8969	1.022	158.0	30.35	3266.	40.73
#1	.0009	.0036	.0055	.0027	-.0048	-.0017	.0010
#2	.0007	.0037	.0055	.0006	-.0025	.0012	.0018
#3	.0007	.0037	.0054	-.0004	-.0040	.0004	.0025

Zoom In Zoom Out

Sample Name: crconf Acquired: 4/23/2019 13:19:02 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113440.**	**7363.4**	**4072.5**	**9386.0**
Stddev	108.	20.4	1.2	2.3
%RSD	.09509	.27691	.02954	.02438
#1	113310.	7340.7	4072.2	9388.5
#2	113500.	7380.1	4073.9	9383.9
#3	113490.	7369.5	4071.5	9385.7

Zoom In Zoom Out

Sample Name: asconf Acquired: 4/23/2019 13:24:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0001**	**.0004**	**-.0009**	**.0002**	**-.0004**	**.0000**	**-.0000**	**-.0012**
Stddev	.0002	.0001	.0000	.0001	.0001	.0003	.0001	.0001	.0003
%RSD	895.3	68.47	10.10	11.46	66.56	86.22	140.4	221.9	23.62
#1	.0003	-.0002	.0005	-.0010	.0000	-.0007	.0001	-.0000	-.0013
#2	-.0000	-.0000	.0004	-.0008	.0003	-.0002	.0001	.0000	-.0014
#3	-.0001	-.0002	.0004	-.0008	.0003	-.0002	-.0000	-.0001	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0003**	**5.354**	**.0002**	**-.0005**	**-.0012**	**.0007**	**.0015**	**-.0038**
Stddev	.0003	.0000	.006	.0008	.0010	.0007	.0012	.0072	.0029
%RSD	340.4	4.720	.1092	348.3	184.9	52.95	175.9	481.9	75.43
#1	.0003	.0003	5.349	.0011	.0005	-.0019	.0017	.0070	-.0007
#2	.0002	.0003	5.353	-.0004	-.0006	-.0006	.0009	-.0066	-.0043
#3	-.0003	.0003	5.361	-.0001	-.0015	-.0012	-.0006	.0041	-.0064

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**.0327**	**.0139**	**.0120**	**.0013**	**.0001**	**.0103**	**-.0003**	**-.0001**
Stddev	.0033	.0513	.0115	.0173	.0005	.0003	.0016	.0002	.0000
%RSD	226.4	157.2	82.21	143.8	36.03	375.4	15.37	88.28	51.63
#1	.0016	.0256	.0024	.0053	.0009	.0004	.0101	-.0000	-.0001
#2	-.0050	.0871	.0253	-.0009	.0018	-.0000	.0088	-.0005	-.0000
#3	-.0010	-.0148	.0141	.0317	.0012	-.0001	.0120	-.0003	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0009**	**.0002**	**-.0007**	**-.0023**	**.0004**	**.0023**
Stddev	.0003	.0006	.0000	.0009	.0010	.0015	.0015
%RSD	73.72	68.79	27.85	127.8	44.80	409.6	63.78
#1	.0003	.0013	.0002	-.0017	-.0034	-.0011	.0009
#2	.0008	.0010	.0001	-.0007	-.0020	.0019	.0038
#3	.0002	.0002	.0001	.0002	-.0014	.0003	.0022

Zoom In Zoom Out

Sample Name: asconf Acquired: 4/23/2019 13:24:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113580.**	**7372.0**	**4153.9**	**9446.2**
Stddev	296.	4.5	1.4	2.3
%RSD	.26059	.06105	.03302	.02446
#1	113790.	7372.0	4152.9	9448.8
#2	113720.	7376.5	4153.3	9445.1
#3	113240.	7367.5	4155.5	9444.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 13:30:05 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.971**	**1.988**	**1.995**	**1.999**	**2.026**	**1.948**	**2.023**	**2.011**	**.2441**
Stddev	.002	.008	.002	.000	.003	.002	.003	.000	.0003
%RSD	.1024	.4205	.0941	.0117	.1672	.0919	.1229	.0172	.1034
#1	1.969	1.978	1.995	1.999	2.029	1.950	2.025	2.012	.2443
#2	1.972	1.994	1.996	1.999	2.026	1.947	2.024	2.011	.2440
#3	1.973	1.991	1.993	1.999	2.022	1.947	2.020	2.011	.2438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.983**	**2.041**	**1.969**	**2.061**	**2.035**	**1.999**	**1.982**	**39.33**	**40.26**
Stddev	.004	.003	.007	.004	.003	.006	.001	.05	.07
%RSD	.2121	.1334	.3401	.1761	.1585	.2797	.0380	.1312	.1740
#1	1.987	2.044	1.969	2.059	2.037	2.000	1.982	39.32	40.23
#2	1.983	2.038	1.975	2.065	2.032	2.005	1.982	39.29	40.34
#3	1.979	2.042	1.962	2.059	2.037	1.993	1.981	39.39	40.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.40**	**39.92**	**39.01**	**39.47**	**2.023**	**1.994**	**5.066**	**2.028**	**1.965**
Stddev	.26	.25	.15	.08	.004	.002	.006	.001	.004
%RSD	.6440	.6298	.3971	.1927	.1911	.1226	.1272	.0671	.2133
#1	40.15	39.74	38.83	39.39	2.024	1.994	5.066	2.030	1.960
#2	40.67	40.21	39.09	39.52	2.027	1.997	5.073	2.027	1.968
#3	40.39	39.81	39.10	39.52	2.019	1.992	5.060	2.028	1.968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 13:30:05 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.960**	**1.970**	**1.952**	**1.961**	**2.014**	**1.959**	**2.008**
Stddev	.002	.002	.002	.005	.004	.004	.004
%RSD	.0994	.0942	.1001	.2627	.1760	.1977	.2064
#1	1.963	1.968	1.952	1.958	2.014	1.955	2.006
#2	1.959	1.970	1.954	1.967	2.018	1.960	2.013
#3	1.959	1.972	1.950	1.957	2.011	1.963	2.005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108510.**	**7302.7**	**3989.3**	**8443.2**
Stddev	214.	44.1	1.4	1.8
%RSD	.19691	.60400	.03389	.02095
#1	108380.	7330.6	3988.1	8441.2
#2	108390.	7251.9	3989.1	8443.8
#3	108750.	7325.7	3990.8	8444.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 13:35:07 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	F **.0002**	**.0002**	**.0002**	**-.0000**	**-.0001**	**.0003**	**.0005**	**-.0007**
Stddev	.0002	.0001	.0001	.0001	.0002	.0003	.0001	.0002	.0004
%RSD	100.4	30.22	65.84	53.74	463.1	420.5	26.73	36.57	48.44
#1	.0004	.0001	.0003	.0003	-.0003	.0002	.0003	.0006	-.0008
#2	.0002	.0002	.0002	.0001	.0001	-.0004	.0003	.0003	-.0004
#3	.0000	.0002	.0001	.0002	.0001	-.0000	.0002	.0007	-.0011
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002							
Low Limit		-.0002							

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0000**	**.0002**	**.0005**	**.0004**	**-.0003**	**.0003**	**.0036**	**.0004**
Stddev	.0001	.0001	.0003	.0004	.0006	.0019	.0012	.0134	.0032
%RSD	27.24	879.1	133.1	83.73	157.5	576.8	430.6	366.2	750.8
#1	.0004	.0001	-.0001	.0001	.0010	-.0004	.0012	-.0082	-.0027
#2	.0004	-.0001	.0002	.0005	.0003	-.0021	-.0010	.0181	.0037
#3	.0003	-.0000	.0005	.0010	-.0002	.0016	.0007	.0010	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0053**	**.0218**	**.0380**	**.0199**	**.0021**	**.0002**	**.0015**	**-.0005**	**.0002**
Stddev	.0041	.0227	.0332	.0040	.0007	.0000	.0013	.0002	.0000
%RSD	76.87	104.0	87.50	20.37	32.47	11.27	92.01	33.02	15.36
#1	.0041	.0480	.0053	.0153	.0029	.0002	.0026	-.0004	.0002
#2	.0020	.0081	.0369	.0230	.0015	.0002	.0019	-.0004	.0002
#3	.0098	.0094	.0717	.0212	.0020	.0002	-.0000	-.0007	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 13:35:07 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0013**	**.0002**	**.0005**	**-.0013**	**.0013**	**.0034**
Stddev	.0002	.0002	.0002	.0013	.0007	.0023	.0002
%RSD	70.40	16.05	88.86	288.0	54.88	174.5	4.551
#1	.0001	.0013	.0001	-.0006	-.0005	.0016	.0036
#2	.0003	.0011	.0004	.0020	-.0019	-.0011	.0033
#3	.0005	.0016	.0001	.0001	-.0015	.0034	.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113660.**	**7299.6**	**4150.5**	**9439.5**
Stddev	418.	17.7	69.0	137.7
%RSD	.36812	.24224	1.6618	1.4591
#1	114140.	7314.1	4184.4	9518.0
#2	113370.	7279.9	4196.0	9520.1
#3	113470.	7304.9	4071.2	9280.5

Zoom In Zoom Out

Sample Name: MP14400-MB1CONF Acquired: 4/23/2019 13:40:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0000**	**.0003**	**.0001**	**.0014**	**.0001**	**.0006**	**.0012**	**-.0010**
Stddev	.0001	.0001	.0000	.0003	.0004	.0002	.0000	.0003	.0003
%RSD	20.95	1200.	14.25	415.1	26.95	131.5	5.693	26.27	33.12
#1	.0003	.0001	.0003	.0003	.0016	-.0000	.0006	.0011	-.0007
#2	.0003	-.0000	.0003	-.0001	.0016	.0003	.0006	.0015	-.0013
#3	.0002	-.0001	.0003	-.0000	.0010	.0001	.0006	.0009	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0115**	**.0004**	**.0002**	**.0010**	**-.0023**	**.0012**	**.0291**	**.1242**
Stddev	.0002	.0003	.0006	.0006	.0006	.0008	.0003	.0118	.0044
%RSD	92.33	2.623	137.0	338.9	65.86	35.66	29.21	40.70	3.555
#1	-.0000	.0116	-.0000	.0007	.0012	-.0026	.0011	.0427	.1191
#2	.0004	.0118	.0011	.0004	.0015	-.0029	.0016	.0218	.1272
#3	.0003	.0112	.0002	-.0005	.0002	-.0013	.0009	.0226	.1262

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0343**	**.0480**	**.0623**	**.0814**	**.0029**	**.0004**	**.0091**	**.0179**	**.0003**
Stddev	.0036	.0081	.0163	.0024	.0005	.0001	.0010	.0008	.0000
%RSD	10.48	16.89	26.22	2.936	17.22	22.17	10.66	4.701	17.50
#1	.0369	.0439	.0812	.0837	.0034	.0004	.0100	.0184	.0003
#2	.0302	.0428	.0535	.0816	.0024	.0003	.0091	.0183	.0002
#3	.0359	.0574	.0523	.0789	.0029	.0005	.0081	.0169	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0004**	**.0001**	**.0201**	**.0000**	**.0002**	**.0212**
Stddev	.0003	.0003	.0001	.0015	.0006	.0006	.0010
%RSD	32.53	64.28	47.47	7.620	10350.	250.5	4.864
#1	.0011	.0001	.0002	.0183	-.0004	.0002	.0222
#2	.0006	.0007	.0001	.0208	.0006	.0008	.0213
#3	.0013	.0005	.0001	.0211	-.0002	-.0004	.0201

Zoom In Zoom Out

Sample Name: MP14400-MB1CONF Acquired: 4/23/2019 13:40:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114710.**	**7523.0**	**4203.8**	**9603.6**
Stddev	449.	34.8	97.5	203.3
%RSD	.39136	.46207	2.3195	2.1174
#1	115020.	7491.6	4148.6	9498.3
#2	114910.	7516.9	4146.5	9474.6
#3	114200.	7560.3	4316.4	9838.0

Zoom In Zoom Out

Sample Name: MP14400-B1CONF Acquired: 4/23/2019 13:46:08 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.839**	**1.860**	**1.860**	**1.841**	**1.877**	**1.812**	**1.880**	**1.850**
Stddev	.001	.002	.003	.001	.006	.002	.002	.001
%RSD	.0743	.0781	.1362	.0386	.3387	.1266	.0823	.0354
#1	1.839	1.861	1.861	1.841	1.879	1.814	1.881	1.851
#2	1.840	1.861	1.861	1.840	1.881	1.813	1.879	1.850
#3	1.837	1.858	1.857	1.840	1.869	1.810	1.879	1.850

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2426**	**1.827**	**1.921**	**1.885**	**1.945**	**1.894**	**1.848**	**1.918**
Stddev	.0003	.001	.002	.000	.005	.001	.004	.006
%RSD	.1133	.0707	.0869	.0220	.2547	.0626	.2212	.3396
#1	.2429	1.827	1.922	1.885	1.945	1.894	1.848	1.922
#2	.2424	1.826	1.922	1.885	1.951	1.894	1.852	1.921
#3	.2425	1.829	1.919	1.884	1.941	1.892	1.844	1.910

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.38**	**23.83**	**24.36**	**23.55**	**23.31**	**23.44**	**1.846**	**1.903**
Stddev	.05	.10	.06	.19	.09	.07	.004	.001
%RSD	.2253	.4250	.2665	.8155	.3873	.2832	.2052	.0473
#1	23.37	23.93	24.41	23.71	23.31	23.48	1.848	1.904
#2	23.44	23.84	24.38	23.60	23.41	23.48	1.849	1.902
#3	23.33	23.73	24.28	23.34	23.23	23.36	1.842	1.904

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0788**	**1.987**	**1.828**	**1.875**	**1.268**	**1.871**	W **-.0489**	**.0022**
Stddev	.0003	.005	.001	.003	.005	.000	.0011	.0015
%RSD	.3418	.2510	.0389	.1713	.3715	.0065	2.157	70.75
#1	.0791	1.991	1.828	1.877	1.263	1.871	-.0495	.0038
#2	.0788	1.988	1.829	1.876	1.272	1.871	-.0495	.0018
#3	.0785	1.982	1.828	1.871	1.270	1.871	-.0477	.0008

Zoom In Zoom Out

Sample Name: MP14400-B1CONF Acquired: 4/23/2019 13:46:08 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0009**	**1.873**
Stddev	.0001	.004
%RSD	12.24	.2031
#1	-.0010	1.874
#2	-.0008	1.876
#3	-.0010	1.869

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110260.**	**7406.5**	**4022.2**	**8688.5**
Stddev	241.	20.9	5.1	9.9
%RSD	.21895	.28161	.12598	.11378
#1	110100.	7388.3	4017.0	8677.1
#2	110140.	7402.0	4022.7	8694.8
#3	110540.	7429.3	4027.1	8693.7

Zoom In Zoom Out

Sample Name: JC86406-1 Acquired: 4/23/2019 13:51:12 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5622**	**.0063**	**.0004**	**.0431**	**.4527**	**.1190**	**.7589**	**.1196**	**-.0016**
Stddev	.0016	.0001	.0004	.0002	.0012	.0018	.0008	.0012	.0010
%RSD	.2788	1.604	89.91	.3777	.2671	1.496	.1038	.9801	63.02
#1	.5629	.0064	.0008	.0430	.4535	.1205	.7596	.1195	-.0015
#2	.5634	.0062	.0002	.0433	.4513	.1170	.7581	.1185	-.0006
#3	.5605	.0064	.0002	.0431	.4532	.1194	.7591	.1208	-.0026

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5705**	**.4012**	**.1085**	**.0020**	**.1216**	**-.0088**	**.0038**	**321.5**	**18.91**
Stddev	.0014	.0015	.0013	.0009	.0045	.0063	.0055	.6	.02
%RSD	.2400	.3692	1.243	46.79	3.730	72.06	144.0	.2010	.1023
#1	.5689	.4011	.1101	.0016	.1268	-.0017	-.0009	322.2	18.93
#2	.5709	.3998	.1078	.0030	.1186	-.0138	.0099	321.1	18.92
#3	.5716	.4028	.1077	.0013	.1193	-.0108	.0025	321.1	18.89

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**361.5**	**12.88**	**9.974**	**1.183**	**.0360**	**.0124**	**1.734**	**.0282**	**.1828**
Stddev	1.5	.31	.133	.022	.0016	.0006	.008	.0005	.0015
%RSD	.4026	2.444	1.334	1.895	4.541	4.889	.4478	1.764	.8243
#1	362.1	12.91	10.08	1.157	.0378	.0131	1.734	.0281	.1845
#2	362.6	13.17	9.824	1.191	.0354	.0122	1.727	.0277	.1821
#3	359.9	12.55	10.02	1.200	.0347	.0120	1.742	.0287	.1817

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.298**	**.0440**	**.1488**	**.5921**	**-.0067**	**.1930**	**2.362**
Stddev	.003	.0054	.0006	.0062	.0007	.0010	.007
%RSD	.1123	12.21	.4113	1.043	10.97	.5016	.3160
#1	2.295	.0462	.1494	.5942	-.0063	.1934	2.364
#2	2.299	.0480	.1482	.5852	-.0063	.1937	2.354
#3	2.300	.0379	.1489	.5970	-.0076	.1919	2.368

Zoom In Zoom Out

Sample Name: JC86406-1 Acquired: 4/23/2019 13:51:12 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112500.**	**7521.9**	**4148.0**	**8876.1**
Stddev	142.	11.2	6.6	5.3
%RSD	.12611	.14911	.15881	.05963
#1	112420.	7531.2	4150.4	8876.4
#2	112660.	7509.4	4153.0	8881.3
#3	112410.	7525.0	4140.5	8870.7

Zoom In Zoom Out

Sample Name: JC86406-2 Acquired: 4/23/2019 13:56:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6015**	**.0064**	**.0006**	**.0611**	**.2659**	**.1142**	**1.630**	**.1219**	**.0001**
Stddev	.0013	.0001	.0003	.0008	.0006	.0005	.002	.0002	.0000
%RSD	.2091	2.179	53.21	1.365	.2250	.4442	.1498	.1869	32.32
#1	.6000	.0065	.0002	.0619	.2658	.1145	1.630	.1221	.0001
#2	.6023	.0063	.0009	.0603	.2665	.1136	1.627	.1218	.0002
#3	.6021	.0063	.0007	.0613	.2653	.1144	1.632	.1216	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3685**	**.5236**	**.0728**	**.0020**	**.3088**	**-.0020**	**.0030**	**184.7**	**10.63**
Stddev	.0005	.0013	.0021	.0015	.0018	.0029	.0010	.2	.02
%RSD	.1327	.2407	2.839	74.14	.5847	147.1	34.06	.0958	.1995
#1	.3680	.5241	.0707	.0003	.3101	.0011	.0042	184.6	10.60
#2	.3686	.5246	.0729	.0031	.3068	-.0023	.0026	184.9	10.65
#3	.3689	.5222	.0748	.0027	.3096	-.0048	.0022	184.8	10.63

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**226.3**	**19.09**	**11.26**	**.5432**	**.0412**	**.0087**	**1.672**	**.0272**	**.1222**
Stddev	.1	.12	.06	.0198	.0015	.0002	.003	.0020	.0001
%RSD	.0486	.6461	.5263	3.644	3.640	2.598	.1594	7.402	.0651
#1	226.5	19.00	11.32	.5204	.0397	.0085	1.670	.0292	.1222
#2	226.3	19.04	11.21	.5555	.0427	.0086	1.675	.0272	.1223
#3	226.3	19.23	11.24	.5537	.0412	.0090	1.671	.0252	.1221

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.734**	**.0160**	**.0785**	**.9076**	**-.0060**	**.1373**	**2.135**
Stddev	.002	.0006	.0002	.0022	.0028	.0010	.006
%RSD	.0638	4.014	.2252	.2475	46.10	.7543	.2621
#1	3.735	.0167	.0783	.9098	-.0029	.1384	2.139
#2	3.732	.0155	.0785	.9077	-.0069	.1364	2.138
#3	3.736	.0157	.0786	.9053	-.0083	.1370	2.129

Zoom In Zoom Out

Sample Name: JC86406-2 Acquired: 4/23/2019 13:56:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113240.**	**7577.1**	**4172.9**	**8898.1**
Stddev	78.	16.5	6.6	12.2
%RSD	.06844	.21839	.15898	.13741
#1	113160.	7577.6	4167.5	8885.0
#2	113300.	7593.3	4180.3	8909.2
#3	113280.	7560.2	4170.7	8900.1

Zoom In Zoom Out

Sample Name: JC86406-5 Acquired: 4/23/2019 14:01:49 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1993**	**.0024**	**.0003**	**.0366**	**.1520**	**.1731**	**.9206**	**.1818**	**-.0011**
Stddev	.0010	.0003	.0003	.0017	.0001	.0003	.0022	.0045	.0014
%RSD	.5030	11.41	96.91	4.717	.0929	.1765	.2381	2.485	126.1
#1	.2001	.0024	.0001	.0358	.1521	.1732	.9198	.1786	-.0025
#2	.1997	.0026	.0001	.0354	.1519	.1733	.9189	.1797	-.0010
#3	.1981	.0021	.0006	.0386	.1518	.1727	.9230	.1869	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1684**	**.2728**	**.0526**	**-.0013**	**.0603**	**-.0055**	**.0062**	**67.94**	**2.191**
Stddev	.0018	.0075	.0041	.0014	.0012	.0041	.0019	.15	.020
%RSD	1.059	2.760	7.875	109.7	2.011	75.21	30.37	.2268	.9167
#1	.1671	.2686	.0545	-.0013	.0589	-.0053	.0074	68.04	2.191
#2	.1676	.2683	.0555	-.0027	.0607	-.0014	.0072	68.02	2.170
#3	.1704	.2815	.0478	.0001	.0612	-.0097	.0040	67.76	2.211

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**306.1**	**15.29**	**6.898**	**.7269**	**.0342**	**.0117**	**1.739**	**.0372**	**.0199**
Stddev	1.3	.27	.027	.0152	.0018	.0005	.047	.0014	.0002
%RSD	.4321	1.751	.3911	2.092	5.154	4.044	2.727	3.663	1.025
#1	306.9	15.57	6.885	.7321	.0340	.0117	1.709	.0367	.0197
#2	304.6	15.25	6.929	.7098	.0324	.0112	1.714	.0361	.0199
#3	306.8	15.04	6.881	.7389	.0360	.0121	1.794	.0387	.0201

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.143**	**.0183**	**.0536**	**4.996**	**.0005**	**.0876**	**1.892**
Stddev	.002	.0022	.0005	.137	.0007	.0025	.051
%RSD	.1831	12.07	.8561	2.735	155.1	2.867	2.710
#1	1.144	.0175	.0536	4.920	.0006	.0880	1.864
#2	1.141	.0207	.0541	4.914	-.0003	.0849	1.861
#3	1.144	.0165	.0532	5.154	.0011	.0899	1.951

Zoom In Zoom Out

Sample Name: JC86406-5 Acquired: 4/23/2019 14:01:49 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113320.**	**7487.9**	**4096.8**	**9064.8**
Stddev	492.	12.7	89.3	176.2
%RSD	.43451	.16960	2.1786	1.9433
#1	113320.	7501.5	4144.5	9160.0
#2	113810.	7476.3	4152.0	9172.9
#3	112830.	7485.9	3993.8	8861.5

Zoom In Zoom Out

Sample Name: JC86406-6 Acquired: 4/23/2019 14:07:09 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.041**	**.0071**	**.0005**	**.1040**	**.2458**	**.1480**	**3.801**	**.2241**	**.0054**
Stddev	.001	.0002	.0000	.0008	.0008	.0008	.005	.0002	.0007
%RSD	.1285	3.060	6.047	.7561	.3275	.5647	.1454	.1111	13.82
#1	1.043	.0070	.0005	.1049	.2458	.1474	3.801	.2243	.0056
#2	1.040	.0073	.0005	.1036	.2466	.1490	3.807	.2238	.0046
#3	1.041	.0070	.0005	.1035	.2450	.1477	3.796	.2242	.0060

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2906**	**.6718**	**.0254**	**-.0007**	**.0807**	**-.0069**	**.0020**	**153.6**	**17.60**
Stddev	.0005	.0016	.0011	.0005	.0007	.0046	.0022	.3	.05
%RSD	.1792	.2435	4.518	72.07	.8613	66.32	106.9	.1718	.3049
#1	.2911	.6703	.0246	-.0012	.0807	-.0107	.0045	153.3	17.56
#2	.2905	.6735	.0249	-.0002	.0800	-.0018	.0005	153.6	17.57
#3	.2901	.6717	.0268	-.0007	.0814	-.0083	.0011	153.8	17.66

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**210.4**	**93.71**	**83.15**	**2.329**	**.0043**	**.0036**	**1.382**	**.0268**	**.0456**
Stddev	.5	.21	.20	.013	.0001	.0004	.004	.0012	.0003
%RSD	.2419	.2285	.2345	.5347	3.239	10.58	.2767	4.487	.5528
#1	209.9	93.88	82.93	2.343	.0044	.0033	1.382	.0281	.0457
#2	210.9	93.77	83.30	2.324	.0042	.0040	1.379	.0259	.0453
#3	210.3	93.47	83.21	2.320	.0044	.0034	1.387	.0263	.0458

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.47**	**.0112**	**.0271**	**.4595**	**.0007**	**.1215**	**4.603**
Stddev	.01	.0021	.0003	.0115	.0018	.0020	.003
%RSD	.1281	18.89	1.046	2.501	254.0	1.686	.0721
#1	10.47	.0133	.0274	.4561	.0020	.1228	4.601
#2	10.48	.0113	.0269	.4723	.0015	.1226	4.606
#3	10.45	.0090	.0270	.4500	-.0014	.1191	4.600

Zoom In Zoom Out

Sample Name: JC86406-6 Acquired: 4/23/2019 14:07:09 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111390.**	**7507.3**	**4065.3**	**8639.6**
Stddev	344.	24.1	2.9	3.9
%RSD	.30927	.32052	.07109	.04559
#1	111530.	7529.5	4065.7	8643.1
#2	110990.	7481.7	4062.2	8635.3
#3	111640.	7510.7	4067.9	8640.4

Zoom In Zoom Out

Sample Name: JC86406-11 Acquired: 4/23/2019 14:12:26 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2662**	**.0038**	**.0002**	**.0522**	**.1284**	**.0867**	**2.209**	**.0949**	**-.0000**
Stddev	.0006	.0001	.0002	.0002	.0006	.0003	.005	.0004	.0004
%RSD	.2279	1.644	80.71	.3280	.4320	.3454	.2267	.3939	1431.
#1	.2667	.0038	.0002	.0520	.1284	.0864	2.214	.0953	-.0004
#2	.2655	.0039	.0004	.0523	.1279	.0870	2.205	.0946	-.0001
#3	.2664	.0037	.0000	.0521	.1290	.0867	2.208	.0949	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1502**	**.2925**	**.0439**	**-.0006**	**.0958**	**-.0027**	**.0013**	**76.00**	**4.157**
Stddev	.0003	.0010	.0005	.0008	.0009	.0009	.0012	.03	.007
%RSD	.2287	.3581	1.080	138.9	.9152	32.55	91.31	.0453	.1682
#1	.1505	.2936	.0440	-.0002	.0966	-.0034	.0012	76.04	4.149
#2	.1502	.2916	.0443	-.0001	.0958	-.0017	.0002	76.01	4.163
#3	.1498	.2923	.0434	-.0016	.0949	-.0030	.0026	75.97	4.158

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**131.8**	**15.88**	**6.821**	**.6034**	**.0243**	**.0040**	**1.480**	**.0216**	**.0367**
Stddev	.2	.07	.008	.0110	.0010	.0002	.005	.0004	.0001
%RSD	.1267	.4563	.1230	1.821	4.037	5.592	.3206	1.724	.1902
#1	131.7	15.80	6.821	.6025	.0253	.0042	1.483	.0219	.0368
#2	132.0	15.94	6.812	.6149	.0245	.0038	1.482	.0216	.0366
#3	131.7	15.90	6.829	.5930	.0233	.0041	1.474	.0212	.0367

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.164**	**.0052**	**.0413**	**.2014**	**-.0003**	**.0932**	**1.578**
Stddev	.001	.0012	.0002	.0022	.0010	.0016	.002
%RSD	.1145	23.51	.5173	1.088	304.6	1.761	.1213
#1	1.165	.0060	.0413	.1998	.0005	.0915	1.580
#2	1.163	.0058	.0411	.2039	-.0015	.0947	1.578
#3	1.164	.0038	.0415	.2005	-.0001	.0934	1.576

Zoom In Zoom Out

Sample Name: JC86406-11 Acquired: 4/23/2019 14:12:26 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115010.**	**7720.0**	**4209.3**	**8948.0**
Stddev	149.	25.9	5.0	8.8
%RSD	.12998	.33576	.11995	.09864
#1	114860.	7749.9	4205.3	8940.2
#2	115160.	7703.0	4214.9	8957.6
#3	115010.	7707.3	4207.6	8946.2

Zoom In Zoom Out

Sample Name: JC86600-2conf Acquired: 4/23/2019 14:17:44 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0002**	**.0006**	**.0005**	**-.0012**	**-.0025**	**.0004**	**.0006**	**-.0051**
Stddev	.0010	.0002	.0007	.0011	.0026	.0019	.0003	.0010	.0006
%RSD	186.1	91.19	116.9	214.2	214.8	75.63	59.23	163.4	12.35
#1	.0013	-.0003	.0005	.0011	-.0018	-.0043	.0002	.0007	-.0058
#2	-.0006	.0000	.0014	-.0008	.0017	-.0027	.0007	.0015	-.0048
#3	.0009	-.0004	-.0000	.0012	-.0035	-.0005	.0005	-.0004	-.0046

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0042**	**.0020**	**-.0025**	**.0021**	**-.0051**	**-.0003**	**.1639**	**.3161**
Stddev	.0001	.0006	.0025	.0048	.0031	.0084	.0051	.0209	.0030
%RSD	13.53	14.57	122.5	186.9	145.3	164.7	1888.	12.75	.9357
#1	.0010	.0036	.0046	-.0008	.0030	-.0060	.0056	.1866	.3187
#2	.0009	.0042	-.0003	-.0079	-.0013	-.0130	-.0034	.1454	.3128
#3	.0008	.0048	.0017	.0011	.0047	.0037	-.0030	.1599	.3167

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0132**	**.0217**	**.2943**	**.0939**	**.0012**	**.0006**	**.0297**	**-.0012**	**-.0001**
Stddev	.0016	.2016	.0636	.0537	.0021	.0005	.0043	.0031	.0002
%RSD	12.05	929.5	21.60	57.19	175.6	85.89	14.64	262.1	237.7
#1	.0150	.2255	.3529	.0395	.0026	.0005	.0247	-.0046	-.0003
#2	.0126	-.1776	.3034	.0952	.0022	.0001	.0324	.0014	.0001
#3	.0120	.0172	.2267	.1469	-.0012	.0011	.0321	-.0003	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0138**	**.0018**	**.0369**	**-.0059**	**-.0043**	**.0202**
Stddev	.0007	.0013	.0002	.0125	.0087	.0071	.0035
%RSD	24.28	9.400	10.13	33.94	148.0	162.8	17.27
#1	.0021	.0133	.0017	.0466	-.0139	.0012	.0224
#2	.0031	.0128	.0020	.0228	-.0073	-.0123	.0161
#3	.0034	.0153	.0017	.0414	.0034	-.0020	.0220

Zoom In Zoom Out

Sample Name: JC86600-2conf Acquired: 4/23/2019 14:17:44 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113770.**	**7366.6**	**4141.9**	**9416.8**
Stddev	316.	37.5	1.7	8.1
%RSD	.27737	.50923	.04117	.08610
#1	113670.	7333.4	4141.9	9410.4
#2	113520.	7407.3	4140.2	9414.1
#3	114120.	7359.0	4143.6	9425.9

Zoom In Zoom Out

Sample Name: MP14400-PS1 Acquired: 4/23/2019 14:23:15 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.433**	**1.809**	**1.848**	**1.933**	**1.988**	**1.975**	**3.134**	**1.985**	**.2374**
Stddev	.003	.002	.001	.002	.009	.005	.003	.002	.0011
%RSD	.1395	.0974	.0699	.0853	.4343	.2568	.0857	.1226	.4592
#1	2.432	1.808	1.849	1.935	1.988	1.978	3.134	1.988	.2381
#2	2.436	1.810	1.848	1.932	1.979	1.978	3.131	1.984	.2379
#3	2.429	1.807	1.847	1.932	1.997	1.969	3.137	1.983	.2361

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.991**	**2.482**	**1.933**	**1.944**	**3.558**	**1.846**	**1.904**	**128.3**	**74.59**
Stddev	.001	.009	.003	.006	.006	.004	.002	.4	.16
%RSD	.0461	.3572	.1690	.3325	.1714	.2047	.1073	.2951	.2109
#1	1.991	2.492	1.932	1.950	3.565	1.844	1.901	128.7	74.75
#2	1.992	2.474	1.931	1.945	3.552	1.850	1.905	128.3	74.56
#3	1.990	2.481	1.937	1.938	3.558	1.843	1.905	127.9	74.44

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**158.6**	**43.31**	**33.57**	**24.42**	**1.913**	**1.829**	**1.630**	**1.823**	**1.952**
Stddev	.0	.07	.04	.03	.002	.001	.005	.007	.004
%RSD	.0259	.1684	.1129	.1350	.0812	.0491	.3225	.4004	.1863
#1	158.7	43.25	33.56	24.45	1.914	1.828	1.624	1.818	1.953
#2	158.7	43.39	33.61	24.41	1.913	1.829	1.633	1.820	1.956
#3	158.6	43.29	33.53	24.39	1.911	1.830	1.633	1.832	1.949

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.280**	**1.724**	**1.873**	**.9661**	**-.0003**	**.1454**	**7.851**
Stddev	.003	.006	.001	.0074	.0011	.0008	.012
%RSD	.0650	.3440	.0385	.7653	430.7	.5303	.1543
#1	4.282	1.717	1.874	.9629	.0010	.1459	7.865
#2	4.277	1.726	1.872	.9746	-.0007	.1446	7.847
#3	4.282	1.728	1.874	.9609	-.0010	.1458	7.842

Zoom In Zoom Out

Sample Name: MP14400-PS1 Acquired: 4/23/2019 14:23:15 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114550.**	**7871.8**	**4178.3**	**8386.0**
Stddev	262.	5.6	2.3	6.1
%RSD	.22845	.07078	.05560	.07263
#1	114350.	7871.4	4175.6	8379.0
#2	114840.	7866.4	4179.9	8390.3
#3	114450.	7877.5	4179.4	8388.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 14:28:19 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.945**	**1.968**	**1.974**	**1.985**	**1.998**	**1.923**	**1.992**	**1.989**	**.2400**
Stddev	.004	.005	.003	.001	.007	.002	.005	.001	.0002
%RSD	.1885	.2791	.1285	.0577	.3389	.0820	.2312	.0664	.0823
#1	1.941	1.971	1.972	1.986	1.999	1.924	1.993	1.991	.2400
#2	1.947	1.971	1.977	1.984	2.004	1.925	1.996	1.989	.2402
#3	1.948	1.961	1.974	1.985	1.991	1.922	1.987	1.989	.2398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.952**	**2.023**	**1.959**	**2.038**	**2.021**	**1.984**	**1.970**	**38.72**	**39.84**
Stddev	.003	.004	.006	.004	.001	.003	.002	.12	.04
%RSD	.1426	.1737	.3010	.2203	.0700	.1539	.0981	.3075	.0894
#1	1.951	2.025	1.954	2.036	2.022	1.981	1.969	38.67	39.87
#2	1.954	2.025	1.965	2.034	2.021	1.984	1.969	38.64	39.80
#3	1.949	2.019	1.957	2.043	2.019	1.987	1.972	38.86	39.86
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.29**	**40.10**	**38.71**	**39.12**	**2.010**	**1.984**	**5.029**	**2.024**	**1.938**
Stddev	.22	.30	.11	.03	.001	.000	.004	.004	.002
%RSD	.5447	.7532	.2913	.0831	.0400	.0156	.0884	.1780	.0896
#1	40.44	40.28	38.83	39.10	2.009	1.984	5.032	2.028	1.936
#2	40.40	40.25	38.71	39.10	2.010	1.984	5.030	2.024	1.940
#3	40.04	39.75	38.61	39.16	2.011	1.984	5.024	2.020	1.939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 14:28:19 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.933**	**1.977**	**1.928**	**1.941**	**2.005**	**1.940**	**1.988**
Stddev	.003	.003	.002	.007	.001	.004	.005
%RSD	.1455	.1423	.1133	.3479	.0481	.2329	.2545
#1	1.933	1.978	1.930	1.934	2.004	1.940	1.985
#2	1.937	1.980	1.929	1.947	2.006	1.935	1.986
#3	1.931	1.974	1.926	1.943	2.005	1.944	1.994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109650.**	**7309.3**	**4002.0**	**8466.0**
Stddev	309.	38.7	6.0	7.0
%RSD	.28162	.53013	.15107	.08300
#1	109600.	7266.6	3999.5	8458.9
#2	109370.	7319.0	3997.7	8466.1
#3	109980.	7342.2	4008.9	8473.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 14:33:21 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**.0003**	**-.0001**	**-.0001**	**-.0007**	**.0002**	**.0001**	**-.0010**
Stddev	.0001	.0001	.0000	.0002	.0003	.0002	.0001	.0004	.0002
%RSD	28.56	105.5	14.19	181.3	398.1	24.14	29.53	315.4	19.09
#1	.0003	-.0001	.0003	-.0002	.0001	-.0008	.0001	-.0003	-.0008
#2	.0002	-.0001	.0003	-.0001	-.0004	-.0005	.0002	.0004	-.0011
#3	.0002	.0000	.0004	.0001	.0001	-.0008	.0002	.0002	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0001**	**.0005**	**.0006**	**.0005**	**-.0006**	**.0009**	**.0154**	**-.0021**
Stddev	.0004	.0001	.0003	.0004	.0013	.0008	.0015	.0122	.0045
%RSD	78.15	81.40	63.14	73.20	257.7	130.9	166.9	79.39	211.4
#1	.0002	-.0002	.0003	.0010	.0006	.0002	.0008	.0054	.0014
#2	.0003	-.0000	.0003	.0002	.0017	-.0015	-.0006	.0117	-.0006
#3	.0009	-.0002	.0009	.0006	-.0008	-.0006	.0025	.0290	-.0071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0301**	**.0991**	**.0151**	**.0024**	**.0017**	**.0011**	**.0030**	**.0000**
Stddev	.0051	.0547	.0198	.0094	.0006	.0000	.0007	.0002	.0002
%RSD	5192.	181.9	20.02	62.13	26.75	.7724	65.01	6.453	855.9
#1	.0055	-.0025	.1035	.0219	.0025	.0017	.0004	.0028	.0000
#2	-.0047	.0932	.0774	.0190	.0018	.0017	.0019	.0031	.0002
#3	-.0006	-.0005	.1163	.0044	.0030	.0017	.0011	.0031	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 14:33:21 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	F **.0110**	**.0001**	**-.0009**	**-.0016**	**.0007**	**.0053**
Stddev	.0002	.0006	.0002	.0013	.0008	.0003	.0004
%RSD	18.76	5.019	182.6	148.5	51.73	47.90	8.047
#1	.0009	.0115	.0001	-.0003	-.0024	.0005	.0058
#2	.0013	.0112	.0003	-.0024	-.0017	.0010	.0050
#3	.0011	.0104	-.0001	-.0000	-.0007	.0005	.0052
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0063					
Low Limit		-.0063					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114340.**	**7383.9**	**4145.4**	**9418.1**
Stddev	267.	12.7	1.8	13.5
%RSD	.23353	.17176	.04227	.14292
#1	114530.	7371.6	4144.4	9402.5
#2	114040.	7383.1	4144.4	9425.3
#3	114470.	7397.0	4147.5	9426.4

Zoom In Zoom Out

Sample Name: MP14348-MB1CONF Acquired: 4/23/2019 14:38:53 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**.0003**	**-.0001**	**.0011**	**.0023**	**.0003**	**.0006**	**-.0010**
Stddev	.0001	.0000	.0000	.0001	.0001	.0002	.0000	.0001	.0000
%RSD	123.1	40.43	15.97	174.8	12.15	7.342	14.33	22.22	4.710
#1	.0002	-.0001	.0002	-.0001	.0011	.0022	.0003	.0007	-.0010
#2	.0002	-.0001	.0003	.0001	.0012	.0023	.0004	.0005	-.0009
#3	-.0000	-.0001	.0003	-.0002	.0010	.0025	.0003	.0005	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0073**	**.0008**	**-.0004**	**.0008**	**-.0008**	**.0008**	**.0107**	**.0528**
Stddev	.0002	.0001	.0004	.0002	.0011	.0011	.0004	.0111	.0020
%RSD	84.71	1.298	56.02	59.79	140.5	128.4	48.33	102.9	3.830
#1	.0000	.0073	.0010	-.0003	-.0005	-.0006	.0005	.0162	.0508
#2	.0003	.0073	.0011	-.0007	.0016	.0001	.0013	.0180	.0529
#3	.0004	.0072	.0003	-.0003	.0012	-.0020	.0008	-.0020	.0548

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0328**	**.0459**	**.0645**	**.0843**	**.0028**	**.0013**	**.0089**	**.0302**	**.0003**
Stddev	.0076	.0301	.0059	.0027	.0001	.0001	.0004	.0005	.0000
%RSD	23.15	65.47	9.138	3.156	4.230	8.646	4.936	1.739	18.13
#1	.0269	.0791	.0578	.0873	.0029	.0012	.0084	.0307	.0002
#2	.0302	.0204	.0687	.0824	.0027	.0014	.0093	.0297	.0003
#3	.0414	.0382	.0670	.0831	.0027	.0013	.0091	.0302	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0069**	**.0001**	**.0071**	**-.0016**	**-.0019**	**.0321**
Stddev	.0000	.0005	.0002	.0019	.0016	.0009	.0011
%RSD	3.440	7.246	162.3	26.31	97.60	49.78	3.469
#1	.0009	.0069	.0002	.0082	-.0022	-.0009	.0328
#2	.0009	.0074	-.0001	.0082	-.0028	-.0019	.0309
#3	.0009	.0064	.0002	.0050	.0002	-.0028	.0328

Zoom In Zoom Out

Sample Name: MP14348-MB1CONF Acquired: 4/23/2019 14:38:53 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114570.**	**7491.6**	**4152.2**	**9458.2**
Stddev	378.	79.4	3.4	9.9
%RSD	.32952	1.0592	.08303	.10468
#1	114560.	7498.6	4154.9	9451.7
#2	114950.	7409.0	4148.3	9453.4
#3	114190.	7567.3	4153.4	9469.6

Zoom In Zoom Out

Sample Name: MP14348-B1CONF Acquired: 4/23/2019 14:44:26 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.906**	**1.924**	**1.917**	**1.920**	**1.959**	**1.883**	**1.951**	**1.922**
Stddev	.004	.003	.003	.001	.006	.002	.001	.001
%RSD	.1882	.1709	.1580	.0296	.2874	.0775	.0714	.0680
#1	1.909	1.927	1.918	1.919	1.966	1.884	1.952	1.923
#2	1.902	1.925	1.920	1.920	1.957	1.882	1.950	1.921
#3	1.906	1.921	1.914	1.920	1.956	1.884	1.952	1.922

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**1.903**	**1.983**	**1.953**	**2.001**	**1.959**	**1.912**	**1.976**
Stddev	.0002	.002	.002	.005	.008	.003	.004	.005
%RSD	.0966	.0803	.0933	.2672	.3894	.1426	.2076	.2425
#1	.2491	1.902	1.985	1.957	2.010	1.962	1.912	1.980
#2	.2490	1.902	1.985	1.953	1.996	1.959	1.916	1.977
#3	.2487	1.904	1.981	1.947	1.997	1.956	1.908	1.970

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.20**	**24.57**	**25.07**	**24.41**	**24.09**	**24.25**	**1.913**	**1.991**
Stddev	.03	.11	.09	.24	.03	.06	.002	.004
%RSD	.1421	.4546	.3466	.9798	.1214	.2415	.1195	.1928
#1	24.17	24.54	25.13	24.62	24.11	24.31	1.913	1.994
#2	24.23	24.70	25.12	24.47	24.10	24.24	1.915	1.993
#3	24.22	24.48	24.97	24.15	24.06	24.20	1.910	1.987

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1194**	**2.067**	**1.892**	**1.949**	**1.704**	**1.938**	F **-.0776**	**.0004**
Stddev	.0017	.001	.005	.003	.001	.002	.0019	.0006
%RSD	1.465	.0290	.2914	.1351	.0684	.0879	2.448	150.5
#1	.1214	2.068	1.898	1.952	1.705	1.940	-.0796	.0001
#2	.1186	2.067	1.887	1.947	1.705	1.936	-.0776	.0011
#3	.1181	2.066	1.890	1.947	1.703	1.939	-.0758	.0000

Zoom In Zoom Out

Sample Name: MP14348-B1CONF Acquired: 4/23/2019 14:44:26 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0016**	**1.941**
Stddev	.0010	.002
%RSD	63.29	.1177
#1	-.0026	1.943
#2	-.0005	1.938
#3	-.0017	1.941

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111000.**	**7436.6**	**4041.1**	**8710.2**
Stddev	257.	81.4	6.2	13.0
%RSD	.23144	1.0952	.15408	.14917
#1	110710.	7456.2	4034.5	8702.5
#2	111090.	7347.2	4046.8	8725.2
#3	111200.	7506.5	4042.0	8703.0

Zoom In Zoom Out

Sample Name: MP14348-S1 Acquired: 4/23/2019 14:49:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.336**	**1.849**	**1.863**	**1.840**	**2.105**	**2.935**	**4.499**	**2.006**	**.2367**
Stddev	.004	.002	.001	.001	.010	.004	.013	.002	.0003
%RSD	.1631	.0976	.0660	.0405	.4959	.1494	.2769	.0998	.1150
#1	2.339	1.850	1.863	1.840	2.103	2.937	4.510	2.007	.2368
#2	2.332	1.850	1.863	1.839	2.097	2.930	4.485	2.008	.2363
#3	2.337	1.847	1.861	1.840	2.117	2.938	4.503	2.004	.2368

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.935**	**5.061**	**2.000**	**1.765**	**2.746**	**1.869**	**1.243**	**62.82**	**33.40**
Stddev	.004	.009	.002	.004	.004	.002	.004	.08	.01
%RSD	.2190	.1674	.1215	.2246	.1319	.1168	.3246	.1321	.0290
#1	1.938	5.057	2.003	1.763	2.743	1.868	1.239	62.85	33.39
#2	1.930	5.056	1.999	1.770	2.750	1.871	1.246	62.73	33.40
#3	1.936	5.071	1.998	1.763	2.746	1.867	1.245	62.89	33.41

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**239.3**	**26.54**	**26.70**	**23.93**	**1.764**	**1.885**	**5.155**	**2.053**	**2.102**
Stddev	.1	.11	.05	.01	.003	.002	.008	.004	.005
%RSD	.0503	.4276	.1970	.0339	.1920	.0926	.1571	.2083	.2269
#1	239.3	26.41	26.68	23.92	1.761	1.883	5.158	2.050	2.107
#2	239.4	26.62	26.67	23.93	1.764	1.887	5.161	2.052	2.097
#3	239.2	26.59	26.76	23.94	1.767	1.884	5.146	2.058	2.102

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.761**	**1.503**	**1.747**	**72.08**	**.0032**	**.0513**	**2.851**
Stddev	.007	.003	.003	.22	.0020	.0042	.009
%RSD	.2373	.1967	.1420	.3017	64.71	8.285	.3195
#1	2.763	1.499	1.750	71.92	.0018	.0562	2.841
#2	2.753	1.505	1.745	72.33	.0021	.0491	2.859
#3	2.766	1.504	1.746	71.99	.0055	.0486	2.854

Zoom In Zoom Out

Sample Name: MP14348-S1 Acquired: 4/23/2019 14:49:31 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112310.**	**7540.2**	**4086.4**	**8930.8**
Stddev	471.	37.5	2.8	3.2
%RSD	.41894	.49752	.06832	.03632
#1	112230.	7539.6	4089.0	8931.6
#2	112810.	7578.1	4083.5	8927.2
#3	111880.	7503.1	4086.8	8933.5

Zoom In Zoom Out

Sample Name: MP14348-S2 Acquired: 4/23/2019 14:54:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.474**	**1.709**	**1.704**	**1.733**	**1.909**	**2.566**	**4.798**	**1.867**	**.2172**
Stddev	.002	.002	.004	.001	.002	.001	.003	.002	.0004
%RSD	.0885	.0974	.2468	.0548	.1039	.0489	.0615	.0878	.1777
#1	2.476	1.711	1.708	1.732	1.909	2.565	4.797	1.865	.2175
#2	2.472	1.708	1.704	1.734	1.908	2.568	4.797	1.866	.2168
#3	2.473	1.709	1.700	1.732	1.911	2.566	4.802	1.869	.2174

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.761**	**4.100**	**1.839**	**1.613**	**2.435**	**1.704**	**1.293**	**63.08**	**66.48**
Stddev	.000	.005	.006	.003	.003	.005	.001	.07	.14
%RSD	.0240	.1250	.3148	.1757	.1361	.2986	.1068	.1063	.2114
#1	1.761	4.102	1.838	1.615	2.435	1.703	1.293	63.14	66.59
#2	1.762	4.104	1.845	1.614	2.432	1.710	1.292	63.09	66.53
#3	1.761	4.094	1.833	1.610	2.439	1.700	1.294	63.01	66.32

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.2**	**30.17**	**25.31**	**22.46**	**1.741**	**1.745**	**13.90**	**1.867**	**1.975**
Stddev	.2	.27	.11	.02	.004	.002	.03	.005	.001
%RSD	.1240	.8913	.4461	.0841	.2467	.1201	.2274	.2633	.0667
#1	189.1	30.28	25.39	22.48	1.744	1.746	13.91	1.870	1.977
#2	189.0	29.86	25.35	22.44	1.743	1.746	13.93	1.869	1.975
#3	189.4	30.37	25.18	22.47	1.736	1.743	13.87	1.861	1.974

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.146**	**1.508**	**1.538**	**39.72**	**-.0000**	**.0554**	**2.658**
Stddev	.002	.003	.002	.06	.0013	.0024	.008
%RSD	.0722	.1767	.1183	.1574	5146.	4.296	.2991
#1	3.145	1.509	1.540	39.75	.0010	.0536	2.666
#2	3.145	1.510	1.537	39.77	-.0014	.0581	2.657
#3	3.149	1.505	1.537	39.65	.0003	.0545	2.650

Zoom In Zoom Out

Sample Name: MP14348-S2 Acquired: 4/23/2019 14:54:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113070.**	**7579.1**	**4111.6**	**8759.5**
Stddev	252.	30.3	5.7	8.8
%RSD	.22289	.39919	.13873	.10045
#1	113340.	7572.1	4105.7	8751.4
#2	113020.	7612.3	4111.9	8768.9
#3	112850.	7553.0	4117.1	8758.3

Zoom In Zoom Out

Sample Name: JC86553-2 Acquired: 4/23/2019 14:59:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5387**	**.0045**	**.0039**	**.0337**	**.6971**	**1.056**	**1.650**	**.1856**	**.0007**
Stddev	.0017	.0003	.0003	.0003	.0020	.001	.003	.0005	.0006
%RSD	.3176	6.525	8.569	.9830	.2896	.1162	.1744	.2789	79.99
#1	.5389	.0046	.0035	.0341	.6959	1.058	1.647	.1852	.0012
#2	.5402	.0042	.0042	.0336	.6994	1.055	1.653	.1862	.0001
#3	.5368	.0048	.0039	.0334	.6960	1.056	1.649	.1855	.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0847**	**1.422**	**.1692**	**.0008**	**1.268**	**.0101**	**.0130**	**17.29**	**13.68**
Stddev	.0006	.002	.0014	.0020	.002	.0051	.0027	.04	.03
%RSD	.7353	.1409	.8210	237.4	.1390	51.09	21.06	.2048	.2134
#1	.0840	1.423	.1708	-.0011	1.266	.0043	.0103	17.29	13.65
#2	.0849	1.423	.1688	.0028	1.270	.0118	.0158	17.32	13.71
#3	.0852	1.420	.1681	.0008	1.269	.0141	.0131	17.25	13.68

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**252.0**	**3.583**	**2.228**	**.7067**	**.0331**	**.0299**	**5.192**	**.1327**	**.2422**
Stddev	.2	.108	.034	.0178	.0007	.0003	.018	.0011	.0002
%RSD	.0834	3.005	1.527	2.516	2.130	1.146	.3519	.8258	.0971
#1	252.2	3.459	2.191	.7236	.0339	.0296	5.211	.1340	.2423
#2	251.8	3.638	2.258	.6881	.0325	.0303	5.175	.1324	.2424
#3	251.9	3.652	2.235	.7084	.0330	.0297	5.189	.1318	.2420

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7393**	**.0206**	**.0211**	**13.87**	**.0043**	**.0210**	**1.017**
Stddev	.0014	.0008	.0003	.00	.0017	.0032	.006
%RSD	.1925	3.707	1.347	.0078	39.44	15.19	.5621
#1	.7377	.0202	.0214	13.87	.0052	.0176	1.023
#2	.7404	.0200	.0209	13.88	.0054	.0216	1.016
#3	.7398	.0214	.0210	13.88	.0024	.0239	1.012

Zoom In Zoom Out

Sample Name: JC86553-2 Acquired: 4/23/2019 14:59:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113720.**	**7519.3**	**4137.8**	**9232.2**
Stddev	337.	55.7	4.1	3.5
%RSD	.29671	.74038	.09987	.03802
#1	114070.	7567.2	4134.0	9231.7
#2	113400.	7458.2	4142.2	9228.9
#3	113690.	7532.6	4137.3	9235.9

Zoom In Zoom Out

Sample Name: JC86553-3 Acquired: 4/23/2019 15:04:49 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3769**	**.0032**	**.0029**	**.0281**	**.2005**	**.7857**	**2.231**	**.1482**	**.0001**
Stddev	.0007	.0001	.0001	.0013	.0009	.0025	.000	.0031	.0011
%RSD	.1735	2.420	3.263	4.517	.4373	.3180	.0149	2.125	829.5
#1	.3764	.0033	.0030	.0288	.1995	.7878	2.231	.1502	.0012
#2	.3776	.0033	.0028	.0266	.2010	.7864	2.231	.1446	-.0010
#3	.3767	.0032	.0030	.0288	.2010	.7829	2.231	.1498	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0801**	**.8927**	**.1338**	**.0008**	**.8647**	**.0078**	**.0142**	**13.75**	**30.63**
Stddev	.0001	.0154	.0034	.0017	.0151	.0036	.0008	.02	.12
%RSD	.1270	1.725	2.565	207.7	1.742	46.74	5.278	.1114	.3857
#1	.0800	.9001	.1360	.0018	.8704	.0117	.0149	13.75	30.74
#2	.0802	.8750	.1298	-.0012	.8476	.0045	.0134	13.77	30.64
#3	.0801	.9031	.1355	.0019	.8760	.0072	.0144	13.74	30.50

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**206.3**	**14.49**	**1.892**	**.6999**	**.0469**	**.0333**	**5.763**	**.0847**	**.1606**
Stddev	.3	.06	.045	.0272	.0002	.0012	.103	.0016	.0004
%RSD	.1230	.3994	2.373	3.882	.4421	3.517	1.783	1.945	.2311
#1	206.6	14.44	1.866	.7153	.0467	.0338	5.807	.0857	.1604
#2	206.2	14.56	1.867	.7160	.0468	.0320	5.645	.0828	.1610
#3	206.1	14.48	1.944	.6686	.0471	.0342	5.836	.0855	.1603

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6903**	**.0186**	**.0213**	**13.84**	**.0021**	**.0158**	**.6976**
Stddev	.0025	.0012	.0004	.29	.0022	.0011	.0125
%RSD	.3553	6.682	1.661	2.069	106.3	7.093	1.793
#1	.6876	.0200	.0210	13.99	.0047	.0145	.7050
#2	.6923	.0182	.0217	13.51	.0007	.0163	.6832
#3	.6909	.0176	.0211	14.01	.0010	.0167	.7047

Zoom In Zoom Out

Sample Name: JC86553-3 Acquired: 4/23/2019 15:04:49 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**113460.**	**7500.0**	**4180.9**	**9271.6**
Stddev	227.	29.8	60.6	124.7
%RSD	.20033	.39730	1.4487	1.3447
#1	113580.	7478.8	4154.9	9212.8
#2	113600.	7534.1	4250.2	9414.7
#3	113200.	7487.1	4137.7	9187.1

Zoom In Zoom Out

Sample Name: JC86553-7 Acquired: 4/23/2019 15:10:06 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3493**	**.0036**	**.0021**	**.0335**	**.2192**	**.3333**	**.7521**	**.1103**	**.0004**
Stddev	.0007	.0000	.0002	.0002	.0018	.0002	.0008	.0001	.0002
%RSD	.2106	1.185	8.948	.4952	.8121	.0632	.1014	.0903	64.39
#1	.3484	.0036	.0021	.0335	.2175	.3334	.7518	.1102	.0007
#2	.3496	.0036	.0019	.0337	.2211	.3330	.7530	.1104	.0002
#3	.3498	.0035	.0022	.0334	.2190	.3334	.7516	.1102	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1220**	**.7777**	**.0510**	**.0005**	**.5866**	**.0036**	**.0050**	**42.08**	**23.29**
Stddev	.0008	.0015	.0006	.0004	.0017	.0012	.0002	.03	.07
%RSD	.6344	.1892	1.242	81.17	.2820	34.04	3.079	.0730	.2959
#1	.1223	.7772	.0511	.0002	.5848	.0049	.0049	42.06	23.32
#2	.1212	.7794	.0515	.0004	.5867	.0025	.0050	42.06	23.21
#3	.1227	.7765	.0503	.0010	.5881	.0034	.0052	42.11	23.34

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.73**	**13.58**	**5.082**	**.6029**	**.0235**	**.0543**	**1.953**	**.0482**	**.1189**
Stddev	.30	.06	.045	.0077	.0004	.0002	.013	.0007	.0004
%RSD	.3204	.4343	.8914	1.283	1.790	.3618	.6379	1.439	.3419
#1	94.61	13.62	5.030	.6065	.0240	.0541	1.962	.0475	.1186
#2	94.51	13.51	5.098	.5941	.0232	.0542	1.959	.0488	.1187
#3	95.08	13.61	5.116	.6083	.0232	.0545	1.939	.0483	.1193

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.164**	**.0088**	**.0448**	**2.997**	**-.0009**	**.0799**	**1.295**
Stddev	.003	.0013	.0002	.008	.0017	.0010	.004
%RSD	.2179	14.38	.4216	.2528	182.7	1.219	.3023
#1	1.163	.0103	.0450	3.000	.0008	.0809	1.298
#2	1.167	.0081	.0447	3.003	-.0011	.0790	1.295
#3	1.162	.0081	.0447	2.989	-.0025	.0796	1.291

Zoom In Zoom Out

Sample Name: JC86553-7 Acquired: 4/23/2019 15:10:06 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114070.**	**7638.7**	**4154.1**	**8996.7**
Stddev	276.	42.0	4.9	8.2
%RSD	.24188	.55027	.11913	.09148
#1	114100.	7652.5	4156.2	9006.2
#2	113780.	7672.0	4148.5	8991.8
#3	114330.	7591.5	4157.7	8992.1

Zoom In Zoom Out

Sample Name: JC86553-10 Acquired: 4/23/2019 15:15:20 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3341**	**.0033**	**.0028**	**.0437**	**.1641**	**.5197**	**1.667**	**.0840**	**.0003**
Stddev	.0008	.0001	.0002	.0003	.0002	.0011	.002	.0002	.0004
%RSD	.2329	1.844	5.383	.7903	.1206	.2198	.1367	.2540	119.3
#1	.3350	.0032	.0030	.0433	.1642	.5204	1.669	.0838	.0008
#2	.3334	.0032	.0027	.0440	.1642	.5183	1.666	.0839	.0003
#3	.3340	.0033	.0027	.0437	.1639	.5202	1.665	.0842	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1022**	**.8405**	**.0656**	**-.0005**	**1.294**	**-.0022**	**.0067**	**46.91**	**4.202**
Stddev	.0007	.0007	.0012	.0007	.002	.0021	.0008	.05	.014
%RSD	.6745	.0827	1.858	139.8	.1478	95.21	12.58	.1086	.3316
#1	.1025	.8409	.0669	-.0005	1.293	-.0035	.0061	46.90	4.186
#2	.1015	.8397	.0655	.0002	1.292	-.0033	.0077	46.86	4.208
#3	.1028	.8410	.0645	-.0013	1.296	.0002	.0064	46.96	4.212

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**115.3**	**12.90**	**6.285**	**.3380**	**.0250**	**.0052**	**2.179**	**.0818**	**.0401**
Stddev	.4	.07	.028	.0068	.0007	.0000	.009	.0005	.0002
%RSD	.3210	.5054	.4410	1.999	2.810	.6201	.4237	.5847	.4935
#1	115.8	12.97	6.315	.3409	.0251	.0052	2.189	.0822	.0403
#2	115.1	12.85	6.279	.3303	.0257	.0051	2.177	.0813	.0399
#3	115.2	12.87	6.261	.3429	.0243	.0052	2.170	.0818	.0399

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.184**	**.0066**	**.0160**	**1.952**	**-.0021**	**.0787**	**2.228**
Stddev	.001	.0006	.0000	.006	.0013	.0006	.004
%RSD	.1087	9.282	.1655	.2855	60.62	.7502	.1835
#1	1.185	.0063	.0160	1.955	-.0036	.0785	2.230
#2	1.184	.0073	.0159	1.946	-.0012	.0793	2.223
#3	1.183	.0062	.0160	1.955	-.0016	.0782	2.230

Zoom In / Zoom Out

Sample Name: JC86553-10 Acquired: 4/23/2019 15:15:20 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115560.**	**7682.9**	**4220.2**	**9054.2**
Stddev	98.	5.4	3.3	9.0
%RSD	.08465	.07007	.07801	.09969
#1	115560.	7682.1	4216.4	9054.8
#2	115470.	7688.7	4221.7	9062.9
#3	115660.	7678.0	4222.5	9044.9

Zoom In / Zoom Out

Sample Name: JC86553-11 Acquired: 4/23/2019 15:20:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4019**	**.0036**	**.0019**	**.0439**	**.1302**	**.5045**	**1.570**	**.1009**	**.0001**
Stddev	.0011	.0001	.0005	.0001	.0004	.0020	.006	.0002	.0005
%RSD	.2748	1.874	28.30	.2727	.2700	.3952	.3681	.2005	841.1
#1	.4031	.0037	.0017	.0439	.1303	.5022	1.575	.1010	-.0004
#2	.4016	.0036	.0016	.0437	.1298	.5057	1.571	.1011	.0000
#3	.4009	.0036	.0025	.0439	.1304	.5055	1.564	.1007	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1309**	**.8997**	**.0988**	**-.0003**	**1.573**	**-.0053**	**.0070**	**58.41**	**3.866**
Stddev	.0009	.0016	.0012	.0009	.005	.0003	.0018	.10	.027
%RSD	.6810	.1755	1.249	318.3	.2944	5.486	24.93	.1675	.7023
#1	.1310	.9007	.1000	.0004	1.573	-.0054	.0087	58.52	3.856
#2	.1317	.9005	.0988	.0000	1.578	-.0050	.0072	58.33	3.845
#3	.1299	.8978	.0976	-.0013	1.568	-.0055	.0052	58.38	3.896

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**215.2**	**12.11**	**5.713**	**.2967**	**.0237**	**.0070**	**2.393**	**.1515**	**.0504**
Stddev	.2	.11	.025	.0016	.0013	.0003	.006	.0006	.0003
%RSD	.0707	.9284	.4350	.5245	5.688	3.906	.2449	.3837	.5019
#1	215.2	12.00	5.700	.2951	.0233	.0073	2.398	.1521	.0506
#2	215.0	12.11	5.699	.2982	.0226	.0070	2.394	.1512	.0501
#3	215.3	12.22	5.742	.2969	.0252	.0067	2.386	.1511	.0505

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.314**	**.0121**	**.0475**	**2.641**	**.0027**	**.0957**	**2.343**
Stddev	.004	.0011	.0003	.007	.0022	.0018	.006
%RSD	.2675	8.788	.7100	.2623	80.20	1.884	.2592
#1	1.317	.0117	.0478	2.641	.0044	.0940	2.346
#2	1.314	.0112	.0472	2.648	.0003	.0954	2.336
#3	1.310	.0132	.0475	2.634	.0036	.0976	2.346

Zoom In / Zoom Out

Sample Name: JC86553-11 Acquired: 4/23/2019 15:20:34 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114610.**	**7561.2**	**4184.9**	**9153.6**
Stddev	497.	50.3	4.2	7.4
%RSD	.43381	.66527	.09967	.08071
#1	114240.	7562.3	4180.2	9146.9
#2	114410.	7611.0	4188.2	9152.4
#3	115180.	7510.4	4186.2	9161.5

Zoom In / Zoom Out

Sample Name: CCV Acquired: 4/23/2019 15:25:53 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.921**	**1.946**	**1.955**	**1.983**	**1.994**	**1.910**	**1.981**	**1.976**	**.2388**
Stddev	.003	.003	.001	.003	.002	.002	.003	.003	.0006
%RSD	.1566	.1367	.0246	.1334	.1228	.0943	.1397	.1638	.2628
#1	1.917	1.949	1.955	1.981	1.994	1.912	1.980	1.978	.2387
#2	1.921	1.943	1.955	1.981	1.992	1.909	1.979	1.973	.2382
#3	1.923	1.946	1.954	1.986	1.996	1.909	1.984	1.978	.2395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.937**	**2.018**	**1.953**	**2.032**	**2.018**	**1.972**	**1.969**	**38.28**	**39.57**
Stddev	.002	.004	.003	.003	.004	.002	.003	.03	.13
%RSD	.1097	.1820	.1333	.1216	.2085	.0776	.1359	.0677	.3332
#1	1.936	2.019	1.955	2.029	2.016	1.973	1.966	38.25	39.61
#2	1.935	2.014	1.954	2.031	2.015	1.972	1.970	38.31	39.43
#3	1.939	2.022	1.950	2.034	2.023	1.970	1.972	38.29	39.68
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.26**	**40.12**	**38.44**	**38.77**	**2.004**	**1.971**	**5.013**	**2.007**	**1.911**
Stddev	.11	.32	.04	.04	.002	.001	.009	.004	.002
%RSD	.2706	.7949	.0912	.0987	.0750	.0616	.1730	.1826	.0834
#1	40.38	40.44	38.47	38.73	2.002	1.972	5.011	2.010	1.910
#2	40.17	39.80	38.40	38.77	2.005	1.970	5.023	2.003	1.910
#3	40.24	40.12	38.44	38.81	2.004	1.971	5.006	2.008	1.913
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 15:25:53 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.911**	**1.943**	**1.911**	**1.947**	**2.000**	**1.924**	**1.987**
Stddev	.002	.003	.001	.003	.005	.003	.002
%RSD	.1061	.1422	.0592	.1479	.2321	.1306	.0733
#1	1.912	1.942	1.911	1.949	1.995	1.924	1.986
#2	1.909	1.946	1.910	1.944	2.004	1.921	1.989
#3	1.912	1.941	1.912	1.948	2.000	1.926	1.988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110230.**	**7350.8**	**4021.0**	**8497.1**
Stddev	267.	32.6	1.6	8.5
%RSD	.24229	.44365	.03983	.10016
#1	110340.	7314.3	4019.2	8490.3
#2	110430.	7376.9	4022.1	8506.7
#3	109930.	7361.4	4021.7	8494.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 15:30:55 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0000**	**.0002**	**-.0001**	**.0002**	**-.0008**	**.0001**	**.0002**	**-.0016**
Stddev	.0002	.0000	.0001	.0002	.0002	.0001	.0000	.0002	.0003
%RSD	309.4	466.7	26.79	246.5	125.8	15.66	10.15	122.3	17.65
#1	-.0000	-.0000	.0001	.0000	.0002	-.0007	.0002	-.0001	-.0015
#2	-.0001	.0000	.0002	.0000	-.0001	-.0009	.0001	.0003	-.0014
#3	.0002	-.0000	.0003	-.0003	.0004	-.0008	.0001	.0003	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0011**	**.0011**	**.0004**	**.0009**	**.0005**	**-.0070**	**-.0011**
Stddev	.0001	.0001	.0002	.0004	.0007	.0006	.0016	.0082	.0030
%RSD	99.93	3676.	19.27	37.78	194.6	68.56	325.8	117.4	276.1
#1	.0000	.0001	.0009	.0016	.0001	.0004	-.0014	-.0013	-.0012
#2	.0003	-.0001	.0010	.0008	.0011	.0007	.0013	-.0033	-.0040
#3	.0001	-.0001	.0013	.0010	-.0002	.0016	.0016	-.0165	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.0514**	**.0580**	**.0043**	**.0021**	**.0003**	**.0010**	**.0002**	**.0000**
Stddev	.0054	.0295	.0150	.0047	.0008	.0001	.0007	.0007	.0001
%RSD	194.2	57.39	25.80	109.5	39.65	47.03	74.17	348.3	812.7
#1	.0040	.0851	.0639	.0065	.0022	.0002	.0018	.0008	-.0001
#2	-.0031	.0302	.0692	-.0011	.0029	.0005	.0003	-.0005	.0000
#3	.0075	.0389	.0410	.0075	.0013	.0002	.0008	.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 15:30:55 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0017**	**.0002**	**-.0007**	**-.0014**	**.0003**	**.0054**
Stddev	.0001	.0005	.0001	.0016	.0014	.0008	.0012
%RSD	23.34	26.77	53.49	240.5	97.92	280.9	22.10
#1	.0006	.0023	.0002	-.0025	-.0023	.0010	.0046
#2	.0005	.0015	.0002	.0002	.0002	-.0006	.0068
#3	.0004	.0015	.0001	.0003	-.0022	.0005	.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115370.**	**7485.3**	**4197.5**	**9533.1**
Stddev	206.	46.7	15.4	37.2
%RSD	.17812	.62408	.36750	.39030
#1	115600.	7437.5	4188.6	9514.2
#2	115290.	7530.8	4215.3	9576.0
#3	115220.	7487.6	4188.5	9509.2

Zoom In Zoom Out

Sample Name: JC86553-15 Acquired: 4/23/2019 15:36:28 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.514**	**.0088**	**.0154**	**.1005**	**2.418**	**1.134**	**4.143**	**.2162**	**.0114**
Stddev	.003	.0000	.0002	.0002	.004	.001	.006	.0008	.0002
%RSD	.1783	.2539	1.224	.1556	.1441	.1199	.1537	.3894	1.710
#1	1.517	.0088	.0152	.1004	2.417	1.134	4.140	.2172	.0114
#2	1.512	.0088	.0156	.1007	2.423	1.135	4.151	.2159	.0112
#3	1.513	.0089	.0154	.1005	2.416	1.132	4.139	.2155	.0116

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2135**	**5.904**	**.3643**	**.0019**	**2.830**	**.0079**	**.0106**	**113.1**	**30.54**
Stddev	.0006	.015	.0003	.0009	.003	.0013	.0020	.1	.08
%RSD	.2593	.2555	.0732	47.50	.1194	16.61	19.26	.1128	.2469
#1	.2129	5.920	.3643	.0024	2.834	.0090	.0122	113.2	30.62
#2	.2139	5.901	.3641	.0024	2.829	.0082	.0112	113.0	30.53
#3	.2138	5.890	.3646	.0009	2.827	.0064	.0083	113.0	30.47

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**187.8**	**26.49**	**11.31**	**2.214**	**.0428**	**.0084**	**1.897**	**.4036**	**.1673**
Stddev	.5	.20	.04	.010	.0006	.0002	.004	.0011	.0005
%RSD	.2885	.7541	.3178	.4677	1.358	2.362	.2154	.2645	.3272
#1	188.3	26.70	11.28	2.220	.0429	.0086	1.892	.4024	.1671
#2	188.0	26.30	11.30	2.202	.0421	.0084	1.899	.4043	.1669
#3	187.2	26.46	11.35	2.220	.0433	.0082	1.900	.4041	.1679

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.184**	**.0145**	**.0268**	**25.08**	**.0157**	**.1597**	F **8.289**
Stddev	.002	.0003	.0001	.05	.0011	.0013	.010
%RSD	.0756	2.127	.5068	.2073	7.073	.8109	.1257
#1	2.182	.0143	.0269	25.02	.0169	.1605	8.278
#2	2.185	.0148	.0267	25.12	.0147	.1582	8.291
#3	2.184	.0144	.0269	25.09	.0153	.1604	8.298

Zoom In Zoom Out

Sample Name: JC86553-15 Acquired: 4/23/2019 15:36:28 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116670.**	**7904.7**	**4214.1**	**8735.4**
Stddev	235.	30.8	3.5	5.9
%RSD	.20134	.38931	.08235	.06724
#1	116920.	7869.4	4213.7	8728.9
#2	116460.	7918.3	4210.8	8740.3
#3	116620.	7926.2	4217.7	8737.0

Zoom In Zoom Out

Sample Name: JC86553-18 Acquired: 4/23/2019 15:41:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.010**	**.0071**	**.0031**	**.0415**	**.1924**	**.3263**	**5.414**	**.1227**	**.0004**
Stddev	.002	.0001	.0004	.0002	.0015	.0004	.010	.0007	.0004
%RSD	.1825	1.673	12.55	.5260	.7864	.1365	.1831	.5428	106.1
#1	1.012	.0069	.0034	.0415	.1913	.3258	5.411	.1224	.0007
#2	1.009	.0071	.0027	.0413	.1917	.3265	5.405	.1234	-.0001
#3	1.008	.0071	.0031	.0417	.1941	.3267	5.425	.1222	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2053**	**1.837**	**.0838**	**-.0016**	**3.624**	**-.0035**	**.0070**	**83.93**	**128.9**
Stddev	.0009	.003	.0028	.0009	.006	.0045	.0007	.11	.3
%RSD	.4297	.1494	3.295	56.08	.1768	129.8	10.47	.1310	.2023
#1	.2057	1.838	.0814	-.0007	3.630	-.0038	.0072	83.81	128.6
#2	.2043	1.839	.0868	-.0017	3.623	-.0079	.0062	83.95	128.8
#3	.2060	1.834	.0831	-.0026	3.618	.0012	.0077	84.03	129.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**222.9**	**64.94**	**11.92**	**2.114**	**.0973**	**.0096**	**2.627**	**.1073**	**.3890**
Stddev	.5	.26	.11	.013	.0007	.0000	.011	.0010	.0014
%RSD	.2176	.3994	.9295	.5950	.7082	.4970	.3982	.9309	.3682
#1	223.3	65.17	11.81	2.112	.0978	.0096	2.637	.1075	.3895
#2	223.0	64.99	12.04	2.127	.0976	.0096	2.626	.1083	.3900
#3	222.4	64.66	11.91	2.102	.0965	.0095	2.616	.1063	.3873

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.772**	**.0144**	**.1310**	**11.84**	**.0035**	**.1264**	**2.619**
Stddev	.009	.0005	.0002	.01	.0016	.0014	.008
%RSD	.1814	3.479	.1739	.0989	46.00	1.072	.2901
#1	4.769	.0149	.1312	11.85	.0027	.1273	2.622
#2	4.765	.0145	.1310	11.83	.0024	.1249	2.624
#3	4.782	.0139	.1307	11.84	.0053	.1272	2.610

Zoom In Zoom Out

Sample Name: JC86553-18 Acquired: 4/23/2019 15:41:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112980.**	**7601.3**	**4090.3**	**8734.2**
Stddev	304.	34.6	5.3	9.8
%RSD	.26917	.45541	.13034	.11267
#1	112940.	7636.0	4084.6	8723.6
#2	113310.	7601.0	4091.2	8736.1
#3	112700.	7566.8	4095.1	8743.0

Zoom In Zoom Out

Sample Name: MP14413-MB1CONF Acquired: 4/23/2019 15:46:53 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0001**	**.0001**	**-.0002**	**.0009**	**.0006**	**.0004**	**.0005**	**-.0012**
Stddev	.0001	.0001	.0001	.0002	.0000	.0002	.0000	.0002	.0001
%RSD	25.46	46.36	57.22	82.17	3.914	32.53	5.768	36.77	12.32
#1	.0003	-.0002	.0002	-.0003	.0009	.0004	.0004	.0007	-.0011
#2	.0002	-.0001	.0001	-.0004	.0010	.0006	.0004	.0004	-.0011
#3	.0002	-.0001	.0001	-.0000	.0009	.0008	.0004	.0004	-.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0673**	**.0008**	**-.0001**	**-.0003**	**-.0018**	**.0002**	**.0185**	**.0741**
Stddev	.0002	.0002	.0003	.0007	.0002	.0005	.0008	.0099	.0041
%RSD	55.01	.2453	32.19	1335.	72.88	27.37	353.8	53.49	5.598
#1	.0005	.0675	.0008	-.0008	-.0005	-.0017	-.0007	.0115	.0776
#2	.0003	.0672	.0011	-.0000	-.0002	-.0023	.0006	.0297	.0695
#3	.0002	.0673	.0006	-.0001	-.0014	.0008	.0141	.0752	

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0278**	**.0713**	**.0700**	**.0913**	**.0015**	**.0003**	**.0192**	**.0264**	**.0001**
Stddev	.0023	.0484	.0133	.0089	.0007	.0003	.0011	.0003	.0001
%RSD	8.239	67.81	19.05	9.734	47.80	92.92	5.706	1.026	164.8
#1	.0288	.1271	.0770	.0845	.0009	.0002	.0198	.0266	.0001
#2	.0294	.0413	.0783	.1014	.0023	.0006	.0200	.0266	.0001
#3	.0251	.0456	.0546	.0881	.0013	.0001	.0180	.0261	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0023**	**.0002**	**.0144**	**-.0011**	**-.0015**	**.0293**
Stddev	.0001	.0005	.0001	.0012	.0010	.0016	.0009
%RSD	13.66	20.43	28.69	8.576	90.84	103.9	3.064
#1	.0010	.0024	.0001	.0130	.0001	-.0028	.0297
#2	.0008	.0027	.0002	.0153	-.0017	-.0021	.0283
#3	.0010	.0018	.0003	.0150	-.0018	.0003	.0299

Zoom In Zoom Out

Sample Name: MP14413-MB1CONF Acquired: 4/23/2019 15:46:53 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115390.**	**7625.7**	**4189.5**	**9559.2**
Stddev	335.	34.2	9.1	16.1
%RSD	.29017	.44866	.21775	.16821
#1	115000.	7661.4	4186.5	9553.5
#2	115570.	7593.3	4199.8	9577.3
#3	115600.	7622.5	4182.3	9546.7

Zoom In Zoom Out

Sample Name: MP14413-B1CONF Acquired: 4/23/2019 15:52:23 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.871**	**1.897**	**1.902**	**1.907**	**1.946**	**1.865**	**1.930**	**1.904**
Stddev	.005	.005	.006	.002	.003	.003	.001	.002
%RSD	.2540	.2434	.3119	.0846	.1449	.1390	.0674	.0763
#1	1.873	1.900	1.909	1.906	1.948	1.867	1.930	1.904
#2	1.875	1.899	1.900	1.908	1.943	1.867	1.930	1.903
#3	1.866	1.891	1.898	1.909	1.947	1.863	1.928	1.906

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2433**	**1.874**	**1.971**	**1.944**	**1.999**	**1.955**	**1.914**	**1.979**
Stddev	.0005	.001	.004	.005	.002	.003	.007	.003
%RSD	.1930	.0726	.2299	.2450	.1062	.1383	.3706	.1566
#1	.2435	1.875	1.972	1.949	2.000	1.952	1.923	1.982
#2	.2428	1.873	1.966	1.941	1.997	1.955	1.910	1.979
#3	.2437	1.873	1.975	1.941	2.001	1.957	1.911	1.976

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.75**	**24.20**	**24.83**	**24.26**	**23.73**	**23.82**	**1.902**	**1.959**
Stddev	.05	.07	.04	.10	.04	.04	.004	.003
%RSD	.2130	.2890	.1694	.4260	.1572	.1745	.1918	.1739
#1	23.81	24.24	24.81	24.18	23.70	23.83	1.907	1.963
#2	23.76	24.24	24.87	24.37	23.77	23.85	1.901	1.957
#3	23.70	24.12	24.79	24.22	23.72	23.77	1.900	1.957

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0669**	**2.051**	**1.858**	**1.921**	**1.352**	**1.920**	F **-.0600**	**.0024**
Stddev	.0011	.003	.005	.002	.009	.002	.0031	.0008
%RSD	1.643	.1446	.2640	.0947	.6889	.0922	5.232	33.52
#1	.0681	2.055	1.860	1.923	1.346	1.921	-.0575	.0019
#2	.0666	2.049	1.861	1.922	1.348	1.921	-.0590	.0034
#3	.0660	2.050	1.852	1.919	1.363	1.918	-.0635	.0020

Zoom In Zoom Out

Sample Name: MP14413-B1CONF Acquired: 4/23/2019 15:52:23 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0006**	**1.943**
Stddev	.0009	.007
%RSD	138.3	.3651
#1	-.0017	1.951
#2	-.0001	1.938
#3	-.0001	1.938

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111710.**	**7460.8**	**4061.2**	**8747.4**
Stddev	57.	7.8	3.3	5.5
%RSD	.05091	.10486	.08198	.06294
#1	111710.	7464.3	4057.4	8753.8
#2	111650.	7466.3	4062.9	8744.6
#3	111760.	7451.9	4063.4	8743.9

Zoom In Zoom Out

Sample Name: JC86466-1 Acquired: 4/23/2019 15:57:28 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5986**	**.0069**	**-.0001**	**.0491**	**.2461**	**.1519**	**3.536**	**.1310**	**.0001**
Stddev	.0002	.0000	.0001	.0004	.0014	.0002	.004	.0009	.0006
%RSD	.0338	.4759	68.12	.8762	.5748	.1057	.1275	.7026	414.9
#1	.5985	.0069	-.0003	.0496	.2456	.1519	3.541	.1307	.0006
#2	.5989	.0069	-.0001	.0489	.2477	.1520	3.532	.1303	-.0005
#3	.5986	.0069	-.0001	.0487	.2450	.1517	3.535	.1321	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3874**	**.4142**	**.0422**	**.0002**	**.1934**	**-.0052**	**.0029**	**157.7**	**12.15**
Stddev	.0015	.0003	.0006	.0037	.0006	.0015	.0015	.3	.04
%RSD	.3870	.0686	1.523	2156.	.3172	28.82	50.51	.1738	.3477
#1	.3891	.4145	.0414	-.0032	.1929	-.0036	.0033	158.0	12.20
#2	.3869	.4140	.0426	-.0005	.1932	-.0065	.0013	157.5	12.12
#3	.3862	.4142	.0425	.0042	.1941	-.0056	.0042	157.6	12.14

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**216.8**	**16.68**	**8.420**	**5.639**	**.0325**	**.0064**	**2.073**	**.0328**	**.1349**
Stddev	1.1	.25	.071	.030	.0005	.0003	.008	.0008	.0002
%RSD	.5276	1.474	.8381	.5411	1.630	5.423	.3826	2.564	.1476
#1	217.5	16.89	8.399	5.646	.0329	.0067	2.071	.0337	.1350
#2	217.4	16.73	8.498	5.606	.0319	.0065	2.065	.0320	.1346
#3	215.5	16.41	8.362	5.666	.0328	.0060	2.081	.0326	.1349

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.718**	**.0429**	**.0874**	**.3069**	**-.0040**	**.0957**	**2.124**
Stddev	.006	.0015	.0003	.0046	.0020	.0055	.001
%RSD	.1591	3.499	.3270	1.492	50.26	5.707	.0645
#1	3.724	.0436	.0876	.3098	-.0047	.1020	2.123
#2	3.713	.0440	.0876	.3017	-.0057	.0929	2.123
#3	3.716	.0412	.0871	.3094	-.0018	.0922	2.125

Zoom In Zoom Out

Sample Name: JC86466-1 Acquired: 4/23/2019 15:57:28 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114670.**	**7674.3**	**4194.3**	**8938.2**
Stddev	228.	81.4	2.8	8.6
%RSD	.19925	1.0606	.06666	.09616
#1	114420.	7637.0	4197.5	8942.5
#2	114870.	7618.3	4192.9	8943.8
#3	114710.	7767.7	4192.5	8928.3

Zoom In Zoom Out

Sample Name: JC86466-4 Acquired: 4/23/2019 16:02:47 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.184**	**.0147**	**.0002**	**.1421**	**.6119**	**.4110**	**.9616**	**.3800**	**.0018**
Stddev	.003	.0003	.0002	.0006	.0058	.0009	.0010	.0007	.0023
%RSD	.1288	1.787	84.79	.4543	.9548	.2162	.1022	.1743	124.4
#1	2.183	.0149	.0004	.1414	.6158	.4120	.9607	.3796	.0043
#2	2.182	.0149	.0001	.1424	.6052	.4107	.9615	.3797	.0011
#3	2.187	.0144	.0001	.1426	.6147	.4102	.9626	.3808	-.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8351**	**1.318**	**.0259**	**-.0020**	**.1124**	**-.0168**	**-.0022**	**251.9**	**6.953**
Stddev	.0041	.001	.0068	.0022	.0038	.0060	.0054	.4	.042
%RSD	.4965	.0844	26.14	110.7	3.409	35.59	248.5	.1780	.6080
#1	.8343	1.316	.0197	-.0040	.1159	-.0107	.0033	252.3	7.002
#2	.8314	1.318	.0331	-.0026	.1083	-.0227	-.0075	251.9	6.928
#3	.8396	1.318	.0248	.0004	.1131	-.0171	-.0024	251.4	6.930

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**413.5**	**101.9**	**86.52**	**6.477**	**.0089**	**.0035**	**1.477**	**.0365**	**.0626**
Stddev	.9	.4	.28	.033	.0008	.0002	.006	.0005	.0005
%RSD	.2204	.3607	.3264	.5063	9.189	4.483	.4280	1.504	.7773
#1	414.5	101.7	86.60	6.511	.0086	.0035	1.472	.0365	.0621
#2	413.2	101.8	86.75	6.472	.0083	.0036	1.484	.0371	.0630
#3	412.8	102.3	86.20	6.446	.0099	.0033	1.475	.0360	.0627

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.05**	**.0477**	**.0221**	**.6976**	**.0066**	**.1101**	**.9006**
Stddev	.03	.0027	.0007	.0209	.0042	.0104	.0056
%RSD	.1210	5.737	3.208	2.990	62.85	9.448	.6236
#1	24.07	.0501	.0223	.7215	.0029	.1206	.8941
#2	24.02	.0447	.0227	.6833	.0111	.0998	.9039
#3	24.07	.0483	.0213	.6879	.0059	.1099	.9038

Zoom In Zoom Out

Sample Name: JC86466-4 Acquired: 4/23/2019 16:02:47 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115350.**	**7647.0**	**4211.2**	**8923.2**
Stddev	489.	58.3	5.5	14.4
%RSD	.42397	.76224	.13015	.16169
#1	115330.	7617.6	4211.4	8927.6
#2	115850.	7609.3	4205.6	8907.1
#3	114870.	7714.2	4216.5	8935.0

Zoom In Zoom Out

Sample Name: JC86466-5 Acquired: 4/23/2019 16:08:07 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.155**	**.0232**	**-.0004**	**.2772**	**.3920**	**1.224**	**4.357**	**.3533**	**.0030**
Stddev	.001	.0005	.0005	.0015	.0022	.002	.003	.0012	.0017
%RSD	.1068	2.336	140.4	.5484	.5572	.1821	.0627	.3317	57.28
#1	1.154	.0227	-.0009	.2755	.3924	1.224	4.359	.3542	.0049
#2	1.157	.0231	-.0001	.2784	.3896	1.222	4.357	.3538	.0021
#3	1.155	.0238	-.0000	.2777	.3939	1.226	4.354	.3520	.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4636**	**.8163**	**.0219**	**-.0051**	**.1230**	**-.0181**	**-.0000**	**198.1**	**5.190**
Stddev	.0011	.0023	.0016	.0034	.0008	.0020	.0008	.3	.025
%RSD	.2345	.2845	7.315	67.37	.6301	11.27	14310.	.1600	.4809
#1	.4648	.8168	.0233	-.0075	.1227	-.0197	.0005	198.1	5.205
#2	.4631	.8183	.0201	-.0067	.1239	-.0189	.0004	197.7	5.162
#3	.4628	.8137	.0221	-.0012	.1224	-.0158	-.0009	198.4	5.204

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**457.9**	**78.97**	**58.37**	**6.435**	**.0047**	**.0029**	**1.765**	**.0305**	**.0494**
Stddev	1.1	.37	.13	.025	.0007	.0003	.004	.0005	.0000
%RSD	.2442	.4675	.2251	.3805	15.19	10.25	.2026	1.767	.0978
#1	459.2	78.56	58.29	6.449	.0040	.0027	1.761	.0299	.0493
#2	457.0	79.07	58.29	6.407	.0045	.0028	1.765	.0309	.0494
#3	457.7	79.28	58.52	6.450	.0054	.0032	1.768	.0308	.0494

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.53**	**.0234**	**.0114**	**.1798**	**.0071**	**.1084**	**5.588**
Stddev	.01	.0007	.0003	.0078	.0016	.0023	.006
%RSD	.0953	3.105	2.428	4.329	23.01	2.086	.1136
#1	14.54	.0233	.0115	.1708	.0052	.1068	5.596
#2	14.51	.0242	.0116	.1844	.0081	.1110	5.584
#3	14.54	.0227	.0111	.1842	.0080	.1075	5.585

Zoom In Zoom Out

Sample Name: JC86466-5 Acquired: 4/23/2019 16:08:07 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116170.**	**7760.1**	**4237.2**	**8852.3**
Stddev	248.	52.5	4.7	13.1
%RSD	.21375	.67605	.11031	.14763
#1	116000.	7722.6	4242.6	8864.5
#2	116060.	7820.0	4233.9	8838.5
#3	116460.	7737.5	4235.2	8853.9

Zoom In Zoom Out

Sample Name: JC86466-10 Acquired: 4/23/2019 16:13:22 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.442**	**.0088**	**.0022**	**.0633**	**.2695**	**.2548**	**12.29**	**.1362**	**.0018**
Stddev	.003	.0002	.0004	.0008	.0023	.0007	.02	.0003	.0004
%RSD	.2272	2.690	16.58	1.226	.8648	.2887	.1530	.2544	22.64
#1	1.438	.0086	.0021	.0642	.2714	.2542	12.30	.1358	.0022
#2	1.445	.0087	.0026	.0630	.2669	.2546	12.31	.1362	.0016
#3	1.442	.0090	.0019	.0628	.2703	.2556	12.27	.1365	.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3462**	**1.311**	**.0712**	**-.0005**	**1.246**	**-.0045**	**.0049**	**142.9**	**28.57**
Stddev	.0024	.001	.0032	.0015	.000	.0015	.0021	.3	.12
%RSD	.6908	.0799	4.513	284.0	.0347	34.14	42.02	.2214	.4101
#1	.3435	1.311	.0749	-.0010	1.246	-.0062	.0072	142.6	28.50
#2	.3475	1.312	.0694	-.0017	1.246	-.0042	.0044	143.3	28.71
#3	.3478	1.310	.0692	.0011	1.247	-.0032	.0031	142.9	28.51

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.4**	**24.88**	**10.60**	**3.682**	**.0412**	**.0117**	**2.134**	**.0722**	**.2427**
Stddev	.3	.18	.03	.005	.0012	.0003	.007	.0019	.0012
%RSD	.1443	.7280	.3178	.1301	2.795	2.216	.3386	2.692	.5093
#1	189.6	25.09	10.60	3.677	.0405	.0120	2.142	.0745	.2416
#2	189.4	24.74	10.56	3.683	.0407	.0115	2.128	.0708	.2426
#3	189.1	24.83	10.62	3.686	.0426	.0117	2.132	.0715	.2440

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.049**	**.0179**	**.0842**	**1.463**	**-.0066**	**.1272**	**3.782**
Stddev	.005	.0019	.0007	.006	.0018	.0034	.019
%RSD	.1318	10.42	.8369	.4394	27.62	2.647	.4986
#1	4.045	.0191	.0834	1.469	-.0087	.1234	3.796
#2	4.055	.0188	.0846	1.456	-.0053	.1297	3.760
#3	4.047	.0157	.0845	1.464	-.0059	.1286	3.789

Zoom In Zoom Out

Sample Name: JC86466-10 Acquired: 4/23/2019 16:13:22 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115020.**	**7668.1**	**4186.5**	**8872.0**
Stddev	256.	34.0	1.4	4.1
%RSD	.22220	.44347	.03413	.04649
#1	115180.	7647.3	4185.0	8870.6
#2	114720.	7649.8	4187.9	8868.7
#3	115160.	7707.4	4186.6	8876.6

Zoom In Zoom Out

Sample Name: JC86470-1 Acquired: 4/23/2019 16:18:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.113**	**.0045**	**.0051**	**.0460**	**.2520**	**.2675**	**5.158**	**.1141**	**.0010**
Stddev	.007	.0002	.0004	.0004	.0016	.0032	.001	.0016	.0006
%RSD	.1718	4.563	8.319	.7690	.6426	1.208	.0224	1.409	55.82
#1	4.111	.0043	.0056	.0460	.2538	.2712	5.160	.1123	.0011
#2	4.106	.0047	.0052	.0456	.2517	.2659	5.158	.1144	.0016
#3	4.120	.0045	.0047	.0464	.2506	.2653	5.158	.1155	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2501**	**1.280**	**.1298**	**.0012**	**.7560**	**-.0042**	**.0072**	**87.17**	**445.3**
Stddev	.0015	.009	.0027	.0029	.0067	.0055	.0030	.16	1.1
%RSD	.5833	.7406	2.088	250.3	.8829	130.9	41.39	.1788	.2524
#1	.2518	1.278	.1285	.0012	.7504	-.0029	.0040	87.33	446.2
#2	.2493	1.273	.1280	.0040	.7544	-.0102	.0077	87.02	445.6
#3	.2493	1.291	.1329	-.0017	.7634	.0005	.0099	87.16	444.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**141.4**	**65.50**	**14.07**	**2.741**	**.1157**	**.0104**	**2.534**	**.0632**	**1.670**
Stddev	.4	.88	.11	.008	.0007	.0006	.006	.0007	.003
%RSD	.3005	1.344	.7466	.2940	.5709	6.002	.2506	1.094	.1757
#1	141.9	65.57	13.97	2.732	.1149	.0109	2.531	.0626	1.672
#2	141.3	66.35	14.18	2.742	.1159	.0106	2.530	.0631	1.667
#3	141.0	64.59	14.06	2.748	.1162	.0097	2.542	.0639	1.671

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.146**	**.0656**	**.1017**	**24.42**	**.2622**	**.0848**	**3.421**
Stddev	.001	.0013	.0005	.17	.0019	.0035	.026
%RSD	.0386	1.997	.4898	.7167	.7115	4.128	.7535
#1	2.146	.0671	.1016	24.39	.2602	.0853	3.403
#2	2.145	.0647	.1023	24.26	.2639	.0811	3.409
#3	2.146	.0651	.1013	24.61	.2624	.0881	3.450

Zoom In Zoom Out

Sample Name: JC86470-1 Acquired: 4/23/2019 16:18:38 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111120.**	**7492.7**	**4030.9**	**8482.9**
Stddev	70.	44.5	30.0	57.0
%RSD	.06260	.59335	.74382	.67178
#1	111170.	7455.9	4045.2	8513.6
#2	111040.	7480.0	4051.0	8518.0
#3	111150.	7542.1	3996.4	8417.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 16:23:56 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.929**	**1.947**	**1.953**	**1.983**	**1.999**	**1.910**	**1.986**	**1.976**	**.2384**
Stddev	.006	.003	.002	.002	.007	.004	.002	.001	.0002
%RSD	.3037	.1289	.1216	.0746	.3415	.2290	.0772	.0560	.0669
#1	1.923	1.944	1.951	1.985	1.993	1.914	1.984	1.975	.2382
#2	1.935	1.949	1.956	1.982	2.006	1.912	1.987	1.975	.2386
#3	1.929	1.948	1.953	1.983	1.999	1.905	1.986	1.977	.2384
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.941**	**2.015**	**1.953**	**2.022**	**2.018**	**1.977**	**1.970**	**38.32**	**39.46**
Stddev	.001	.002	.002	.001	.003	.002	.001	.05	.10
%RSD	.0299	.1191	.1074	.0279	.1627	.1121	.0648	.1325	.2599
#1	1.940	2.013	1.953	2.022	2.015	1.974	1.969	38.26	39.52
#2	1.941	2.014	1.952	2.023	2.017	1.978	1.970	38.35	39.34
#3	1.941	2.018	1.956	2.022	2.021	1.977	1.971	38.35	39.51
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.16**	**39.89**	**38.43**	**38.83**	**2.001**	**1.970**	**5.018**	**2.004**	**1.917**
Stddev	.03	.19	.07	.06	.002	.001	.002	.002	.005
%RSD	.0674	.4663	.1953	.1653	.1141	.0697	.0298	.0987	.2722
#1	40.14	40.11	38.38	38.79	2.003	1.971	5.017	2.004	1.912
#2	40.15	39.79	38.51	38.91	1.999	1.969	5.020	2.002	1.922
#3	40.19	39.79	38.39	38.81	2.003	1.971	5.017	2.006	1.918
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 16:23:56 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.916**	**1.945**	**1.915**	**1.937**	**2.000**	**1.927**	**1.974**
Stddev	.002	.003	.001	.003	.002	.002	.004
%RSD	.1240	.1310	.0715	.1669	.1143	.0779	.1797
#1	1.917	1.942	1.916	1.941	2.000	1.926	1.970
#2	1.918	1.945	1.915	1.935	2.003	1.929	1.977
#3	1.913	1.948	1.913	1.936	1.999	1.927	1.975
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**110330.**	**7431.4**	**4025.7**	**8501.2**
Stddev	187.	35.3	3.5	9.0
%RSD	.16990	.47534	.08627	.10630
#1	110540.	7393.0	4021.9	8491.1
#2	110180.	7438.6	4028.6	8503.6
#3	110260.	7462.6	4026.7	8508.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 16:28:59 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0000**	**.0004**	**.0001**	**.0002**	**-.0007**	**.0002**	**.0003**	**-.0016**
Stddev	.0003	.0001	.0001	.0002	.0001	.0005	.0000	.0002	.0004
%RSD	333.5	174.2	18.88	199.4	72.26	71.29	17.87	80.84	24.59
#1	.0004	-.0000	.0005	.0002	.0002	-.0007	.0002	.0001	-.0016
#2	.0001	-.0001	.0004	-.0001	.0004	-.0002	.0002	.0002	-.0020
#3	-.0002	.0000	.0003	.0001	.0001	-.0013	.0002	.0005	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0002**	**.0004**	**.0007**	**-.0003**	**-.0004**	**.0003**	**.0025**	**-.0021**
Stddev	.0000	.0001	.0005	.0015	.0008	.0010	.0006	.0024	.0012
%RSD	43.74	61.05	113.0	232.1	290.2	220.0	186.1	98.08	57.42
#1	.0001	.0003	.0002	-.0009	.0003	.0006	.0010	.0052	-.0013
#2	.0001	.0002	.0001	.0022	.0000	-.0007	-.0003	.0012	-.0034
#3	.0001	.0001	.0010	.0007	-.0012	-.0012	.0004	.0010	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**.0500**	**.0881**	**.0122**	**.0018**	**.0004**	**.0014**	**-.0002**	**.0001**
Stddev	.0041	.0262	.0266	.0084	.0006	.0000	.0006	.0002	.0001
%RSD	79.49	52.32	30.20	68.55	32.10	8.394	43.47	118.8	53.98
#1	.0015	.0206	.0687	.0040	.0024	.0005	.0010	-.0001	.0002
#2	.0043	.0588	.1185	.0118	.0012	.0004	.0012	-.0004	.0001
#3	.0095	.0706	.0772	.0207	.0019	.0004	.0021	-.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 16:28:59 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0030**	**.0003**	**-.0011**	**-.0020**	**-.0007**	**.0059**
Stddev	.0001	.0002	.0001	.0026	.0008	.0015	.0012
%RSD	20.81	6.989	38.33	237.0	42.23	225.3	20.66
#1	.0007	.0032	.0004	-.0010	-.0029	.0010	.0061
#2	.0004	.0031	.0002	-.0038	-.0018	-.0013	.0046
#3	.0006	.0028	.0002	.0015	-.0012	-.0018	.0070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115550.**	**7469.1**	**4160.0**	**9452.9**
Stddev	322.	52.5	4.3	.9
%RSD	.27881	.70356	.10326	.00980
#1	115180.	7468.8	4162.0	9453.8
#2	115730.	7416.7	4155.1	9451.9
#3	115740.	7521.8	4162.9	9452.8

Zoom In Zoom Out

Sample Name: JC86470-3 Acquired: 4/23/2019 16:34:30 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.977**	**.0028**	**.0046**	**.0370**	**.1501**	**.3628**	**3.422**	**.1047**
Stddev	.002	.0001	.0000	.0001	.0008	.0009	.005	.0002
%RSD	.1066	2.461	.7754	.3178	.5653	.2407	.1369	.1857
#1	1.979	.0028	.0045	.0370	.1501	.3637	3.422	.1046
#2	1.976	.0029	.0045	.0368	.1510	.3625	3.427	.1049
#3	1.975	.0029	.0046	.0370	.1493	.3621	3.418	.1046

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.1928**	**.9578**	**.1335**	F **-.0034**	**.7074**	**.0039**	**.0070**
Stddev	.0006	.0001	.0036	.0006	.0009	.0013	.0027	.0010
%RSD	36.34	.0429	.3739	.4809	27.08	.1789	70.28	14.92
#1	.0010	.1928	.9616	.1328	-.0043	.7067	.0011	.0080
#2	.0023	.1929	.9573	.1339	-.0035	.7089	.0040	.0069
#3	.0017	.1928	.9545	.1338	-.0025	.7066	.0065	.0059

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.47**	**196.5**	**131.2**	**55.36**	**10.34**	**1.970**	**.0915**	**.0122**
Stddev	.14	.2	.2	.36	.06	.007	.0003	.0001
%RSD	.2404	.1079	.1671	.6468	.5405	.3660	.3647	1.171
#1	56.62	196.5	130.9	55.10	10.31	1.978	.0919	.0123
#2	56.35	196.2	131.2	55.20	10.31	1.967	.0912	.0123
#3	56.42	196.6	131.3	55.77	10.41	1.964	.0915	.0121

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.007**	**.0473**	**.5147**	**1.155**	**.4836**	**.0670**	**38.77**	**.0027**
Stddev	.004	.0013	.0008	.001	.0004	.0000	.05	.0011
%RSD	.1856	2.756	.1547	.0929	.0763	.0433	.1246	41.19
#1	2.010	.0487	.5153	1.155	.4834	.0670	38.82	.0040
#2	2.003	.0462	.5138	1.156	.4834	.0671	38.73	.0025
#3	2.009	.0470	.5149	1.154	.4841	.0670	38.77	.0018

Zoom In Zoom Out

Sample Name: JC86470-3 Acquired: 4/23/2019 16:34:30 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0695**	**2.700**
Stddev	.0016	.001
%RSD	2.243	.0326
#1	.0684	2.701
#2	.0713	2.699
#3	.0689	2.699

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**109460.**	**7582.7**	**3981.5**	**8270.2**
Stddev	229.	27.6	6.0	6.8
%RSD	.20900	.36394	.14944	.08244
#1	109660.	7593.9	3975.3	8262.4
#2	109210.	7603.0	3987.2	8273.9
#3	109510.	7551.3	3982.0	8274.4

Zoom In Zoom Out

Sample Name: MP14409-MB1CONF Acquired: 4/23/2019 16:39:44 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**.0001**	**-.0003**	**-.0000**	**-.0006**	**.0001**	**-.0001**	**-.0018**
Stddev	.0001	.0000	.0002	.0003	.0002	.0000	.0000	.0003	.0002
%RSD	136.5	24.29	121.7	120.0	935.2	8.274	20.65	363.1	8.426
#1	.0000	-.0001	.0002	-.0000	.0001	-.0005	.0001	.0001	-.0017
#2	.0002	-.0001	.0002	-.0002	-.0003	-.0005	.0001	-.0004	-.0018
#3	.0000	-.0001	-.0000	-.0006	.0001	-.0006	.0001	.0000	-.0020

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0010**	**.0004**	**-.0001**	**.0009**	**-.0022**	**.0002**	**.0085**	**-.0020**
Stddev	.0001	.0002	.0007	.0008	.0002	.0005	.0001	.0038	.0029
%RSD	44.11	18.52	170.4	525.4	22.76	21.93	70.48	44.33	144.8
#1	.0004	.0012	-.0003	.0003	.0009	-.0020	.0001	.0048	.0001
#2	.0002	.0009	.0003	.0003	.0007	-.0019	.0002	.0084	-.0008
#3	.0004	.0009	.0011	-.0011	.0011	-.0028	.0004	.0123	-.0054

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0410**	**.0291**	**.0062**	**.0012**	**.0003**	**.0085**	**-.0005**	**-.0001**
Stddev	.0050	.0259	.0186	.0047	.0005	.0001	.0002	.0002	.0001
%RSD	382.6	63.13	63.98	75.02	38.51	31.45	2.560	32.42	61.79
#1	.0011	.0441	.0335	.0009	.0017	.0002	.0083	-.0006	-.0001
#2	-.0036	.0137	.0451	.0096	.0012	.0003	.0088	-.0003	-.0002
#3	.0065	.0653	.0087	.0081	.0008	.0004	.0085	-.0007	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0038**	**.0002**	**.0034**	**-.0023**	**-.0014**	**.0066**
Stddev	.0003	.0004	.0002	.0010	.0010	.0011	.0008
%RSD	61.43	11.61	114.2	28.92	43.98	78.48	12.39
#1	.0007	.0033	.0000	.0041	-.0035	-.0016	.0056
#2	.0002	.0040	.0001	.0039	-.0019	-.0023	.0069
#3	.0007	.0042	.0004	.0023	-.0016	-.0002	.0072

Zoom In Zoom Out

Sample Name: MP14409-MB1CONF Acquired: 4/23/2019 16:39:44 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115930.**	**7560.6**	**4132.6**	**9423.2**
Stddev	303.	21.1	54.5	115.0
%RSD	.26116	.27848	1.3197	1.2207
#1	115840.	7544.0	4069.7	9290.4
#2	116260.	7553.5	4161.7	9490.8
#3	115680.	7584.3	4166.5	9488.4

Zoom In Zoom Out

Sample Name: MP14409-B1CONF Acquired: 4/23/2019 16:45:13 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.903**	**1.919**	**1.910**	**1.926**	**1.950**	**1.885**	**1.943**	**1.918**
Stddev	.001	.004	.003	.002	.004	.002	.003	.001
%RSD	.0639	.2051	.1413	.1038	.2255	.1235	.1326	.0635
#1	1.902	1.922	1.912	1.927	1.948	1.887	1.940	1.918
#2	1.904	1.920	1.911	1.928	1.948	1.883	1.945	1.919
#3	1.902	1.915	1.907	1.924	1.955	1.886	1.944	1.916

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2492**	**1.904**	**1.963**	**1.972**	**2.001**	**1.961**	**1.928**	**2.008**
Stddev	.0006	.000	.003	.003	.003	.002	.002	.003
%RSD	.2429	.0168	.1263	.1305	.1400	.0863	.1149	.1245
#1	.2485	1.904	1.966	1.975	1.999	1.961	1.930	2.010
#2	.2497	1.904	1.961	1.971	2.001	1.962	1.925	2.005
#3	.2495	1.905	1.962	1.970	2.004	1.959	1.929	2.007

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.35**	**24.67**	**25.39**	**24.66**	**24.34**	**24.42**	**1.959**	**2.017**
Stddev	.04	.04	.09	.19	.03	.04	.002	.002
%RSD	.1519	.1426	.3609	.7851	.1280	.1455	.1044	.1030
#1	24.34	24.68	25.48	24.81	24.34	24.39	1.958	2.020
#2	24.38	24.71	25.39	24.74	24.37	24.46	1.961	2.017
#3	24.31	24.64	25.30	24.44	24.31	24.41	1.957	2.016

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1399**	**2.054**	**1.886**	**1.948**	**1.945**	**1.945**	F **-.0971**	**.0019**
Stddev	.0007	.002	.002	.001	.003	.001	.0022	.0009
%RSD	.4748	.1101	.0874	.0248	.1439	.0441	2.314	48.92
#1	.1392	2.053	1.888	1.948	1.947	1.944	-.0946	.0018
#2	.1399	2.056	1.887	1.948	1.942	1.946	-.0979	.0010
#3	.1405	2.051	1.884	1.947	1.946	1.946	-.0989	.0029

Zoom In Zoom Out

Sample Name: MP14409-B1CONF Acquired: 4/23/2019 16:45:13 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0018**	**1.920**
Stddev	.0008	.003
%RSD	43.54	.1406
#1	-.0025	1.919
#2	-.0019	1.923
#3	-.0009	1.917

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112160.**	**7558.9**	**4050.6**	**8717.4**
Stddev	197.	11.3	2.3	3.4
%RSD	.17607	.14939	.05643	.03866
#1	112370.	7546.4	4049.1	8719.6
#2	111970.	7568.3	4049.5	8713.5
#3	112150.	7562.1	4053.2	8719.1

Zoom In Zoom Out

Sample Name: mp14409-s1 Acquired: 4/23/2019 16:50:15 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.920**	**1.891**	**1.907**	**1.916**	**1.915**	**1.877**	**1.964**	**1.903**	**.2497**
Stddev	.003	.004	.002	.002	.011	.001	.002	.002	.0004
%RSD	.1746	.2099	.0889	.1199	.5471	.0470	.0995	.1003	.1759
#1	1.917	1.888	1.908	1.919	1.927	1.876	1.966	1.905	.2494
#2	1.924	1.896	1.907	1.915	1.908	1.877	1.962	1.902	.2494
#3	1.919	1.890	1.905	1.915	1.910	1.877	1.964	1.903	.2502

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.877**	**1.899**	**1.982**	**1.943**	**1.939**	**1.931**	**2.008**	**24.21**	**175.9**
Stddev	.002	.002	.004	.002	.004	.002	.005	.04	.1
%RSD	.1059	.1209	.2292	.0794	.1817	.1261	.2451	.1582	.0312
#1	1.879	1.900	1.987	1.944	1.942	1.933	2.013	24.18	175.9
#2	1.875	1.900	1.980	1.943	1.935	1.930	2.009	24.25	175.9
#3	1.876	1.896	1.979	1.941	1.939	1.929	2.003	24.21	175.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.19**	**52.68**	**35.62**	**44.21**	**2.191**	**1.984**	**3.871**	**1.981**	**2.626**
Stddev	.10	.29	.15	.09	.006	.004	.010	.004	.004
%RSD	.3661	.5485	.4170	.1935	.2902	.1889	.2587	.1889	.1714
#1	28.11	52.35	35.49	44.17	2.195	1.988	3.875	1.984	2.623
#2	28.31	52.88	35.78	44.31	2.194	1.983	3.878	1.983	2.631
#3	28.14	52.81	35.58	44.15	2.183	1.980	3.859	1.977	2.623

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.926**	**1.942**	**1.933**	**32.58**	**.0019**	**-.0061**	**1.946**
Stddev	.002	.002	.002	.08	.0009	.0010	.003
%RSD	.1051	.1157	.0831	.2378	48.53	16.89	.1265
#1	1.928	1.945	1.934	32.65	.0029	-.0052	1.946
#2	1.924	1.941	1.931	32.58	.0010	-.0059	1.949
#3	1.925	1.941	1.934	32.50	.0019	-.0073	1.944

Zoom In Zoom Out

Sample Name: mp14409-s1 Acquired: 4/23/2019 16:50:15 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108400.**	**7441.4**	**3910.7**	**8155.9**
Stddev	126.	19.3	2.9	2.5
%RSD	.11589	.25926	.07398	.03073
#1	108250.	7434.4	3908.4	8155.0
#2	108470.	7426.5	3909.7	8158.7
#3	108470.	7463.2	3913.9	8154.0

Zoom In Zoom Out

Sample Name: mp14409-s2 Acquired: 4/23/2019 16:55:16 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.830**	**1.799**	**1.813**	**1.815**	**1.819**	**1.782**	**1.870**	**1.807**	**.2475**
Stddev	.005	.003	.002	.002	.005	.004	.001	.001	.0009
%RSD	.2790	.1588	.1204	.1226	.2543	.1981	.0577	.0662	.3702
#1	1.836	1.803	1.815	1.813	1.822	1.786	1.871	1.808	.2486
#2	1.826	1.799	1.810	1.814	1.814	1.780	1.869	1.806	.2470
#3	1.829	1.797	1.813	1.818	1.822	1.780	1.869	1.807	.2470

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.789**	**1.804**	**1.963**	**1.843**	**1.841**	**1.831**	**1.983**	**23.04**	**172.4**
Stddev	.002	.007	.003	.002	.004	.004	.005	.09	.2
%RSD	.0860	.3760	.1593	.1252	.2347	.2446	.2491	.3930	.1360
#1	1.789	1.811	1.966	1.845	1.846	1.836	1.984	23.14	172.6
#2	1.790	1.803	1.964	1.844	1.838	1.827	1.977	22.96	172.4
#3	1.787	1.798	1.960	1.840	1.839	1.830	1.987	23.02	172.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.85**	**50.74**	**34.19**	**42.64**	**2.084**	**1.967**	**3.786**	**1.961**	**2.528**
Stddev	.04	.11	.02	.13	.003	.003	.004	.003	.004
%RSD	.1648	.2081	.0643	.2959	.1180	.1370	.0921	.1739	.1643
#1	26.84	50.76	34.19	42.78	2.084	1.970	3.784	1.963	2.533
#2	26.90	50.83	34.22	42.60	2.081	1.965	3.783	1.957	2.525
#3	26.82	50.62	34.17	42.54	2.086	1.966	3.790	1.963	2.527

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.918**	**1.925**	**1.922**	**31.88**	**.0019**	**-.0045**	**1.849**
Stddev	.001	.006	.002	.05	.0005	.0015	.002
%RSD	.0748	.2933	.1207	.1464	24.85	32.60	.0811
#1	1.920	1.931	1.924	31.91	.0024	-.0059	1.849
#2	1.917	1.921	1.920	31.83	.0018	-.0046	1.848
#3	1.918	1.921	1.921	31.90	.0015	-.0030	1.851

Zoom In Zoom Out

Sample Name: mp14409-s2 Acquired: 4/23/2019 16:55:16 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108640.**	**7429.5**	**3932.0**	**8205.4**
Stddev	153.	16.5	2.3	7.1
%RSD	.14114	.22143	.05941	.08710
#1	108470.	7443.1	3930.8	8212.6
#2	108770.	7411.2	3934.7	8205.3
#3	108680.	7434.2	3930.6	8198.3

Zoom In Zoom Out

Sample Name: JC86554-1 Acquired: 4/23/2019 17:00:16 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0505**	**-.0001**	**.0002**	**-.0002**	**.0010**	**.0016**	**.0673**	**.0016**	**-.0002**
Stddev	.0001	.0001	.0002	.0001	.0002	.0002	.0002	.0001	.0004
%RSD	.2258	67.50	117.7	41.31	20.33	13.03	.2534	4.438	171.9
#1	.0506	-.0002	.0003	-.0003	.0008	.0016	.0674	.0017	-.0001
#2	.0504	-.0000	-.0001	-.0001	.0008	.0015	.0671	.0015	.0001
#3	.0506	-.0001	.0003	-.0003	.0012	.0019	.0673	.0017	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0013**	**-.0003**	**-.0004**	**.0005**	**-.0009**	**.0014**	**.0135**	**157.4**
Stddev	.0003	.0002	.0006	.0006	.0010	.0018	.0009	.0175	.5
%RSD	65.49	12.85	229.1	167.5	195.3	196.0	63.16	129.0	.3363
#1	.0005	.0012	.0002	.0003	.0011	-.0030	.0012	.0241	157.8
#2	.0001	.0013	-.0010	-.0005	-.0006	-.0003	.0023	-.0066	157.6
#3	.0007	.0015	-.0000	-.0009	.0011	.0005	.0006	.0232	156.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.576**	**29.21**	**11.61**	**20.56**	**.2600**	**.0021**	**3.884**	**-.0008**	**.8068**
Stddev	.012	.03	.06	.07	.0003	.0001	.006	.0003	.0016
%RSD	.3374	.1019	.4885	.3625	.1140	5.785	.1514	36.41	.2023
#1	3.563	29.20	11.67	20.64	.2599	.0022	3.891	-.0010	.8086
#2	3.579	29.20	11.62	20.56	.2599	.0020	3.879	-.0009	.8065
#3	3.587	29.25	11.55	20.49	.2604	.0020	3.883	-.0005	.8054

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0142**	**.0003**	**33.84**	**-.0028**	**-.0046**	**.0126**
Stddev	.0002	.0003	.0001	.03	.0018	.0009	.0010
%RSD	62.04	1.971	39.97	.1032	63.86	20.33	8.160
#1	.0002	.0141	.0002	33.87	-.0048	-.0036	.0116
#2	.0006	.0145	.0004	33.84	-.0017	-.0046	.0125
#3	.0002	.0140	.0002	33.80	-.0018	-.0055	.0136

Zoom In Zoom Out

Sample Name: JC86554-1 Acquired: 4/23/2019 17:00:16 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108870.**	**7425.0**	**3903.3**	**8454.7**
Stddev	155.	26.3	6.9	12.3
%RSD	.14205	.35402	.17768	.14509
#1	108910.	7402.1	3895.6	8444.5
#2	109010.	7419.1	3905.2	8451.2
#3	108710.	7453.7	3909.1	8468.3

Zoom In Zoom Out

Sample Name: MP14409-SD1 Acquired: 4/23/2019 17:05:41 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0503**	**-.0010**	**.0012**	**.0000**	**.0024**	**-.0005**	**.0676**	**.0010**	**-.0077**
Stddev	.0005	.0007	.0005	.0002	.0032	.0024	.0004	.0010	.0014
%RSD	1.051	69.19	44.12	680.6	133.4	474.4	.6463	100.5	18.09
#1	.0499	-.0014	.0014	-.0001	-.0013	-.0017	.0675	.0014	-.0092
#2	.0509	-.0002	.0016	-.0001	.0045	-.0021	.0681	-.0001	-.0066
#3	.0502	-.0015	.0006	.0003	.0040	.0023	.0673	.0017	-.0071

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0253**	**.0029**	**.0012**	**.0054**	**-.0072**	**.0064**	**.1082**	**157.9**
Stddev	.0011	.0004	.0076	.0044	.0042	.0032	.0065	.0145	.6
%RSD	257.0	1.674	260.3	367.2	78.26	44.48	100.1	13.37	.3818
#1	-.0007	.0249	.0093	.0052	.0005	-.0085	-.0010	.1201	157.3
#2	.0014	.0253	-.0055	-.0035	.0078	-.0095	.0100	.1124	158.0
#3	.0006	.0257	.0049	.0019	.0079	-.0036	.0103	.0921	158.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.631**	**30.46**	**11.63**	**20.40**	**.2605**	**.0024**	**3.841**	**-.0028**	**.8104**
Stddev	.025	.08	.08	.03	.0033	.0004	.008	.0017	.0008
%RSD	.6796	.2692	.6921	.1574	1.265	16.32	.2159	61.04	.0952
#1	3.656	30.37	11.71	20.40	.2598	.0021	3.845	-.0048	.8096
#2	3.607	30.52	11.55	20.37	.2641	.0028	3.846	-.0020	.8103
#3	3.629	30.49	11.63	20.43	.2577	.0022	3.831	-.0016	.8112

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**.0180**	**.0038**	**33.00**	**-.0117**	**-.0028**	**.0376**
Stddev	.0013	.0017	.0004	.07	.0056	.0022	.0043
%RSD	72.40	9.538	11.07	.2139	47.78	81.05	11.35
#1	-.0031	.0198	.0033	32.93	-.0141	-.0011	.0329
#2	-.0015	.0164	.0040	33.00	-.0158	-.0018	.0412
#3	-.0006	.0179	.0041	33.08	-.0053	-.0053	.0387

Zoom In Zoom Out

Sample Name: MP14409-SD1 Acquired: 4/23/2019 17:05:41 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114110.**	**7507.0**	**4095.8**	**9150.2**
Stddev	279.	30.8	8.7	12.7
%RSD	.24446	.41021	.21170	.13846
#1	114300.	7537.2	4096.8	9154.5
#2	113790.	7508.2	4086.8	9136.0
#3	114240.	7475.7	4104.0	9160.2

Zoom In Zoom Out

Sample Name: JC86643-11 Acquired: 4/23/2019 17:11:07 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2143**	**.0036**	**.0009**	**.0375**	**.1420**	**.0769**	**.6173**	**.0812**	**-.0024**
Stddev	.0009	.0002	.0003	.0005	.0004	.0005	.0005	.0001	.0004
%RSD	.4138	4.528	40.55	1.274	.3022	.6206	.0870	.1100	16.77
#1	.2148	.0037	.0012	.0376	.1417	.0769	.6178	.0813	-.0023
#2	.2148	.0038	.0008	.0370	.1425	.0764	.6167	.0812	-.0029
#3	.2132	.0035	.0006	.0379	.1418	.0774	.6174	.0812	-.0021

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1365**	**.2725**	**.0038**	**-.0005**	**.1847**	**-.0092**	**.0010**	**55.65**	**4.567**
Stddev	.0005	.0005	.0010	.0028	.0018	.0008	.0033	.05	.033
%RSD	.3787	.1798	25.39	548.1	.9707	8.592	315.8	.0901	.7276
#1	.1370	.2730	.0044	-.0036	.1850	-.0083	-.0027	55.69	4.559
#2	.1365	.2720	.0044	.0004	.1827	-.0097	.0022	55.67	4.604
#3	.1360	.2725	.0027	.0017	.1863	-.0097	.0035	55.59	4.539

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.63**	**13.18**	**7.357**	**10.11**	**.0082**	**.0016**	**37.51**	**-.0002**	**.0219**
Stddev	.15	.15	.030	.02	.0003	.0004	.06	.0005	.0002
%RSD	.2966	1.123	.4135	.2108	3.535	22.10	.1664	275.6	.7746
#1	51.59	13.20	7.358	10.09	.0084	.0014	37.44	.0002	.0218
#2	51.79	13.32	7.387	10.13	.0083	.0014	37.55	-.0001	.0220
#3	51.49	13.03	7.326	10.12	.0079	.0020	37.55	-.0007	.0217

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.448**	**.0379**	**.0001**	**.8226**	**-.0058**	**.0311**	**.4657**
Stddev	.003	.0003	.0001	.0053	.0011	.0013	.0014
%RSD	.0991	.8355	101.6	.6499	19.29	4.035	.3035
#1	3.450	.0376	.0000	.8282	-.0048	.0303	.4641
#2	3.444	.0379	.0001	.8176	-.0056	.0326	.4663
#3	3.451	.0382	.0003	.8220	-.0070	.0305	.4668

Zoom In Zoom Out

Sample Name: JC86643-11 Acquired: 4/23/2019 17:11:07 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116200.**	**7657.2**	**4192.4**	**9158.8**
Stddev	223.	31.9	7.2	11.9
%RSD	.19156	.41699	.17275	.12963
#1	116340.	7693.0	4185.8	9148.6
#2	116310.	7631.5	4191.3	9156.1
#3	115940.	7647.2	4200.2	9171.8

Zoom In Zoom Out

Sample Name: JC86644-1 Acquired: 4/23/2019 17:16:30 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0120**	**.0005**	**.0005**	**.0042**	**.1998**	**.0061**	**.0369**	**.0203**	**-.0010**
Stddev	.0001	.0001	.0001	.0002	.0004	.0003	.0001	.0004	.0001
%RSD	1.110	15.18	15.16	3.945	.2034	5.265	.4053	2.023	11.39
#1	.0119	.0006	.0006	.0043	.2003	.0065	.0370	.0203	-.0008
#2	.0119	.0005	.0005	.0040	.1996	.0060	.0367	.0208	-.0010
#3	.0122	.0005	.0005	.0043	.1996	.0059	.0369	.0200	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0562**	**.0421**	**.0141**	**.0009**	**.0053**	**-.0034**	**.0013**	**10.98**	**12.90**
Stddev	.0002	.0001	.0012	.0006	.0006	.0016	.0012	.04	.02
%RSD	.3171	.2713	8.737	74.49	11.94	45.81	95.51	.3966	.1169
#1	.0560	.0422	.0137	.0014	.0060	-.0051	.0006	10.94	12.91
#2	.0562	.0420	.0131	.0002	.0050	-.0019	.0006	11.02	12.88
#3	.0563	.0421	.0155	.0010	.0049	-.0033	.0027	10.99	12.90

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.54**	**3.760**	**5.339**	**1.873**	**.0426**	**.0022**	F **28.97**	**-.0026**	**.0715**
Stddev	.08	.061	.026	.019	.0006	.0000	.04	.0003	.0001
%RSD	.2811	1.618	.4838	1.030	1.436	2.215	.1243	10.55	.1379
#1	27.51	3.725	5.323	1.851	.0433	.0022	29.01	-.0024	.0714
#2	27.49	3.725	5.325	1.883	.0424	.0022	28.94	-.0026	.0716
#3	27.63	3.830	5.369	1.885	.0421	.0023	28.96	-.0029	.0716

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1540**	**.0296**	**.0064**	**11.90**	**-.0046**	**.0043**	**.2777**
Stddev	.0002	.0002	.0002	.01	.0008	.0015	.0016
%RSD	.1007	.5575	3.722	.1132	17.35	35.67	.5617
#1	.1541	.0295	.0064	11.90	-.0055	.0030	.2769
#2	.1539	.0296	.0061	11.91	-.0039	.0060	.2795
#3	.1541	.0298	.0066	11.88	-.0045	.0040	.2767

Zoom In Zoom Out

Sample Name: JC86644-1 Acquired: 4/23/2019 17:16:30 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116150.**	**7622.3**	**4161.7**	**9231.3**
Stddev	143.	22.8	6.4	5.1
%RSD	.12328	.29971	.15271	.05477
#1	116240.	7637.1	4154.5	9225.5
#2	115980.	7595.9	4166.4	9233.4
#3	116220.	7633.7	4164.2	9235.0

Zoom In Zoom Out

Sample Name: JC86644-3 Acquired: 4/23/2019 17:21:51 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0356**	**.0001**	**.0012**	**.0008**	**.0150**	**.0019**	**.0103**	**.0053**	**-.0015**
Stddev	.0001	.0000	.0001	.0001	.0001	.0003	.0001	.0003	.0003
%RSD	.3284	75.31	5.473	11.50	.9674	14.72	1.204	4.814	20.23
#1	.0354	.0000	.0012	.0007	.0148	.0022	.0103	.0055	-.0018
#2	.0356	.0001	.0013	.0009	.0150	.0020	.0104	.0054	-.0015
#3	.0357	.0001	.0011	.0009	.0151	.0016	.0102	.0050	-.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0052**	**.0130**	**.0021**	**-.0003**	**.0022**	**.0001**	**.0005**	**1.357**	**35.74**
Stddev	.0002	.0002	.0005	.0008	.0011	.0017	.0006	.007	.08
%RSD	3.716	1.161	23.28	227.7	48.70	1284.	102.3	.5064	.2259
#1	.0052	.0130	.0026	-.0012	.0010	.0019	-.0000	1.356	35.80
#2	.0050	.0129	.0018	-.0002	.0027	-.0000	.0006	1.364	35.65
#3	.0053	.0132	.0018	.0003	.0030	-.0015	.0011	1.351	35.77

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.668**	**5.951**	**5.167**	F **469.4**	**.0323**	**.0006**	**3.844**	**-.0011**	**.2619**
Stddev	.027	.065	.018	6.7	.0003	.0001	.003	.0005	.0003
%RSD	.7364	1.084	.3419	1.419	.7755	9.662	.0854	41.34	.1041
#1	3.699	6.002	5.148	473.7	.0322	.0007	3.840	-.0008	.2616
#2	3.659	5.879	5.168	461.7	.0321	.0006	3.845	-.0016	.2620
#3	3.647	5.971	5.184	472.7	.0325	.0005	3.846	-.0009	.2621

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0159**	**.0061**	**.0010**	**29.90**	**-.0015**	**.0039**	**.0411**
Stddev	.0004	.0005	.0002	.02	.0007	.0021	.0000
%RSD	2.396	7.933	16.74	.0682	47.68	52.78	.0232
#1	.0163	.0064	.0008	29.88	-.0007	.0033	.0411
#2	.0159	.0056	.0011	29.92	-.0015	.0022	.0411
#3	.0155	.0064	.0011	29.91	-.0021	.0062	.0411

Zoom In Zoom Out

Sample Name: JC86644-3 Acquired: 4/23/2019 17:21:51 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105790.**	**7389.2**	**3836.1**	**7872.8**
Stddev	614.	40.3	3.0	.8
%RSD	.58002	.54565	.07872	.01045
#1	105570.	7354.5	3839.5	7873.7
#2	105310.	7433.5	3834.7	7872.4
#3	106480.	7379.7	3834.0	7872.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 17:27:24 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.898**	**1.920**	**1.932**	**1.970**	**1.962**	**1.892**	**1.952**	**1.954**	**.2357**
Stddev	.002	.003	.004	.000	.004	.001	.002	.001	.0003
%RSD	.1052	.1529	.2050	.0035	.1843	.0281	.1004	.0533	.1417
#1	1.898	1.920	1.933	1.970	1.962	1.892	1.951	1.954	.2354
#2	1.900	1.918	1.928	1.970	1.966	1.892	1.955	1.955	.2361
#3	1.896	1.923	1.936	1.970	1.959	1.891	1.952	1.953	.2357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.910**	**1.998**	**1.942**	**2.014**	**2.000**	**1.959**	**1.961**	**37.77**	**38.99**
Stddev	.001	.002	.003	.002	.002	.003	.005	.03	.08
%RSD	.0488	.0889	.1617	.1210	.1193	.1307	.2323	.0905	.2025
#1	1.910	1.997	1.944	2.013	1.997	1.957	1.962	37.79	39.06
#2	1.909	2.000	1.939	2.017	2.002	1.958	1.956	37.79	38.90
#3	1.911	1.998	1.944	2.012	2.001	1.962	1.965	37.73	39.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.86**	**39.86**	**38.08**	**38.18**	**1.993**	**1.956**	**4.997**	**1.990**	**1.886**
Stddev	.06	.21	.03	.00	.005	.002	.008	.003	.002
%RSD	.1621	.5181	.0723	.0032	.2463	.1111	.1555	.1258	.1036
#1	39.85	39.90	38.09	38.18	1.991	1.956	4.998	1.990	1.886
#2	39.81	39.63	38.04	38.18	1.989	1.954	4.988	1.992	1.888
#3	39.94	40.04	38.10	38.18	1.998	1.958	5.004	1.987	1.884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 17:27:24 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.881**	**1.926**	**1.887**	**1.935**	**1.992**	**1.909**	**1.969**
Stddev	.001	.001	.001	.009	.006	.002	.005
%RSD	.0273	.0571	.0688	.4524	.3179	.1081	.2438
#1	1.881	1.928	1.888	1.945	1.994	1.906	1.970
#2	1.882	1.926	1.887	1.928	1.985	1.910	1.964
#3	1.881	1.926	1.885	1.932	1.997	1.910	1.973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**111940.**	**7447.6**	**4038.3**	**8537.8**
Stddev	295.	20.3	3.4	6.1
%RSD	.26336	.27200	.08383	.07152
#1	112240.	7466.4	4039.4	8541.8
#2	111650.	7450.1	4041.0	8530.7
#3	111950.	7426.2	4034.5	8540.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 17:32:27 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	F **.0002**	**.0004**	**.0000**	**.0003**	**-.0008**	**.0003**	**.0004**	**-.0014**
Stddev	.0001	.0001	.0001	.0000	.0000	.0001	.0001	.0002	.0005
%RSD	40.58	37.20	39.24	128.9	9.094	7.679	21.45	43.76	36.29
#1	.0001	.0001	.0005	.0001	.0003	-.0008	.0003	.0002	-.0020
#2	.0004	.0001	.0003	-.0000	.0002	-.0009	.0002	.0006	-.0011
#3	.0003	.0002	.0003	.0001	.0003	-.0009	.0004	.0004	-.0012
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002							
Low Limit		-.0002							

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0004**	**.0008**	**-.0001**	**.0004**	**-.0006**	**.0005**	**.0098**	**-.0004**
Stddev	.0002	.0001	.0004	.0007	.0007	.0002	.0006	.0033	.0021
%RSD	83.21	19.04	55.90	933.2	161.8	32.72	129.0	33.19	523.1
#1	.0000	.0003	.0011	.0003	-.0002	-.0008	-.0002	.0072	-.0027
#2	.0002	.0005	.0009	-.0008	.0011	-.0004	.0011	.0134	.0014
#3	.0003	.0003	.0003	.0004	.0003	-.0007	.0006	.0088	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**.0118**	**.1115**	**.0524**	**.0017**	**.0004**	**.0070**	**.0002**	**.0001**
Stddev	.0031	.0447	.0204	.0098	.0004	.0001	.0008	.0007	.0001
%RSD	74.43	379.2	18.31	18.70	24.11	20.98	10.88	310.3	89.75
#1	.0077	-.0044	.0957	.0598	.0022	.0003	.0078	-.0005	-.0000
#2	.0025	.0624	.1346	.0413	.0015	.0004	.0063	.0009	.0002
#3	.0022	-.0225	.1043	.0561	.0014	.0004	.0071	.0004	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 17:32:27 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0011**	**.0003**	**.0008**	**-.0010**	**.0005**	**.0069**
Stddev	.0003	.0003	.0001	.0027	.0007	.0010	.0011
%RSD	70.49	31.39	34.87	348.1	69.81	191.8	15.40
#1	.0003	.0014	.0002	.0028	-.0017	.0016	.0060
#2	.0009	.0009	.0003	.0019	-.0005	.0003	.0081
#3	.0003	.0008	.0004	-.0023	-.0007	-.0003	.0067

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116280.**	**7514.2**	**4189.5**	**9521.6**
Stddev	307.	30.0	4.5	9.8
%RSD	.26443	.39887	.10747	.10277
#1	115940.	7479.8	4194.5	9529.5
#2	116350.	7534.2	4185.8	9510.7
#3	116540.	7528.7	4188.2	9524.8

Zoom In Zoom Out

Sample Name: JC86406-1 Acquired: 4/23/2019 17:38:00 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5322**	**.0061**	**-.0003**	**.0432**	**.4295**	**.1162**	**.7209**	**.1140**	**-.0006**
Stddev	.0413	.0006	.0004	.0003	.0025	.0044	.0027	.0006	.0077
%RSD	7.761	9.018	125.4	.7755	.5903	3.769	.3683	.4979	1259.
#1	.4903	.0056	-.0007	.0429	.4273	.1118	.7190	.1146	-.0082
#2	.5729	.0067	-.0004	.0436	.4323	.1205	.7239	.1139	.0072
#3	.5336	.0061	.0001	.0432	.4289	.1163	.7198	.1135	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5456**	**.3837**	**.1028**	**-.0003**	**.1194**	**-.0082**	**.0067**	**304.9**	**17.35**
Stddev	.0017	.0002	.0015	.0014	.0032	.0015	.0029	24.5	1.35
%RSD	.3084	.0423	1.454	538.0	2.659	18.19	43.03	8.027	7.805
#1	.5469	.3836	.1016	-.0016	.1187	-.0089	.0035	279.9	15.97
#2	.5437	.3839	.1023	.0012	.1228	-.0065	.0092	328.8	18.68
#3	.5461	.3837	.1045	-.0004	.1166	-.0091	.0074	306.1	17.40

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**341.7**	**12.29**	**9.575**	**1.060**	**.0313**	**.0119**	**1.685**	**.0263**	**.1725**
Stddev	25.8	.89	.646	.071	.0014	.0002	.006	.0005	.0134
%RSD	7.538	7.241	6.744	6.737	4.560	1.500	.3518	1.711	7.743
#1	315.6	11.36	8.928	.9831	.0318	.0118	1.691	.0262	.1587
#2	367.1	13.13	10.22	1.124	.0297	.0121	1.682	.0268	.1853
#3	342.5	12.37	9.578	1.072	.0325	.0119	1.681	.0259	.1734

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.185**	**.0142**	**.1412**	**.5579**	**-.0033**	**.1868**	**2.269**
Stddev	.009	.0016	.0012	.0016	.0026	.0143	.001
%RSD	.4257	11.64	.8683	.2804	79.15	7.649	.0409
#1	2.195	.0127	.1398	.5574	-.0006	.1714	2.269
#2	2.184	.0139	.1420	.5596	-.0059	.1997	2.270
#3	2.177	.0159	.1417	.5566	-.0035	.1893	2.268

Zoom In Zoom Out

Sample Name: JC86406-1 Acquired: 4/23/2019 17:38:00 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115170.**	**7790.3**	**4219.9**	**8904.9**
Stddev	385.	520.8	13.4	21.3
%RSD	.33460	6.6850	.31820	.23936
#1	115210.	8330.3	4230.4	8920.7
#2	114760.	7291.2	4224.4	8913.4
#3	115530.	7749.2	4204.7	8880.7

Zoom In Zoom Out

Sample Name: JC86406-5 Acquired: 4/23/2019 17:43:18 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1923**	**.0026**	**-.0008**	**.0360**	**.1479**	**.1690**	**.8902**	**.1717**	**-.0015**
Stddev	.0001	.0001	.0002	.0003	.0001	.0006	.0003	.0002	.0009
%RSD	.0775	3.281	28.21	.9573	.0758	.3545	.0390	.1185	59.05
#1	.1924	.0027	-.0005	.0361	.1480	.1683	.8902	.1716	-.0010
#2	.1923	.0026	-.0009	.0363	.1479	.1692	.8906	.1719	-.0025
#3	.1921	.0025	-.0009	.0356	.1478	.1695	.8899	.1716	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1643**	**.2364**	**.0505**	**.0008**	**.0580**	**-.0107**	**.0049**	**65.55**	**1.548**
Stddev	.0009	.0003	.0021	.0018	.0004	.0015	.0009	.06	.008
%RSD	.5267	.1103	4.226	218.5	.6154	13.90	17.43	.0920	.5178
#1	.1643	.2362	.0525	-.0004	.0577	-.0121	.0044	65.57	1.543
#2	.1635	.2362	.0508	.0029	.0578	-.0109	.0044	65.59	1.558
#3	.1652	.2367	.0482	.0000	.0584	-.0091	.0059	65.48	1.544

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**294.7**	**14.86**	**6.657**	**.6237**	**.0314**	**.0125**	**1.679**	**.0381**	**.0188**
Stddev	.5	.15	.013	.0082	.0004	.0002	.002	.0017	.0003
%RSD	.1698	1.034	.1946	1.311	1.160	1.866	.1048	4.482	1.479
#1	295.2	15.01	6.670	.6332	.0317	.0126	1.681	.0376	.0185
#2	294.4	14.71	6.657	.6197	.0310	.0123	1.679	.0366	.0189
#3	294.4	14.87	6.644	.6184	.0315	.0127	1.678	.0399	.0190

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.106**	**.0139**	**.0522**	**4.855**	**.0042**	**.0821**	**1.837**
Stddev	.003	.0007	.0007	.007	.0031	.0031	.001
%RSD	.2229	4.951	1.342	.1511	73.05	3.760	.0259
#1	1.107	.0145	.0526	4.852	.0068	.0786	1.838
#2	1.108	.0141	.0514	4.850	.0051	.0844	1.837
#3	1.103	.0132	.0526	4.864	.0008	.0832	1.837

Zoom In Zoom Out

Sample Name: JC86406-5 Acquired: 4/23/2019 17:43:18 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**115110.**	**7675.4**	**4186.6**	**9239.1**
Stddev	204.	23.9	8.2	18.6
%RSD	.17687	.31156	.19477	.20102
#1	115200.	7662.8	4196.0	9257.8
#2	115240.	7703.0	4182.6	9220.7
#3	114870.	7660.4	4181.2	9238.9

Zoom In Zoom Out

Sample Name: MP14495-MB1 7 Acquired: 4/23/2019 17:48:37 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**.0003**	**-.0000**	**.0007**	**.0002**	**.0011**	**.0012**	**-.0018**
Stddev	.0002	.0001	.0001	.0001	.0003	.0001	.0001	.0002	.0002
%RSD	66.58	243.2	41.55	388.1	44.33	67.13	7.497	16.99	11.38
#1	.0001	.0001	.0003	.0001	.0006	.0003	.0011	.0014	-.0020
#2	.0002	-.0002	.0002	.0000	.0004	.0003	.0012	.0012	-.0020
#3	.0005	-.0000	.0004	-.0002	.0010	.0001	.0011	.0010	-.0016

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0222**	**.0005**	**.0007**	**.0010**	**-.0015**	**.0014**	**.0062**	**.0700**
Stddev	.0000	.0001	.0004	.0001	.0007	.0007	.0007	.0097	.0044
%RSD	16.78	.4577	76.88	9.857	70.52	49.89	46.74	156.8	6.324
#1	.0003	.0221	.0003	.0007	.0018	-.0009	.0020	-.0038	.0682
#2	.0003	.0223	.0009	.0008	.0009	-.0013	.0017	.0157	.0667
#3	.0002	.0222	.0003	.0007	.0004	-.0023	.0007	.0067	.0750

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0849**	**.0162**	**.1193**	**.1358**	**.0016**	**.0004**	**.0171**	**.0210**	**.0002**
Stddev	.0046	.0243	.0349	.0035	.0002	.0001	.0011	.0001	.0000
%RSD	5.394	150.5	29.27	2.596	12.57	13.87	6.522	.6813	14.13
#1	.0799	.0020	.0863	.1364	.0017	.0005	.0181	.0212	.0002
#2	.0890	.0023	.1558	.1390	.0017	.0004	.0174	.0209	.0003
#3	.0856	.0442	.1157	.1320	.0013	.0004	.0159	.0210	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0010**	**.0004**	**.0103**	**-.0016**	**-.0010**	**.0279**
Stddev	.0001	.0004	.0002	.0020	.0009	.0007	.0005
%RSD	10.21	35.44	43.10	19.80	58.80	65.53	1.712
#1	.0005	.0013	.0006	.0112	-.0016	-.0013	.0274
#2	.0005	.0006	.0003	.0118	-.0024	-.0015	.0281
#3	.0006	.0011	.0003	.0080	-.0006	-.0003	.0283

Zoom In Zoom Out

Sample Name: MP14495-MB1 7 Acquired: 4/23/2019 17:48:37 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118000.**	**7610.6**	**4213.7**	**9608.0**
Stddev	310.	249.7	3.0	8.7
%RSD	.26303	3.2815	.07207	.09067
#1	118160.	7680.7	4210.2	9598.2
#2	118200.	7817.8	4215.7	9610.6
#3	117650.	7333.3	4215.2	9615.0

Zoom In Zoom Out

Sample Name: MP14495-B1 Acquired: 4/23/2019 17:54:06 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.808**	**1.828**	**1.820**	**1.842**	**1.860**	**1.783**	**1.846**	**1.828**
Stddev	.081	.084	.003	.005	.005	.004	.003	.004
%RSD	4.497	4.576	.1392	.2543	.2605	.2534	.1614	.2051
#1	1.895	1.917	1.823	1.842	1.855	1.780	1.842	1.829
#2	1.734	1.751	1.819	1.847	1.863	1.788	1.848	1.831
#3	1.794	1.817	1.819	1.838	1.863	1.782	1.847	1.824

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2389**	**1.792**	**1.886**	**1.920**	**1.916**	**1.878**	**1.830**	**1.956**
Stddev	.0014	.003	.006	.002	.007	.006	.004	.005
%RSD	.5953	.1610	.3235	.0920	.3879	.3436	.2155	.2340
#1	.2404	1.789	1.887	1.922	1.924	1.879	1.834	1.960
#2	.2385	1.794	1.891	1.920	1.913	1.883	1.827	1.951
#3	.2377	1.794	1.879	1.919	1.910	1.871	1.828	1.956

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.60**	**24.05**	**24.94**	**24.36**	**23.78**	**23.79**	**1.836**	**1.944**
Stddev	1.03	1.07	1.14	1.27	1.05	1.05	.002	.003
%RSD	4.350	4.461	4.554	5.228	4.417	4.423	.0975	.1620
#1	24.71	25.20	26.15	25.68	24.93	24.93	1.839	1.947
#2	22.68	23.08	23.90	23.13	22.87	22.86	1.836	1.943
#3	23.39	23.86	24.77	24.26	23.54	23.58	1.835	1.941

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1019**	**2.021**	**1.790**	**1.876**	**1.428**	**1.880**	F **-.0691**	**.0010**
Stddev	.0009	.007	.081	.004	.011	.004	.0027	.0011
%RSD	.8762	.3546	4.511	.2183	.7510	.2395	3.909	113.2
#1	.1009	2.029	1.877	1.871	1.416	1.875	-.0665	.0011
#2	.1026	2.019	1.717	1.879	1.431	1.883	-.0719	-.0002
#3	.1022	2.015	1.776	1.878	1.436	1.882	-.0689	.0021

Zoom In Zoom Out

Sample Name: MP14495-B1 Acquired: 4/23/2019 17:54:06 Type: Unk
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0015**	**1.864**
Stddev	.0013	.003
%RSD	89.15	.1571
#1	-.0029	1.867
#2	-.0003	1.864
#3	-.0013	1.861

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**114120.**	**7612.3**	**4101.7**	**8839.2**
Stddev	98.	290.3	5.7	19.2
%RSD	.08571	3.8132	.14002	.21713
#1	114200.	7314.9	4100.2	8848.8
#2	114150.	7894.8	4096.9	8817.1
#3	114010.	7627.1	4108.0	8851.6

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/23/2019 17:59:08 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0006**	**-.0001**	**-.0009**	**.0014**	**.0029**	**.0008**	**.0006**	**-.0016**
Stddev	.0002	.0000	.0003	.0003	.0002	.0006	.0000	.0002	.0008
%RSD	114.2	8.536	222.6	30.33	12.03	20.67	1.767	27.12	51.88
#1	-.0003	.0005	.0002	-.0006	.0015	.0030	.0008	.0008	-.0008
#2	-.0002	.0006	-.0002	-.0011	.0012	.0023	.0008	.0006	-.0024
#3	.0000	.0006	-.0004	-.0010	.0015	.0035	.0008	.0005	-.0016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0006**	**.0017**	**-.0003**	**.0017**	**-.0073**	**.0020**	**484.5**	**363.5**
Stddev	.0002	.0001	.0011	.0011	.0013	.0018	.0018	1.3	1.6
%RSD	7.240	14.14	65.21	393.3	76.50	24.36	87.17	.2696	.4282
#1	.0034	-.0007	.0021	-.0016	.0005	-.0085	.0035	485.8	365.1
#2	.0030	-.0006	.0004	.0003	.0014	-.0052	.0001	484.6	363.5
#3	.0030	-.0005	.0024	.0004	.0031	-.0081	.0025	483.2	361.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**181.0**	**484.8**	**-.2973**	**.0476**	**-.0023**	**-.0001**	**-.0083**	**-.0020**	**-.0027**
Stddev	.8	3.3	.0114	.0061	.0005	.0005	.0009	.0008	.0001
%RSD	.4467	.6778	3.826	12.84	23.80	593.9	10.97	37.71	2.293
#1	181.9	487.7	-.3104	.0524	-.0026	.0005	-.0093	-.0017	-.0028
#2	181.0	485.3	-.2907	.0497	-.0025	-.0002	-.0079	-.0015	-.0027
#3	180.3	481.2	-.2907	.0407	-.0016	-.0005	-.0076	-.0029	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/23/2019 17:59:08 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0232**	**-.0018**	**-.0230**	**.0028**	**-.0125**	**.0076**
Stddev	.0003	.0021	.0001	.0047	.0004	.0004	.0011
%RSD	274.3	8.921	4.078	20.27	15.28	3.220	14.95
#1	.0004	.0254	-.0018	-.0190	.0029	-.0127	.0064
#2	-.0002	.0212	-.0018	-.0281	.0023	-.0128	.0086
#3	.0001	.0231	-.0019	-.0217	.0031	-.0121	.0078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103210.**	**7260.7**	**3736.4**	**7492.8**
Stddev	381.	52.5	.4	7.9
%RSD	.36878	.72321	.01190	.10554
#1	102860.	7223.0	3736.8	7487.3
#2	103150.	7238.5	3736.4	7489.2
#3	103620.	7320.7	3735.9	7501.9

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/23/2019 18:04:29 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4739**	**.4651**	**.9618**	**.4723**	**.4648**	**.4775**	**.4699**	**.9339**	**1.038**
Stddev	.0007	.0006	.0014	.0008	.0016	.0013	.0022	.0014	.002
%RSD	.1556	.1388	.1467	.1669	.3429	.2722	.4778	.1476	.1526
#1	.4733	.4658	.9607	.4716	.4666	.4788	.4724	.9324	1.040
#2	.4736	.4645	.9612	.4722	.4638	.4774	.4690	.9351	1.036
#3	.4747	.4652	.9634	.4732	.4638	.4762	.4682	.9342	1.038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4637**	**.9107**	**1.029**	**.9247**	**.9391**	**.9944**	**1.045**	**482.4**	**363.0**
Stddev	.0016	.0021	.001	.0027	.0014	.0031	.000	.9	1.6
%RSD	.3408	.2324	.0791	.2922	.1472	.3081	.0267	.1821	.4446
#1	.4654	.9112	1.030	.9216	.9387	.9968	1.045	483.1	364.8
#2	.4635	.9084	1.028	.9263	.9407	.9909	1.045	481.4	361.7
#3	.4623	.9126	1.029	.9263	.9380	.9953	1.045	482.7	362.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**187.9**	**493.7**	**-.3273**	**.0324**	**.4592**	**.4644**	**.4968**	**.4545**	**.4682**
Stddev	.7	3.1	.0518	.0069	.0012	.0001	.0002	.0008	.0007
%RSD	.3524	.6301	15.84	21.28	.2577	.0169	.0484	.1676	.1485
#1	188.6	497.1	-.3419	.0394	.4587	.4645	.4967	.4545	.4683
#2	187.3	491.1	-.2697	.0256	.4606	.4643	.4971	.4552	.4675
#3	187.8	492.9	-.3702	.0324	.4583	.4644	.4966	.4537	.4689
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/23/2019 18:04:29 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4687**	**.4729**	**.4575**	**.4718**	**.4957**	**.4972**	**.5017**
Stddev	.0014	.0012	.0012	.0032	.0022	.0011	.0015
%RSD	.3029	.2470	.2565	.6831	.4363	.2227	.2909
#1	.4703	.4723	.4587	.4710	.4947	.4977	.5001
#2	.4684	.4722	.4564	.4754	.4942	.4959	.5026
#3	.4675	.4743	.4572	.4691	.4982	.4979	.5026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102920.**	**7269.5**	**3729.3**	**7503.7**
Stddev	515.	59.3	5.2	8.8
%RSD	.50082	.81557	.13830	.11717
#1	102340.	7203.3	3730.0	7508.8
#2	103110.	7317.7	3734.0	7508.7
#3	103320.	7287.5	3723.8	7493.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 18:09:33 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.888**	**1.906**	**1.915**	**1.949**	**1.952**	**1.872**	**1.940**	**1.939**	**.2333**
Stddev	.003	.005	.003	.001	.002	.005	.001	.000	.0006
%RSD	.1366	.2478	.1341	.0497	.0807	.2665	.0612	.0169	.2433
#1	1.889	1.911	1.918	1.950	1.951	1.875	1.939	1.939	.2331
#2	1.890	1.907	1.913	1.948	1.951	1.866	1.941	1.939	.2339
#3	1.885	1.902	1.914	1.949	1.954	1.875	1.941	1.939	.2328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.895**	**1.973**	**1.920**	**1.990**	**1.979**	**1.942**	**1.943**	**37.45**	**38.56**
Stddev	.002	.004	.004	.003	.003	.001	.001	.09	.04
%RSD	.0791	.2247	.2090	.1571	.1424	.0486	.0572	.2488	.1060
#1	1.895	1.976	1.924	1.993	1.977	1.943	1.944	37.47	38.57
#2	1.896	1.968	1.916	1.989	1.982	1.942	1.942	37.54	38.60
#3	1.893	1.974	1.921	1.987	1.977	1.941	1.943	37.35	38.52
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.45**	**39.28**	**37.74**	**37.93**	**1.973**	**1.937**	**4.933**	**1.966**	**1.877**
Stddev	.08	.24	.01	.07	.003	.001	.007	.003	.005
%RSD	.2081	.6117	.0292	.1882	.1298	.0466	.1433	.1725	.2442
#1	39.54	39.56	37.75	37.94	1.971	1.937	4.939	1.967	1.881
#2	39.40	39.13	37.74	37.99	1.971	1.937	4.925	1.962	1.877
#3	39.40	39.16	37.73	37.85	1.975	1.936	4.936	1.969	1.872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/23/2019 18:09:33 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.868**	**1.911**	**1.872**	**1.906**	**1.970**	**1.887**	**1.935**
Stddev	.002	.002	.001	.004	.000	.001	.004
%RSD	.0888	.1152	.0538	.2232	.0145	.0576	.2350
#1	1.868	1.913	1.871	1.910	1.970	1.888	1.940
#2	1.867	1.910	1.871	1.901	1.970	1.886	1.935
#3	1.870	1.909	1.873	1.907	1.970	1.886	1.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**112150.**	**7514.9**	**4069.4**	**8596.4**
Stddev	162.	9.9	10.3	12.9
%RSD	.14444	.13162	.25292	.14957
#1	112170.	7525.9	4061.1	8586.4
#2	112290.	7506.7	4080.9	8610.9
#3	111970.	7512.1	4066.1	8591.8

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/23/2019 18:14:35 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	F **-.0002**	**.0001**	**-.0001**	**.0002**	**-.0010**	**.0002**	**.0002**
Stddev	.0002	.0000	.0001	.0001	.0002	.0002	.0000	.0001
%RSD	1348.	13.31	79.21	73.58	91.37	21.69	19.44	50.83
#1	-.0001	-.0001	.0002	-.0000	.0001	-.0012	.0001	.0003
#2	-.0001	-.0002	.0000	-.0001	.0005	-.0008	.0002	.0001
#3	.0002	-.0002	.0001	-.0002	.0001	-.0010	.0002	.0002
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002						
Low Limit		-.0002						

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0003**	**.0001**	**-.0003**	**.0003**	**.0002**	**-.0011**	**.0005**
Stddev	.0004	.0003	.0002	.0003	.0011	.0008	.0003	.0007
%RSD	19.91	106.7	224.6	106.7	308.4	359.9	27.52	138.4
#1	-.0017	.0006	.0003	-.0001	.0014	-.0001	-.0011	.0003
#2	-.0017	.0004	.0000	-.0006	-.0007	-.0004	-.0008	-.0001
#3	-.0023	-.0000	-.0000	-.0001	.0003	.0011	-.0014	.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0058**	**-.0074**	**.0037**	**.0543**	**.0510**	**.0199**	**.0021**	**.0004**
Stddev	.0022	.0038	.0037	.0316	.0092	.0067	.0009	.0002
%RSD	38.33	51.67	99.66	58.23	18.09	33.86	43.54	56.70
#1	-.0082	-.0118	.0072	.0429	.0540	.0236	.0025	.0006
#2	-.0056	-.0053	-.0002	.0901	.0585	.0239	.0029	.0003
#3	-.0037	-.0051	.0042	.0300	.0407	.0121	.0011	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Inst QC: MA46568

Zoom In
Zoom Out

Sample Name: CCB Acquired: 4/23/2019 18:14:35 Type: QC
Method: SGS 3(v314) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**-.0001**	**-.0001**	**.0004**	**.0052**	**.0002**	**-.0009**	**-.0011**
Stddev	.0007	.0005	.0000	.0003	.0004	.0001	.0004	.0007
%RSD	18.65	324.4	28.01	76.35	8.571	40.56	46.71	64.33
#1	.0039	-.0004	-.0001	.0007	.0049	.0001	-.0009	-.0004
#2	.0029	-.0004	-.0001	.0005	.0057	.0002	-.0013	-.0018
#3	.0043	.0004	-.0001	.0001	.0050	.0002	-.0005	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0007**	**.0060**
Stddev	.0010	.0013
%RSD	132.5	21.08
#1	-.0006	.0060
#2	.0002	.0072
#3	-.0018	.0047
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**116950.**	**7544.6**	**4207.1**	**9553.7**
Stddev	147.	35.7	3.6	.9
%RSD	.12567	.47279	.08635	.00941
#1	117050.	7507.0	4202.9	9553.9
#2	117020.	7577.9	4208.8	9554.5
#3	116780.	7548.8	4209.5	9552.7

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Ba 455.403 { 74}	☒	3	Mg	0.000001	0.000000	No
				Al	0.000002	0.000000	No
				Zr	0.000727	0.000000	No
	Be 313.042 {108}	☒	9	V	0.000221	0.000000	No
				Mo	-0.000030	0.000000	No
				Ti	-0.000580	0.000000	No
				Mn	-0.000018	0.000000	No
				Ni	0.000001	0.000000	No
				Ca	-0.000000	0.000000	No
				Cu	0.000014	0.000000	No
				Zn	-0.000010	0.000000	No
				Fe	-0.000002	0.000000	No
	Cd 228.802 {448}	☒	13	As	0.003660	0.000000	No
				Ni	-0.001200	0.000000	No
				Fe	-0.000010	0.000000	No
				V	0.000110	0.000000	No
				Ba	0.000054	0.000000	No
				Co	-0.000709	0.000000	No
				Ca	0.000000	0.000000	No
				Mn	0.000014	0.000000	No
				Cr	0.000007	0.000000	No
				Cu	0.000024	0.000000	No
				Al	0.000000	0.000000	No
				Mo	0.000004	0.000000	No
				W	0.000000	0.000000	No
	Co 228.616 {448}	☒	9	Fe	-0.000001	0.000000	No
				Cr	-0.000046	0.000000	No
				Mo	-0.001750	0.000000	No
				Ni	0.000084	0.000000	No
				Ti	0.002220	0.000000	No
				W	0.000160	0.000000	No
				Cd	-0.000188	0.000000	No
				Ca	0.000000	0.000000	No
				As	0.000150	0.000000	No
	Cr 267.716 {126}	☒	11	Mn	0.000474	0.000000	No
				Mo	0.000033	0.000000	No
				Fe	-0.000009	0.000000	No
				Cd	-0.000050	0.000000	No
				Al	-0.000000	0.000000	No
				Ca	0.000002	0.000000	No
				Mg	0.000001	0.000000	No
				Ti	0.000050	0.000000	No
				Ba	0.000013	0.000000	No
				Cu	0.000100	0.000000	No
				Sr	-0.000100	0.000000	No
	Cu 324.754 {104}2	☒	17	Cr	0.000000	0.000000	No
				V	-0.000408	0.000000	No
				Mo	0.000572	0.000000	No
				Ti	-0.000330	0.000000	No
				Fe	-0.000127	0.000000	No
				Al	0.000000	0.000000	No
				Sn	-0.000097	0.000000	No
				Co	-0.000980	0.000000	No
				Zr	-0.000500	0.000000	No
				Si	-0.000002	0.000000	No
				Mn	-0.000072	0.000000	No
				Se	0.000050	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ag	0.000166	0.000000	No
			Sb	0.000024	0.000000	No
			Pb	0.000040	0.000000	No
			Be	-0.000031	0.000000	No
			W	0.000000	0.000000	No
Mn 257.610 {131}	☒	6	Fe	-0.000094	0.000000	No
			Si	0.000044	0.000000	No
			Ba	0.000012	0.000000	No
			Ni	0.000028	0.000000	No
			Mo	0.000000	0.000000	No
			Cr	-0.000114	0.000000	No
Ni 231.604 {446}	☒	11	Fe	0.000030	0.000000	No
			Zn	-0.000021	0.000000	No
			Be	-0.000112	0.000000	No
			Co	-0.000360	0.000000	No
			Tl	0.000209	0.000000	No
			V	-0.000032	0.000000	No
			Cu	0.000100	0.000000	No
			Cr	-0.000014	0.000000	No
			Si	-0.000030	0.000000	No
			Sn	0.000079	0.000000	No
			W	0.000830	0.000000	No
Ag 328.068 {103}	☒	15	Mn	-0.000009	0.000000	No
			Mo	-0.000154	0.000000	No
			Ti	-0.000213	0.000000	No
			Fe	-0.000305	0.000000	No
			V	-0.000662	0.000000	No
			Zn	0.000170	0.000000	No
			Ca	-0.000004	0.000000	No
			Al	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Ba	-0.000189	0.000000	No
			Cr	-0.000038	0.000000	No
			Zr	0.005170	0.000000	No
			Sn	-0.000100	0.000000	No
			W	0.000000	0.000000	No
			K	-0.000080	0.000000	No
V 292.402 {115}	☒	7	Ti	0.000776	0.000000	No
			Mo	-0.013400	0.000000	No
			Fe	0.000010	0.000000	No
			Sr	0.000000	0.000000	No
			Cr	-0.002590	0.000000	No
			Mn	-0.002844	0.000000	No
			W	0.000050	0.000000	No
Zn 206.200 {464}	☒	15	Cr	-0.000874	0.000000	No
			Mo	-0.000228	0.000000	No
			Fe	0.000010	0.000000	No
			Al	0.000000	0.000000	No
			Si	0.000065	0.000000	No
			Ba	-0.000060	0.000000	No
			Ca	0.000004	0.000000	No
			Sr	0.000017	0.000000	No
			Sn	0.000069	0.000000	No
			Cu	0.000056	0.000000	No
			As	-0.000050	0.000000	No
			Be	0.000071	0.000000	No
			Bi	-0.000400	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			W	0.000000	0.000000	No
			Ti	0.000030	0.000000	No
As 189.042 {478}	☒	23	Al	-0.000001	0.000000	No
			Fe	-0.000038	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	-0.000010	0.000000	No
			Mo	0.002364	0.000000	No
			Cr	0.000590	0.000000	No
			V	0.000052	0.000000	No
			Co	-0.000029	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000123	0.000000	No
			Cd	-0.000194	0.000000	No
			Tl	0.000385	0.000000	No
			Be	-0.000017	0.000000	No
			Mg	0.000002	0.000000	No
			Si	0.000007	0.000000	No
			Zn	0.000070	0.000000	No
			Sr	-0.000080	0.000000	No
			Zr	0.000074	0.000000	No
			Ti	0.000009	0.000000	No
			Cu	0.000077	0.000000	No
			K	0.000000	0.000000	No
			B	-0.000030	0.000000	No
			S	0.000005	0.000000	No
Tl 190.856 {477}	☒	24	Cr	0.000289	0.000000	No
			Mo	-0.002500	0.000000	No
			Al	-0.000004	0.000000	No
			Fe	-0.000052	0.000000	No
			V	-0.017200	0.000000	No
			Mn	0.001620	0.000000	No
			Si	-0.000016	0.000000	No
			Ca	-0.000003	0.000000	No
			Ti	-0.003000	0.000000	No
			Mg	-0.000000	0.000000	No
			Co	0.004840	0.000000	No
			Sr	-0.000222	0.000000	No
			B	0.000120	0.000000	No
			Ba	0.000110	0.000000	No
			Zn	0.000025	0.000000	No
			As	0.000015	0.000000	No
			Ni	0.000051	0.000000	No
			Cu	-0.000032	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000080	0.000000	No
			Se	0.000040	0.000000	No
			S	0.000010	0.000000	No
			K	0.000000	0.000000	No
			P	0.000000	0.000000	No
Pb 220.353 {453}	☒	23	Al	-0.000096	0.000000	No
			Fe	0.000025	0.000000	No
			Ca	-0.000007	0.000000	No
			Mn	0.000145	0.000000	No
			Zn	-0.000036	0.000000	No
			Mo	-0.001970	0.000000	No
			Cu	0.000410	0.000000	No
			V	0.000013	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Co	0.000116	0.000000	No
				Ti	0.000060	0.000000	No
				Si	0.000116	0.000000	No
				Ba	-0.000012	0.000000	No
				Sb	0.000006	0.000000	No
				Sr	-0.000050	0.000000	No
				W	0.000000	0.000000	No
				Mg	0.000007	0.000000	No
				Cd	0.000476	0.000000	No
				Zr	-0.000300	0.000000	No
				Ni	0.000320	0.000000	No
				S	-0.000010	0.000000	No
				Se	0.000036	0.000000	No
				As	0.000200	0.000000	No
				Cr	-0.000150	0.000000	No
	Se 196.090 {472}	☒	22	Al	0.000001	0.000000	No
				Ca	0.000001	0.000000	No
				Mn	0.000651	0.000000	No
				Mo	0.000277	0.000000	No
				Fe	-0.000149	0.000000	No
				Co	-0.000729	0.000000	No
				V	0.000207	0.000000	No
				Sr	-0.000008	0.000000	No
				Cu	-0.000113	0.000000	No
				W	0.000000	0.000000	No
				Si	0.000157	0.000000	No
				Tl	0.000180	0.000000	No
				Be	-0.000143	0.000000	No
				Zn	-0.000250	0.000000	No
				B	-0.000141	0.000000	No
				Ti	0.000016	0.000000	No
				Cd	0.000090	0.000000	No
				Zr	-0.000280	0.000000	No
				Ba	0.000180	0.000000	No
				Mg	-0.000002	0.000000	No
				Cr	-0.000039	0.000000	No
				S	-0.000012	0.000000	No
	Sb 206.833 {463}	☒	15	Fe	0.000023	0.000000	No
				Al	-0.000011	0.000000	No
				Ca	-0.000006	0.000000	No
				Ni	-0.001077	0.000000	No
				Cr	0.020270	0.000000	No
				V	-0.001909	0.000000	No
				Zn	-0.000200	0.000000	No
				Mo	-0.005630	0.000000	No
				Ti	0.001000	0.000000	No
				Sn	-0.015200	0.000000	No
				Mg	0.000004	0.000000	No
				Zr	-0.000627	0.000000	No
				Sr	0.000209	0.000000	No
				W	0.000000	0.000000	No
				Si	0.000000	0.000000	No
	Al 396.152 { 85}	☒	5	Si	0.000913	0.000000	No
				Ca	0.000078	0.000000	No
				Mo	0.046534	0.000000	No
				Zr	-0.006000	0.000000	No
				Ti	-0.000017	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Ca 317.933 {106}	☒	13	Fe	0.000130	0.000000	No
				W	0.003960	0.000000	No
				Tl	0.004950	0.000000	No
				Be	0.001840	0.000000	No
				Ba	0.003500	0.000000	No
				Cu	-0.001800	0.000000	No
				Cd	0.003700	0.000000	No
				Ni	0.001513	0.000000	No
				B	-0.000210	0.000000	No
				Se	0.002000	0.000000	No
				Co	0.000540	0.000000	No
				Cr	0.000640	0.000000	No
				Al	0.000026	0.000000	No
	Fe 259.940 {130}	☒	13	Co	0.000004	0.000000	No
				Si	-0.000100	0.000000	No
				Tl	-0.002590	0.000000	No
				Se	-0.000050	0.000000	No
				Cr	-0.000566	0.000000	No
				Mn	-0.001433	0.000000	No
				V	-0.000064	0.000000	No
				Cu	0.000953	0.000000	No
				K	-0.000200	0.000000	No
				Zn	0.000046	0.000000	No
				Ti	-0.000631	0.000000	No
				Ca	0.000020	0.000000	No
				Ba	0.001000	0.000000	No
	Mg 279.079 {121}	☒	1	Mo	-0.020780	0.000000	No
	K 766.490 { 44}	☒	11	Fe	-0.000340	0.000000	No
				Al	0.000301	0.000000	No
				Ca	0.000448	0.000000	No
				Mn	0.001430	0.000000	No
				Si	-0.003000	0.000000	No
				V	-0.002000	0.000000	No
				Sn	-0.004700	0.000000	No
				Na	0.000300	0.000000	No
				Mo	-0.000850	0.000000	No
				Cu	-0.010000	0.000000	No
				Mg	0.000400	0.000000	No
	Na 589.592 { 57}	☒	5	K	0.000038	0.000000	No
				Ba	0.000900	0.000000	No
				Ca	0.000055	0.000000	No
				Al	0.000040	0.000000	No
				V	-0.005000	0.000000	No
	B 208.959 {462}	☒	1	Mo	0.037210	0.000000	No
	Mo 202.030 {467}	☒	5	Fe	-0.000010	0.000000	No
				Mg	-0.000001	0.000000	No
				Ca	0.000003	0.000000	No
				W	0.000000	0.000000	No
				V	-0.000230	0.000000	No
	Si 212.412 {459}	☒	14	Sr	0.000366	0.000000	No
				Ni	0.000106	0.000000	No
				Mo	0.028950	0.000000	No
				Ti	0.006320	0.000000	No
				Al	0.000012	0.000000	No
				Cd	0.001043	0.000000	No
				Ba	0.000170	0.000000	No
				Fe	0.000040	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Sn	0.002213	0.000000	No
			Zn	0.000385	0.000000	No
			As	-0.000560	0.000000	No
			Pb	0.000471	0.000000	No
			V	0.006165	0.000000	No
			W	-0.025000	0.000000	No
Sn 189.989 {478}	☒	6	Ti	-0.000621	0.000000	No
			Mo	0.000011	0.000000	No
			Fe	0.000005	0.000000	No
			Mn	0.000060	0.000000	No
			Si	0.000089	0.000000	No
			W	-0.010000	0.000000	No
Sr 407.771 { 83}	☒	2	Fe	0.000002	0.000000	No
			Ca	0.000023	0.000000	No
Ti 334.904 {101}	☒	4	Cr	-0.000084	0.000000	No
			Mo	0.001569	0.000000	No
			Si	0.000035	0.000000	No
			Ca	-0.000003	0.000000	No
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
In 230.606 {446}*	☒	None				
W 207.911 {462}	☒	25	Al	0.000002	0.000000	No
			Si	-0.000900	0.000000	No
			Fe	-0.000007	0.000000	No
			As	-0.000200	0.000000	No
			Mg	0.000000	0.000000	No
			Mn	-0.000110	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.012200	0.000000	No
			Sn	0.000078	0.000000	No
			Zr	-0.020000	0.000000	No
			B	-0.001000	0.000000	No
			Sb	-0.003000	0.000000	No
			Co	0.000041	0.000000	No
			Ni	-0.000263	0.000000	No
			Be	-0.000130	0.000000	No
			Se	-0.000080	0.000000	No
			Cu	-0.000118	0.000000	No
			Ba	-0.000090	0.000000	No
			Tl	-0.000110	0.000000	No
			Ag	0.000224	0.000000	No
Zr 339.198 { 99}	☒	9	Mo	0.000323	0.000000	No
			Ti	-0.000010	0.000000	No
			Fe	-0.000060	0.000000	No
			Si	0.000070	0.000000	No
			Bi	0.000295	0.000000	No
			Cr	-0.000900	0.000000	No
			V	0.000200	0.000000	No
			W	0.019000	0.000000	No
			Sn	-0.000400	0.000000	No
S 182.034 {485}	☒	11	Ca	0.000001	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Mo	-0.000040	0.000000	No
				Al	-0.000110	0.000000	No
				Fe	-0.000023	0.000000	No
				Mn	0.003900	0.000000	No
				W	0.000000	0.000000	No
				Zn	-0.001538	0.000000	No
				Cr	-0.000200	0.000000	No
				Mg	0.000015	0.000000	No
				Ti	0.000300	0.000000	No
				Li	0.000200	0.000000	No
	Bi 223.061 {451}	☒	9	V	-0.000680	0.000000	No
				Co	-0.002200	0.000000	No
				Ca	-0.000005	0.000000	No
				Mg	-0.000002	0.000000	No
				W	0.000000	0.000000	No
				Cu	-0.001186	0.000000	No
				Fe	0.000097	0.000000	No
				Cr	0.001500	0.000000	No
				Ti	-0.004530	0.000000	No
	Li 670.784 { 50}	☒	1	Ca	0.000051	0.000000	No
	P 177.495 {490}	☒	2	Mn	-0.005600	0.000000	No
				Ca	0.000034	0.000000	No

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
	Ba 455.403 { 74}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.004399	1.816647	0.000000	1.000000
	Be 313.042 {108}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000136	1.597467	0.000000	1.000000
	Cd 228.802 {448}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000041	0.924426	0.000000	1.000000
	Co 228.616 {448}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000285	0.507409	0.000000	1.000000
	Cr 267.716 {126}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000006	0.047253	0.000000	1.000000
	Cu 324.754 {104}2	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.002360	0.179312	0.000000	1.000000
	Mn 257.610 {131}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000010	0.283555	0.000000	1.000000
	Ni 231.604 {446}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000206	0.364396	0.000000	1.000000
	Ag 328.068 {103}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000349	0.090637	0.000000	1.000000
	V 292.402 {115}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000004	0.095888	0.000000	1.000000
	Zn 206.200 {464}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000304	1.250601	0.000000	1.000000
	As 189.042 {478}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000290	0.128144	0.000000	1.000000
	Tl 190.856 {477}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000194	0.065048	0.000000	1.000000
	Pb 220.353 {453}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000004	0.175360	0.000000	1.000000
	Se 196.090 {472}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000312	0.102565	0.000000	1.000000
	Sb 206.833 {463}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000480	0.184098	0.000000	1.000000
	Al 396.152 { 85}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.001171	0.032983	0.000000	1.000000
	Ca 317.933 {106}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.004865	0.046526	0.000000	1.000000
	Fe 259.940 {130}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000082	0.015201	0.000000	1.000000
	Mg 279.079 {121}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	-0.000156	0.002456	0.000000	1.000000
	K 766.490 { 44}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.003862	0.030693	0.000000	1.000000
	Na 589.592 { 57}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000302	0.091351	0.000000	1.000000
	B 208.959 {462}	4/24/2019 9:28:32	4/23/2019 11:52:48	Linear	1/Conc	0.000162	0.219521	0.000000	1.000000
	Mo 202.030 {467}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.000035	0.925902	0.000000	1.000000
	Si 212.412 {459}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.002725	0.239482	0.000000	1.000000
	Sn 189.989 {478}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.000155	0.211114	0.000000	1.000000
	Sr 407.771 { 83}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.000766	3.487788	0.000000	1.000000
	Ti 334.904 {101}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	-0.000075	0.116099	0.000000	1.000000
	Y 360.073 { 94}*	4/24/2019 9:28:32	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 371.030 { 91}*	4/24/2019 9:28:32	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 224.306 {451}*	4/24/2019 9:28:32	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	In 230.606 {446}*	4/24/2019 9:28:32	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	W 207.911 {462}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.000805	0.466212	0.000000	1.000000
	Zr 339.198 { 99}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	-0.000135	0.301699	0.000000	1.000000
	S 182.034 {485}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	-0.001518	0.056185	0.000000	1.000000
	Bi 223.061 {451}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	-0.000567	0.221771	0.000000	1.000000
	Li 670.784 { 50}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	0.001579	0.618568	0.000000	1.000000
	P 177.495 {490}	4/24/2019 9:28:32	4/23/2019 11:52:49	Linear	1/Conc	-0.007506	0.133343	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000291	0.000971	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000122	0.000406	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000200	0.000667	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000259	0.000864	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000484	0.001613	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000374	0.001248	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000072	0.000241	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000312	0.001040	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000490	0.001635	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000357	0.001191	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000136	0.000454	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001083	0.003612	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001067	0.003556	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.000978	0.003259	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001788	0.005961	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001277	0.004256	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.014772	0.049239	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.004843	0.016142	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.006933	0.023109	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.056216	0.187387	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.036701	0.122338	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.011101	0.037003	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000686	0.002286	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000220	0.000734	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.000941	0.003138	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000631	0.002103	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000119	0.000398	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000363	0.001209	OK.	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 224.306 {451}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
W 207.911 {462}	1.000000	0.000000	0.000878	0.002926	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000185	0.000615	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.002680	0.008932	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001368	0.004560	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001802	0.006005	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.001200	0.003999	OK.	1.000000	0.000000	1	0

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/24/2019 10:32:09 Type: Cal
Method: SGS 3(v317) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0046**	**-.0003**	**.0003**	**-.0004**	**-.0000**	**.0024**	**.0000**	**-.0002**	**-.0005**
Stddev	.0002	.0001	.0002	.0001	.0000	.0001	.0000	.0001	.0000
%RSD	3.569	23.73	44.72	38.63	345.0	3.061	78.56	69.34	9.368
#1	.0048	-.0003	.0002	-.0005	.0000	.0024	.0000	-.0000	-.0005
#2	.0045	-.0002	.0005	-.0004	-.0000	.0024	.0000	-.0002	-.0005
#3	.0046	-.0003	.0004	-.0002	-.0000	.0023	.0000	-.0002	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0000**	**.0000**	**-.0004**	**-.0002**	**-.0004**	**.0001**	**-.0005**	**-.0008**	**.0046**
Stddev	.0000	.0002	.0001	.0000	.0002	.0000	.0001	.0002	.0001
%RSD	711.4	713.4	24.88	11.16	45.34	29.12	16.95	21.20	3.024
#1	.0000	-.0002	-.0004	-.0002	-.0003	.0002	-.0006	-.0010	.0047
#2	-.0000	.0001	-.0005	-.0002	-.0003	.0001	-.0005	-.0008	.0045
#3	.0000	.0002	-.0003	-.0002	-.0006	.0001	-.0004	-.0007	.0047

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**-.0000**	**.0049**	**.0020**	**.0002**	**.0001**	**.0028**	**.0001**	**.0008**
Stddev	.0001	.0000	.0005	.0007	.0001	.0002	.0004	.0000	.0002
%RSD	145.2	98.18	9.448	36.10	37.07	204.6	12.52	21.33	24.35
#1	.0000	-.0001	.0049	.0029	.0002	.0001	.0029	.0001	.0009
#2	.0000	-.0001	.0044	.0014	.0002	.0003	.0025	.0001	.0006
#3	.0002	.0000	.0053	.0018	.0001	-.0001	.0032	.0002	.0009

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0000**	**.0008**	**-.0002**	**-.0017**	**-.0011**	**.0005**	**-.0070**
Stddev	.0000	.0004	.0000	.0001	.0001	.0003	.0001
%RSD	9930.	48.38	11.21	5.253	5.595	63.42	1.428
#1	.0000	.0004	-.0002	-.0018	-.0011	.0001	-.0070
#2	-.0000	.0012	-.0002	-.0016	-.0011	.0008	-.0069
#3	.0000	.0009	-.0002	-.0018	-.0010	.0006	-.0071

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 4/24/2019 10:32:09 Type: Cal
Method: SGS 3(v317) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102720.**	**6511.5**	**3811.7**	**8817.1**
Stddev	257.	22.4	.7	10.8
%RSD	.24970	.34403	.01705	.12304
#1	102500.	6501.6	3812.4	8829.7
#2	102670.	6495.7	3811.2	8811.1
#3	103000.	6537.2	3811.4	8810.7

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/24/2019 10:37:38 Type: Cal
Method: SGS 3(v317) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.685**	**6.400**	**3.883**	**2.113**	**.2058**	**.7788**	**1.213**	**1.507**	**.0468**
Stddev	.021	.016	.008	.004	.0009	.0008	.002	.003	.0001
%RSD	.2776	.2558	.1953	.1861	.4329	.1090	.1566	.1909	.1083
#1	7.702	6.410	3.875	2.114	.2069	.7781	1.215	1.507	.0469
#2	7.691	6.409	3.890	2.117	.2054	.7797	1.212	1.509	.0468
#3	7.661	6.381	3.883	2.109	.2053	.7785	1.211	1.504	.0469

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4030**	**5.265**	**.5469**	**.2646**	**.7298**	**.4356**	**.7883**	**2.776**	**3.812**
Stddev	.0002	.019	.0009	.0012	.0019	.0004	.0021	.005	.009
%RSD	.0588	.3567	.1649	.4597	.2640	.0985	.2693	.1708	.2357
#1	.4032	5.281	.5463	.2644	.7306	.4351	.7858	2.773	3.811
#2	.4030	5.269	.5480	.2659	.7311	.4359	.7893	2.782	3.822
#3	.4027	5.244	.5466	.2635	.7276	.4357	.7897	2.773	3.804

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.370**	**.2774**	**2.656**	**7.829**	**.9677**	**3.908**	**2.582**	**.8844**	**14.51**
Stddev	.003	.0010	.004	.011	.0027	.003	.006	.0022	.04
%RSD	.2103	.3716	.1578	.1339	.2748	.0758	.2517	.2543	.3094
#1	1.369	.2775	2.657	7.832	.9647	3.905	2.575	.8841	14.55
#2	1.373	.2784	2.659	7.836	.9689	3.911	2.585	.8868	14.53
#3	1.367	.2763	2.651	7.817	.9696	3.907	2.586	.8824	14.46

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5004**	**1.930**	**1.325**	**.2391**	**.9422**	**2.692**	**.5630**
Stddev	.0011	.001	.002	.0007	.0038	.004	.0016
%RSD	.2233	.0539	.1109	.3117	.4003	.1308	.2754
#1	.5016	1.930	1.327	.2384	.9378	2.695	.5618
#2	.5002	1.932	1.326	.2399	.9442	2.691	.5648
#3	.4994	1.930	1.324	.2390	.9445	2.688	.5626

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 4/24/2019 10:37:38 Type: Cal
Method: SGS 3(v317) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**95899.**	**6437.0**	**3580.8**	**7612.5**
Stddev	220.	26.8	3.1	2.2
%RSD	.22976	.41694	.08590	.02846
#1	95649.	6443.1	3583.9	7613.5
#2	95987.	6407.6	3580.8	7610.1
#3	96063.	6460.2	3577.7	7614.1

Zoom In Zoom Out

Sample Name: CCVCONF Acquired: 4/24/2019 10:42:39 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.011**	**2.031**	**2.020**	**2.001**	**2.032**	**1.967**	**2.045**	**2.025**	**.2483**
Stddev	.004	.005	.003	.002	.001	.000	.002	.001	.0003
%RSD	.2257	.2485	.1271	.0958	.0351	.0213	.1003	.0623	.1155
#1	2.006	2.032	2.023	2.003	2.032	1.967	2.046	2.027	.2480
#2	2.015	2.036	2.019	2.000	2.032	1.967	2.046	2.025	.2485
#3	2.012	2.026	2.018	1.999	2.033	1.966	2.042	2.024	.2484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.010**	**2.041**	**1.989**	**2.078**	**2.037**	**2.008**	**2.001**	**40.16**	**40.52**
Stddev	.002	.001	.001	.001	.006	.002	.005	.10	.11
%RSD	.1081	.0491	.0235	.0427	.2899	.0793	.2489	.2587	.2669
#1	2.012	2.043	1.989	2.078	2.041	2.007	2.006	40.06	40.53
#2	2.010	2.041	1.989	2.077	2.040	2.010	2.001	40.27	40.62
#3	2.007	2.041	1.990	2.078	2.031	2.007	1.996	40.15	40.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.79**	**39.73**	**39.78**	**40.08**	**2.034**	**2.022**	**5.157**	**2.053**	**2.012**
Stddev	.06	.17	.03	.00	.003	.003	.009	.004	.003
%RSD	.1531	.4300	.0783	.0108	.1517	.1545	.1721	.1838	.1255
#1	40.77	39.70	39.76	40.07	2.033	2.024	5.167	2.057	2.010
#2	40.86	39.92	39.81	40.08	2.032	2.018	5.156	2.050	2.015
#3	40.73	39.59	39.76	40.08	2.038	2.023	5.149	2.052	2.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCVCONF Acquired: 4/24/2019 10:42:39 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.005**	**2.000**	**1.993**	**1.992**	**2.029**	**2.008**	**2.024**
Stddev	.002	.003	.001	.002	.004	.001	.003
%RSD	.0766	.1534	.0495	.1216	.2229	.0263	.1211
#1	2.007	2.000	1.994	1.994	2.034	2.008	2.027
#2	2.004	2.003	1.992	1.989	2.027	2.008	2.022
#3	2.005	1.997	1.994	1.992	2.026	2.007	2.025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**98509.**	**6512.7**	**3699.0**	**7962.3**
Stddev	256.	25.8	2.9	10.7
%RSD	.25953	.39558	.07910	.13423
#1	98214.	6496.2	3701.2	7974.4
#2	98655.	6499.5	3700.0	7958.0
#3	98658.	6542.4	3695.7	7954.3

Zoom In Zoom Out

Sample Name: CCBCONF Acquired: 4/24/2019 10:47:42 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0001**	**-.0002**	**.0000**	**.0000**	**.0003**	**.0001**	**.0001**	**.0001**
Stddev	.0003	.0000	.0000	.0000	.0002	.0003	.0000	.0003	.0003
%RSD	76.47	57.09	18.98	158.0	725.0	121.5	9.669	459.0	309.9
#1	.0005	.0000	-.0002	.0000	.0003	-.0001	.0001	.0003	-.0002
#2	.0000	.0001	-.0002	-.0000	-.0000	.0005	.0002	-.0002	.0004
#3	.0005	.0001	-.0003	.0001	-.0001	.0003	.0001	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0001**	**-.0006**	**.0007**	**.0006**	**.0018**	**.0006**	**-.0132**	**.0016**
Stddev	.0002	.0001	.0004	.0005	.0001	.0004	.0006	.0078	.0027
%RSD	62.55	77.22	75.93	67.81	18.07	24.54	98.78	59.31	166.8
#1	.0001	.0000	-.0008	.0002	.0007	.0019	.0010	-.0124	.0009
#2	.0004	.0002	-.0001	.0011	.0006	.0013	-.0001	-.0215	.0046
#3	.0003	.0002	-.0009	.0007	.0005	.0022	.0009	-.0058	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**-.0053**	**.0283**	**.0112**	**.0021**	**.0003**	**.0012**	**.0001**	**.0001**
Stddev	.0029	.0418	.0167	.0091	.0003	.0001	.0006	.0004	.0000
%RSD	56.37	794.4	59.06	80.97	12.94	27.32	51.80	527.9	42.36
#1	.0021	-.0453	.0476	.0092	.0022	.0003	.0005	.0001	.0000
#2	.0054	.0381	.0181	.0033	.0024	.0002	.0013	.0004	.0001
#3	.0078	-.0086	.0192	.0211	.0018	.0003	.0017	-.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCBCONF Acquired: 4/24/2019 10:47:42 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0017**	**.0003**	**.0019**	**-.0002**	**.0014**	**-.0010**
Stddev	.0001	.0002	.0002	.0008	.0004	.0025	.0005
%RSD	34.18	14.66	59.53	42.43	157.7	180.4	56.06
#1	-.0002	.0020	.0005	.0029	-.0002	.0019	-.0016
#2	-.0004	.0015	.0002	.0013	.0001	.0036	-.0008
#3	-.0005	.0017	.0002	.0017	-.0007	-.0013	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103850.**	**6587.1**	**3853.2**	**8908.9**
Stddev	262.	29.1	6.8	13.1
%RSD	.25266	.44237	.17589	.14679
#1	103590.	6595.5	3848.6	8897.2
#2	103850.	6554.6	3850.1	8906.3
#3	104120.	6611.0	3861.0	8923.0

Zoom In Zoom Out

Sample Name: ICVCONF Acquired: 4/24/2019 10:53:15 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.968**	**1.975**	**1.961**	**1.968**	**1.935**	F **1.893**	**1.963**	**1.954**	**.2488**
Stddev	.003	.003	.002	.002	.007	.003	.005	.003	.0003
%RSD	.1407	.1513	.0946	.0990	.3486	.1703	.2330	.1696	.1341
#1	1.965	1.972	1.961	1.970	1.929	1.897	1.958	1.957	.2489
#2	1.970	1.974	1.963	1.966	1.935	1.893	1.965	1.952	.2491
#3	1.969	1.978	1.959	1.967	1.942	1.890	1.967	1.951	.2485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value						2.000			
Range						-5.000%			

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.941**	**1.954**	**1.947**	**2.000**	**1.953**	**1.928**	**1.945**	**39.43**	**39.03**
Stddev	.005	.005	.003	.002	.004	.002	.002	.09	.09
%RSD	.2386	.2398	.1766	.0770	.2100	.0911	.1132	.2375	.2324
#1	1.936	1.959	1.943	2.001	1.953	1.926	1.947	39.46	39.13
#2	1.943	1.949	1.948	1.999	1.949	1.928	1.944	39.51	38.96
#3	1.944	1.954	1.949	1.999	1.957	1.930	1.943	39.33	39.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.79**	**38.95**	**39.17**	**39.12**	**1.988**	**1.970**	**5.166**	**1.990**	**1.959**
Stddev	.03	.23	.09	.01	.002	.001	.005	.002	.003
%RSD	.0671	.6008	.2414	.0298	.1024	.0560	.0925	.0913	.1547
#1	39.78	39.21	39.24	39.11	1.986	1.971	5.165	1.992	1.955
#2	39.76	38.75	39.20	39.13	1.990	1.970	5.171	1.989	1.961
#3	39.82	38.91	39.06	39.12	1.988	1.969	5.161	1.989	1.960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICVCONF Acquired: 4/24/2019 10:53:15 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.962**	**1.935**	**1.935**	**1.972**	**1.951**	**1.976**	**1.973**
Stddev	.002	.001	.002	.004	.005	.002	.002
%RSD	.1034	.0583	.0945	.1787	.2764	.1181	.0753
#1	1.960	1.936	1.936	1.976	1.946	1.973	1.975
#2	1.961	1.935	1.934	1.970	1.957	1.978	1.972
#3	1.964	1.934	1.937	1.970	1.950	1.977	1.972
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**99472.**	**6532.8**	**3708.4**	**8001.8**
Stddev	322.	32.1	1.7	7.1
%RSD	.32333	.49168	.04539	.08894
#1	99812.	6495.7	3708.4	7999.2
#2	99431.	6553.2	3710.0	8009.9
#3	99173.	6549.3	3706.7	7996.4

Zoom In Zoom Out

Sample Name: ICBCONF Acquired: 4/24/2019 10:58:18 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0002**	**-.0001**	**.0003**	**.0003**	**.0000**	**-.0001**	**-.0000**
Stddev	.0003	.0000	.0001	.0002	.0003	.0004	.0000	.0004	.0003
%RSD	530.0	32.77	34.21	284.9	131.4	127.2	83.52	331.7	753.6
#1	.0002	.0001	-.0002	-.0002	.0002	.0003	.0000	-.0005	-.0004
#2	-.0003	.0001	-.0002	.0000	-.0001	-.0001	.0001	.0002	.0001
#3	.0003	.0001	-.0001	.0000	.0006	.0007	.0001	-.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0002**	**.0009**	**.0005**	**.0017**	**-.0003**	**-.0117**	**-.0004**
Stddev	.0001	.0001	.0004	.0002	.0004	.0007	.0004	.0131	.0051
%RSD	105.1	84.13	157.0	17.05	80.86	42.15	121.1	111.8	1203.
#1	.0002	.0000	.0001	.0009	.0009	.0009	-.0006	-.0051	-.0034
#2	.0001	.0002	-.0000	.0011	.0000	.0017	-.0004	-.0033	-.0033
#3	-.0000	.0001	.0007	.0008	.0007	.0023	.0001	-.0268	.0054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0054**	**-.0342**	**.0398**	**.0073**	**.0024**	**.0002**	**.0009**	**-.0003**	**-.0000**
Stddev	.0086	.0273	.0113	.0068	.0006	.0002	.0009	.0001	.0001
%RSD	158.2	79.94	28.39	93.52	25.90	75.07	101.3	53.65	265.0
#1	-.0018	-.0417	.0481	.0116	.0027	.0002	.0009	-.0001	-.0001
#2	.0031	-.0039	.0444	.0109	.0029	.0000	.0018	-.0003	.0001
#3	.0149	-.0569	.0270	-.0006	.0017	.0003	-.0000	-.0003	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICBCONF Acquired: 4/24/2019 10:58:18 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0029**	**.0003**	**.0031**	**.0012**	**.0014**	**-.0007**
Stddev	.0001	.0004	.0001	.0022	.0013	.0006	.0003
%RSD	37.73	11.95	41.93	72.01	110.7	43.93	43.58
#1	-.0003	.0031	.0004	.0055	-.0002	.0020	-.0008
#2	-.0005	.0032	.0003	.0012	.0013	.0013	-.0009
#3	-.0003	.0026	.0002	.0025	.0025	.0008	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103340.**	**6628.2**	**3854.7**	**8907.1**
Stddev	1148.	32.8	1.9	7.9
%RSD	1.1108	.49499	.04844	.08866
#1	103710.	6666.1	3854.2	8900.2
#2	104260.	6609.7	3853.0	8905.3
#3	102050.	6608.8	3856.7	8915.7

Zoom In Zoom Out

Sample Name: ICV 1 Acquired: 4/24/2019 11:04:40 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.003**	**2.018**	**2.003**	**1.982**	**1.986**	**1.941**	**2.011**	**2.009**	**.2456**
Stddev	.008	.007	.003	.003	.002	.002	.004	.004	.0010
%RSD	.4029	.3492	.1434	.1506	.0754	.0956	.1836	.1724	.4091
#1	2.003	2.019	2.004	1.984	1.987	1.939	2.014	2.011	.2458
#2	2.011	2.025	2.005	1.982	1.984	1.943	2.007	2.010	.2445
#3	1.995	2.011	2.000	1.978	1.986	1.941	2.012	2.005	.2465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.981**	**2.015**	**1.970**	**2.060**	**2.015**	**1.994**	**1.987**	**39.77**	**40.02**
Stddev	.004	.004	.003	.002	.004	.004	.002	.05	.09
%RSD	.2266	.1959	.1306	.1040	.2157	.1831	.0836	.1344	.2203
#1	1.983	2.019	1.970	2.059	2.017	1.996	1.989	39.81	40.09
#2	1.976	2.016	1.967	2.062	2.019	1.996	1.987	39.80	40.05
#3	1.984	2.011	1.972	2.058	2.010	1.990	1.985	39.71	39.92
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.47**	**39.61**	**39.42**	**39.79**	**2.022**	**2.006**	**5.111**	**2.030**	**2.003**
Stddev	.10	.10	.15	.08	.002	.003	.006	.002	.006
%RSD	.2482	.2468	.3721	.2114	.1005	.1627	.1256	.1202	.3043
#1	40.48	39.55	39.34	39.80	2.024	2.010	5.115	2.033	2.004
#2	40.57	39.73	39.59	39.86	2.021	2.005	5.114	2.029	2.009
#3	40.37	39.57	39.33	39.70	2.020	2.004	5.104	2.028	1.997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV 1 Acquired: 4/24/2019 11:04:40 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.976**	**1.985**	**1.965**	**1.981**	**2.012**	**1.990**	**2.003**
Stddev	.002	.003	.001	.003	.002	.006	.001
%RSD	.1232	.1655	.0349	.1539	.1121	.3216	.0410
#1	1.977	1.988	1.965	1.980	2.015	1.994	2.002
#2	1.973	1.985	1.966	1.984	2.012	1.994	2.003
#3	1.977	1.981	1.966	1.979	2.010	1.983	2.003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**100230.**	**6574.0**	**3721.7**	**8014.9**
Stddev	289.	19.1	5.2	6.9
%RSD	.28795	.29032	.13900	.08628
#1	99955.	6585.0	3716.1	8007.0
#2	100530.	6585.1	3722.7	8018.4
#3	100200.	6552.0	3726.3	8019.5

Zoom In Zoom Out

Sample Name: ICB 7 Acquired: 4/24/2019 11:09:42 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**-.0001**	**.0002**	**-.0003**	**.0003**	**.0002**	**.0002**	**.0001**
Stddev	.0001	.0001	.0001	.0001	.0003	.0001	.0000	.0004	.0004
%RSD	27.24	78.55	67.14	51.77	85.59	35.43	19.42	207.8	380.8
#1	.0004	.0000	-.0000	.0002	-.0006	.0002	.0002	.0001	-.0003
#2	.0003	.0001	-.0002	.0003	-.0002	.0004	.0002	.0005	.0005
#3	.0005	.0000	-.0001	.0001	-.0001	.0002	.0002	-.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0002**	**-.0002**	**.0005**	**.0008**	**.0010**	**.0003**	**-.0185**	**.0022**
Stddev	.0001	.0000	.0009	.0012	.0003	.0010	.0007	.0063	.0022
%RSD	67.60	16.06	397.1	242.0	44.00	106.0	224.0	33.84	102.4
#1	.0004	.0002	.0001	-.0006	.0007	-.0000	.0002	-.0187	.0026
#2	.0002	.0002	.0005	.0003	.0004	.0009	-.0003	-.0248	-.0002
#3	.0001	.0002	-.0013	.0018	.0011	.0020	.0011	-.0122	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**-.0083**	**.0304**	**.0079**	**.0021**	**.0001**	**.0014**	**.0002**	**.0001**
Stddev	.0089	.0464	.0207	.0086	.0011	.0001	.0001	.0001	.0000
%RSD	623.0	558.0	68.10	108.7	53.42	108.8	8.881	61.25	26.50
#1	.0111	.0402	.0500	.0169	.0031	.0003	.0013	.0001	.0001
#2	-.0005	-.0522	.0324	.0070	.0024	.0000	.0015	.0003	.0001
#3	-.0063	-.0129	.0088	-.0002	.0009	.0000	.0014	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB 7 Acquired: 4/24/2019 11:09:42 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0018**	**.0005**	**.0035**	**.0003**	**.0008**	**-.0003**
Stddev	.0002	.0005	.0002	.0011	.0007	.0005	.0004
%RSD	107.5	27.23	48.81	30.28	217.5	71.49	148.6
#1	-.0001	.0023	.0007	.0047	-.0003	.0004	-.0008
#2	-.0000	.0013	.0002	.0032	.0011	.0014	.0001
#3	-.0004	.0018	.0006	.0027	.0002	.0005	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**104870.**	**6611.8**	**3881.2**	**8980.2**
Stddev	58.	49.6	2.4	7.5
%RSD	.05548	.74990	.06308	.08376
#1	104940.	6558.9	3883.9	8988.9
#2	104820.	6619.3	3879.1	8976.2
#3	104850.	6657.3	3880.5	8975.5

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/24/2019 11:17:04 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.990**	**2.004**	**1.990**	**1.969**	**1.976**	**1.933**	**2.003**	**1.994**	**.2447**
Stddev	.005	.004	.002	.001	.006	.004	.004	.001	.0005
%RSD	.2537	.1976	.1155	.0467	.3018	.2080	.1975	.0705	.2161
#1	1.996	2.010	1.990	1.968	1.976	1.932	2.004	1.994	.2448
#2	1.985	2.000	1.989	1.968	1.979	1.932	2.006	1.993	.2442
#3	1.993	2.004	1.989	1.970	1.981	1.939	2.005	1.996	.2454
#4	1.987	2.002	1.994	1.969	1.968	1.930	1.997	1.993	.2444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.973**	**2.001**	**1.962**	**2.044**	**1.998**	**1.982**	**1.978**	**39.45**	**39.72**
Stddev	.003	.002	.001	.004	.001	.003	.002	.10	.08
%RSD	.1461	.1065	.0701	.1803	.0695	.1439	.1209	.2473	.2026
#1	1.973	2.004	1.962	2.047	1.998	1.980	1.979	39.48	39.74
#2	1.974	2.001	1.961	2.039	1.998	1.980	1.979	39.52	39.79
#3	1.975	1.999	1.962	2.044	1.999	1.981	1.979	39.50	39.75
#4	1.969	2.000	1.964	2.045	1.996	1.986	1.974	39.30	39.60
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/24/2019 11:17:04 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.18**	**39.34**	**39.20**	**39.57**	**2.014**	**1.993**	**5.083**	**2.018**	**1.990**
Stddev	.04	.21	.08	.11	.002	.003	.001	.005	.005
%RSD	.0969	.5404	.1927	.2730	.1213	.1281	.0091	.2469	.2436
#1	40.21	39.30	39.27	39.67	2.014	1.996	5.083	2.025	1.995
#2	40.20	39.57	39.17	39.53	2.010	1.990	5.083	2.013	1.985
#3	40.18	39.44	39.25	39.64	2.016	1.994	5.084	2.018	1.994
#4	40.12	39.07	39.11	39.43	2.015	1.993	5.083	2.016	1.987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.965**	**1.969**	**1.957**	**1.970**	**2.002**	**1.980**	**1.991**
Stddev	.003	.002	.003	.005	.002	.007	.002
%RSD	.1331	.1075	.1275	.2479	.0748	.3320	.1036
#1	1.964	1.970	1.958	1.974	2.002	1.986	1.993
#2	1.967	1.967	1.957	1.964	2.001	1.974	1.991
#3	1.967	1.971	1.960	1.968	2.003	1.985	1.989
#4	1.962	1.966	1.954	1.974	2.000	1.974	1.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Zoom In Zoom Out

Sample Name: ICCV 1 Acquired: 4/24/2019 11:17:04 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**100570.**	**6592.4**	**3738.8**	**8054.1**
Stddev	266.	8.2	3.0	4.1
%RSD	.26499	.12421	.08076	.05097
#1	100470.	6598.7	3740.1	8056.3
#2	100470.	6582.7	3741.5	8058.7
#3	100370.	6599.6	3739.2	8051.7
#4	100960.	6588.5	3734.5	8049.7

Zoom In Zoom Out

Sample Name: CCB 7 Acquired: 4/24/2019 11:29:03 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0000**	**.0000**	**-.0000**	**.0001**	**.0001**	**-.0001**	**.0001**
Stddev	.0004	.0001	.0001	.0001	.0004	.0002	.0000	.0002	.0002
%RSD	255.3	305.7	226.0	1358.	903.0	156.5	30.18	332.8	240.2
#1	.0004	.0000	.0000	-.0000	-.0005	.0002	.0001	.0002	-.0000
#2	.0003	-.0001	.0000	-.0000	-.0000	-.0001	.0001	-.0002	.0004
#3	-.0003	.0001	-.0002	.0001	.0004	.0002	.0001	-.0002	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0001**	**-.0004**	**.0005**	**.0004**	**.0010**	**-.0002**	**-.0144**	**-.0000**
Stddev	.0001	.0001	.0003	.0006	.0003	.0014	.0005	.0068	.0021
%RSD	31.86	102.9	76.81	129.4	91.17	132.7	249.3	47.46	5453.
#1	.0002	.0001	-.0001	.0000	.0001	.0023	.0003	-.0199	-.0014
#2	.0002	.0000	-.0006	.0002	.0007	-.0004	-.0003	-.0067	.0024
#3	.0004	.0002	-.0003	.0012	.0003	.0013	-.0006	-.0165	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**-.0102**	**.0035**	**.0039**	**.0019**	**.0000**	**.0008**	**-.0002**	**-.0001**
Stddev	.0041	.0298	.0131	.0015	.0004	.0000	.0008	.0003	.0000
%RSD	146.3	291.9	370.6	39.34	22.99	3932.	101.4	173.4	28.00
#1	-.0019	-.0295	-.0038	.0055	.0018	-.0000	-.0000	-.0005	-.0002
#2	.0056	.0241	-.0043	.0038	.0015	-.0000	.0008	.0002	-.0001
#3	.0046	-.0253	.0186	.0024	.0024	.0001	.0017	-.0002	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB 7 Acquired: 4/24/2019 11:29:03 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0016**	**.0001**	**.0027**	**.0014**	**.0002**	**-.0020**
Stddev	.0002	.0010	.0002	.0015	.0009	.0016	.0009
%RSD	73.13	65.23	202.3	53.60	64.98	990.7	47.90
#1	-.0001	.0013	.0002	.0030	.0025	-.0010	-.0020
#2	-.0005	.0008	.0002	.0040	.0010	-.0005	-.0029
#3	-.0002	.0028	-.0001	.0012	.0007	.0020	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105800.**	**6706.7**	**3862.5**	**8937.8**
Stddev	374.	36.6	76.0	159.5
%RSD	.35325	.54536	1.9667	1.7841
#1	105380.	6664.5	3904.3	9028.3
#2	105940.	6729.5	3908.4	9031.5
#3	106080.	6726.1	3774.8	8753.7

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/24/2019 11:33:37 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2057**	**.0020**	**.0029**	**.0485**	**.0102**	**.0096**	**.0158**	**.0097**	**.0054**
Stddev	.0005	.0001	.0002	.0003	.0002	.0004	.0000	.0002	.0002
%RSD	.2204	2.998	6.507	.7210	2.056	4.230	.3010	1.554	3.740
#1	.2053	.0020	.0031	.0481	.0100	.0097	.0157	.0098	.0052
#2	.2062	.0021	.0028	.0486	.0101	.0091	.0158	.0099	.0055
#3	.2055	.0020	.0027	.0488	.0104	.0099	.0158	.0096	.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0507**	**.0212**	**.0076**	**.0091**	**.0031**	**.0116**	**.0061**	**.2049**	**5.255**
Stddev	.0001	.0000	.0011	.0002	.0004	.0007	.0016	.0046	.010
%RSD	.2208	.0289	14.94	2.211	12.74	6.021	25.69	2.230	.1909
#1	.0506	.0212	.0085	.0093	.0032	.0119	.0049	.2065	5.266
#2	.0508	.0212	.0063	.0092	.0033	.0108	.0055	.2085	5.251
#3	.0507	.0212	.0079	.0089	.0026	.0120	.0079	.1998	5.247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1106**	**5.219**	**5.126**	**5.181**	**.1020**	**.0212**	**.2128**	**.0112**	**.0102**
Stddev	.0026	.030	.033	.011	.0003	.0001	.0008	.0004	.0001
%RSD	2.380	.5842	.6345	.2048	.2783	.6268	.3656	3.926	.7125
#1	.1082	5.212	5.154	5.187	.1022	.0213	.2120	.0112	.0101
#2	.1134	5.192	5.133	5.188	.1022	.0211	.2136	.0117	.0103
#3	.1102	5.252	5.090	5.169	.1017	.0213	.2129	.0108	.0102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/24/2019 11:33:37 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0095**	**.0522**	**.0099**	**.0498**	**.0218**	**.0554**	**.0482**
Stddev	.0004	.0007	.0002	.0029	.0012	.0011	.0005
%RSD	4.319	1.424	2.020	5.923	5.619	1.919	1.077
#1	.0093	.0525	.0100	.0496	.0223	.0566	.0487
#2	.0093	.0513	.0100	.0469	.0205	.0551	.0481
#3	.0100	.0527	.0097	.0528	.0228	.0545	.0477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103060.**	**6549.7**	**3803.9**	**8667.6**
Stddev	380.	18.9	1.8	6.7
%RSD	.36865	.28922	.04671	.07787
#1	102670.	6528.3	3805.9	8662.4
#2	103090.	6556.5	3803.2	8665.2
#3	103430.	6564.3	3802.5	8675.2

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 11:39:05 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**.0011**	**.0011**	**.0032**	**.0022**	F **.0001**	**.0035**	**.0043**
Stddev	.0001	.0000	.0002	.0002	.0003	.0000	.0000	.0002
%RSD	2.560	3.824	13.52	6.337	12.16	38.84	.3941	4.101
#1	.0045	.0011	.0010	.0030	.0019	.0001	.0035	.0044
#2	.0046	.0010	.0012	.0033	.0024	.0001	.0035	.0045
#3	.0044	.0011	.0012	.0034	.0024	.0001	.0035	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0006**	**.0025**	**.0119**	**.0033**	F **.0028**	F **.0003**	F **.0069**	F **-.0007**
Stddev	.0002	.0002	.0001	.0012	.0013	.0007	.0006	.0008
%RSD	33.18	9.465	.4470	35.27	48.22	213.3	8.432	112.0
#1	.0007	.0027	.0119	.0038	.0039	.0007	.0063	-.0010
#2	.0007	.0022	.0119	.0041	.0013	-.0005	.0072	-.0014
#3	.0004	.0025	.0118	.0020	.0031	.0007	.0073	.0002
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0020				.0020	.0025	.0050	.0030
Range	-30.00%				20.00%	-30.00%	30.00%	-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1033**	**1.151**	**.0059**	**.1081**	**2.230**	**1.127**	F **.0012**	**-.0000**
Stddev	.0119	.005	.0041	.0349	.033	.009	.0005	.0002
%RSD	11.56	.4003	69.15	32.25	1.491	.8109	37.85	415.7
#1	.0982	1.148	.0077	.1100	2.210	1.127	.0016	.0001
#2	.1170	1.157	.0012	.1421	2.268	1.136	.0014	-.0003
#3	.0948	1.149	.0087	.0724	2.212	1.118	.0007	.0000
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None
Value							.0100	
Range							-30.00%	

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 11:39:05 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**.0002**	**-.0001**	**-.0003**	F **.0001**	F **.0002**	**.0029**	F **.0006**
Stddev	.0003	.0003	.0001	.0003	.0003	.0001	.0001	.0004
%RSD	6.881	134.1	136.8	90.55	443.9	62.93	4.584	65.10
#1	.0041	.0001	-.0001	-.0003	-.0003	.0002	.0029	.0011
#2	.0046	.0005	.0000	-.0006	.0004	.0001	.0028	.0005
#3	.0046	-.0000	-.0001	-.0000	.0001	.0004	.0030	.0003
Check ?	None	None	None	None	Chk Fail	Chk Fail	Chk Pass	Chk Fail
Value					.0040	.0040		.0040
Range					-30.00%	-30.00%		-30.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **.0007**	F **-.0015**
Stddev	.0017	.0006
%RSD	263.5	40.07
#1	.0003	-.0022
#2	.0025	-.0013
#3	-.0008	-.0011
Check ?	Chk Fail	Chk Fail
Value	.0040	.0040
Range	-30.00%	-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105970.**	**6692.3**	**3908.6**	**8996.0**
Stddev	32.	78.1	4.4	7.2
%RSD	.03028	1.1669	.11322	.08013
#1	105940.	6765.2	3904.8	8989.7
#2	105970.	6609.9	3907.5	8994.3
#3	106000.	6701.8	3913.4	9003.9

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/24/2019 11:44:36 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0005**	**-.0003**	**-.0009**	**.0007**	**.0026**	**.0011**	**.0003**	**.0001**
Stddev	.0001	.0002	.0003	.0003	.0004	.0001	.0001	.0007	.0004
%RSD	21.85	34.16	77.39	30.20	53.95	4.530	8.991	233.2	377.4
#1	-.0003	.0006	-.0004	-.0009	.0011	.0026	.0012	.0003	.0006
#2	-.0004	.0005	-.0000	-.0006	.0006	.0027	.0012	-.0004	-.0000
#3	-.0004	.0003	-.0005	-.0011	.0004	.0024	.0010	.0010	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**-.0009**	**.0024**	**-.0035**	**-.0000**	**.0009**	**-.0009**	**504.8**	**370.4**
Stddev	.0001	.0002	.0024	.0016	.0007	.0020	.0026	1.1	.9
%RSD	6.393	25.69	103.4	44.41	1615.	224.4	273.2	.2106	.2347
#1	.0020	-.0007	.0046	-.0018	.0008	.0028	-.0004	505.7	370.9
#2	.0021	-.0012	-.0002	-.0048	-.0003	.0010	.0013	505.1	370.9
#3	.0023	-.0010	.0027	-.0041	-.0006	-.0011	-.0037	503.6	369.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**182.1**	**479.6**	**-.3695**	**.0311**	**-.0023**	**-.0015**	**-.0139**	**-.0014**	**-.0029**
Stddev	.6	1.7	.0285	.0028	.0012	.0003	.0010	.0002	.0001
%RSD	.3170	.3448	7.726	9.164	53.17	21.66	7.420	14.26	4.332
#1	182.6	480.9	-.3541	.0338	-.0026	-.0013	-.0140	-.0016	-.0030
#2	182.3	480.0	-.4024	.0314	-.0010	-.0013	-.0129	-.0013	-.0029
#3	181.5	477.7	-.3520	.0281	-.0034	-.0018	-.0150	-.0013	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/24/2019 11:44:36 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0052**	**-.0020**	**-.0225**	**.0071**	**-.0116**	**-.0012**
Stddev	.0003	.0016	.0001	.0027	.0022	.0017	.0010
%RSD	30.76	29.77	6.629	11.87	31.16	14.20	82.49
#1	-.0007	.0058	-.0019	-.0238	.0083	-.0103	-.0016
#2	-.0012	.0035	-.0021	-.0194	.0083	-.0135	-.0001
#3	-.0008	.0065	-.0020	-.0243	.0045	-.0112	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**93745.**	**6443.9**	**3485.7**	**7133.3**
Stddev	49.	13.3	2.6	1.5
%RSD	.05202	.20654	.07427	.02075
#1	93761.	6457.2	3484.3	7131.9
#2	93690.	6430.6	3484.2	7134.8
#3	93783.	6443.9	3488.7	7133.1

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/24/2019 11:49:59 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4925**	**.4806**	**.9886**	**.4704**	**.4645**	**.4895**	**.4807**	**.9487**	**1.070**
Stddev	.0008	.0010	.0017	.0004	.0017	.0002	.0008	.0014	.001
%RSD	.1695	.1999	.1738	.0883	.3593	.0443	.1611	.1460	.0552
#1	.4921	.4795	.9890	.4700	.4636	.4898	.4814	.9488	1.070
#2	.4934	.4809	.9901	.4704	.4664	.4894	.4799	.9500	1.070
#3	.4919	.4813	.9868	.4709	.4634	.4894	.4807	.9473	1.069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4770**	**.9111**	**1.025**	**.9333**	**.9338**	**1.015**	**1.039**	**500.8**	**368.8**
Stddev	.0014	.0016	.001	.0040	.0014	.003	.003	.8	1.1
%RSD	.2901	.1810	.1083	.4256	.1530	.3073	.3173	.1568	.2870
#1	.4782	.9117	1.023	.9376	.9323	1.012	1.038	500.1	367.6
#2	.4755	.9123	1.025	.9298	.9352	1.018	1.043	501.7	369.5
#3	.4774	.9092	1.025	.9326	.9338	1.015	1.037	500.8	369.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**187.7**	**485.0**	**-.3897**	**.0387**	**.4606**	**.4667**	**.4933**	**.4543**	**.4913**
Stddev	.6	1.8	.0069	.0040	.0008	.0003	.0018	.0020	.0007
%RSD	.3216	.3789	1.762	10.28	.1688	.0744	.3727	.4503	.1484
#1	187.0	482.9	-.3850	.0356	.4600	.4666	.4955	.4552	.4908
#2	188.1	485.7	-.3864	.0432	.4614	.4671	.4923	.4558	.4922
#3	188.0	486.4	-.3976	.0372	.4602	.4664	.4922	.4520	.4910
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/24/2019 11:49:59 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4829**	**.4683**	**.4682**	**.4697**	**.4986**	**.5088**	**.4960**
Stddev	.0006	.0005	.0006	.0024	.0007	.0022	.0022
%RSD	.1241	.1052	.1206	.5049	.1442	.4413	.4499
#1	.4836	.4686	.4686	.4711	.4994	.5093	.4982
#2	.4827	.4684	.4676	.4709	.4983	.5108	.4937
#3	.4825	.4677	.4685	.4669	.4981	.5064	.4961
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**93481.**	**6464.0**	**3471.6**	**7124.4**
Stddev	276.	44.3	3.5	4.4
%RSD	.29550	.68588	.10182	.06140
#1	93440.	6514.8	3471.2	7129.4
#2	93776.	6444.4	3468.3	7121.5
#3	93228.	6433.0	3475.3	7122.3

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/24/2019 11:54:59 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.863**	**7.921**	**7.562**	**7.668**	**7.918**	**7.858**	**7.737**	**7.642**	**.6411**
Stddev	.007	.006	.007	.005	.006	.007	.031	.004	.0009
%RSD	.0917	.0757	.0923	.0626	.0780	.0862	.3972	.0471	.1420
#1	7.864	7.923	7.570	7.667	7.924	7.850	7.772	7.645	.6411
#2	7.856	7.914	7.560	7.664	7.919	7.861	7.727	7.638	.6402
#3	7.870	7.926	7.556	7.673	7.912	7.862	7.714	7.643	.6421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.901**	**7.913**	**7.844**	**7.959**	**7.769**	**7.742**	**8.018**	**.1418**	**-.1161**
Stddev	.006	.010	.008	.009	.005	.013	.007	.0073	.0039
%RSD	.0824	.1271	.1048	.1099	.0626	.1614	.0839	5.179	3.382
#1	7.908	7.905	7.852	7.969	7.772	7.754	8.026	.1342	-.1184
#2	7.896	7.909	7.845	7.954	7.764	7.742	8.013	.1423	-.1183
#3	7.899	7.924	7.835	7.954	7.773	7.729	8.017	.1489	-.1116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0305**	**-.0328**	**.2178**	**.0715**	**7.817**	**8.068**	**25.00**	**8.287**	**7.827**
Stddev	.0020	.0096	.0274	.0085	.002	.004	.01	.003	.009
%RSD	6.658	29.41	12.57	11.91	.0240	.0492	.0269	.0299	.1138
#1	.0328	-.0243	.2389	.0720	7.819	8.073	25.01	8.285	7.828
#2	.0291	-.0433	.1869	.0628	7.818	8.066	24.99	8.287	7.817
#3	.0296	-.0309	.2275	.0798	7.815	8.066	25.00	8.290	7.835
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/24/2019 11:54:59 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.081**	**8.248**	**7.824**	**96.98**	**8.101**	**7.875**	**7.624**
Stddev	.005	.008	.063	.03	.013	.005	.003
%RSD	.0630	.0963	.7996	.0291	.1626	.0690	.0380
#1	8.085	8.256	7.865	97.01	8.114	7.879	7.626
#2	8.083	8.248	7.856	96.97	8.102	7.877	7.626
#3	8.076	8.240	7.752	96.96	8.088	7.869	7.621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103390.**	**6688.5**	**3844.9**	**8743.2**
Stddev	238.	23.5	2.8	5.0
%RSD	.23035	.35062	.07355	.05688
#1	103120.	6673.8	3841.7	8737.6
#2	103470.	6676.2	3847.0	8746.9
#3	103570.	6715.6	3846.1	8745.3

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/24/2019 12:00:17 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0008**	**-.0003**	**-.0011**	**.0009**	**.0030**	**.0009**	**.0006**	**.0153**
Stddev	.0002	.0001	.0003	.0003	.0000	.0004	.0001	.0004	.0003
%RSD	107.9	9.609	108.2	25.09	1.380	13.30	7.418	61.48	1.841
#1	.0003	.0009	-.0002	-.0013	.0009	.0027	.0010	.0010	.0151
#2	-.0000	.0008	-.0007	-.0008	.0009	.0029	.0009	.0002	.0156
#3	.0002	.0007	-.0000	-.0011	.0009	.0035	.0009	.0006	.0152
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**-.0004**	**.0018**	**-.0008**	**.0010**	**.0004**	**.0019**	**311.0**	**195.3**
Stddev	.0002	.0001	.0010	.0003	.0021	.0010	.0008	.3	.2
%RSD	6.135	29.51	57.80	32.25	208.6	242.1	45.58	.0983	.1242
#1	.0026	-.0005	.0006	-.0008	.0024	.0012	.0011	311.3	195.0
#2	.0027	-.0002	.0021	-.0005	-.0014	-.0007	.0028	311.1	195.3
#3	.0029	-.0004	.0026	-.0011	.0021	.0008	.0017	310.7	195.5
Check ?	None	None	None	None	None	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**191.5**	**297.5**	**197.4**	**196.4**	**.0004**	**.0002**	**-.0018**	**-.0014**	**-.0019**
Stddev	.5	1.2	.2	.5	.0009	.0003	.0007	.0004	.0001
%RSD	.2464	.3909	.1252	.2427	212.0	146.7	36.47	29.77	3.764
#1	191.2	296.4	197.5	196.8	-.0006	-.0001	-.0011	-.0018	-.0019
#2	191.3	297.4	197.6	196.6	.0007	.0002	-.0022	-.0010	-.0020
#3	192.1	298.7	197.2	195.9	.0013	.0005	-.0022	-.0012	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 4/24/2019 12:00:17 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0054**	**-.0017**	**-.0053**	**.0056**	**.0008**	**.0027**
Stddev	.0004	.0014	.0001	.0038	.0018	.0007	.0022
%RSD	53.63	26.99	6.983	71.93	31.46	85.61	81.26
#1	-.0012	.0040	-.0016	-.0024	.0072	.0015	.0038
#2	-.0004	.0069	-.0017	-.0038	.0060	.0004	.0042
#3	-.0008	.0052	-.0018	-.0096	.0037	.0004	.0002
Check ?	None	None	None	None	None	None	None
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**93525.**	**6423.9**	**3487.6**	**7120.4**
Stddev	287.	32.3	3.6	6.2
%RSD	.30640	.50317	.10399	.08763
#1	93742.	6435.7	3490.7	7127.4
#2	93633.	6448.7	3488.6	7118.2
#3	93200.	6387.3	3483.6	7115.5

Zoom In Zoom Out

Sample Name: FECONF Acquired: 4/24/2019 12:05:40 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0005**	**-.0007**	**-.0005**	**.0002**	**.0012**	**.0006**	**.0003**
Stddev	.0003	.0001	.0003	.0001	.0002	.0001	.0000	.0002
%RSD	184.4	27.47	47.30	13.75	93.60	11.14	5.442	73.16
#1	.0006	.0004	-.0007	-.0005	.0003	.0013	.0006	.0000
#2	.0001	.0004	-.0004	-.0006	-.0000	.0011	.0006	.0004
#3	-.0001	.0006	-.0010	-.0005	.0004	.0011	.0007	.0004

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**.0033**	**.0003**	**.0007**	**-.0003**	**.0020**	**.0000**	**.0051**
Stddev	.0004	.0002	.0001	.0004	.0002	.0004	.0026	.0005
%RSD	24.59	6.958	40.07	55.90	71.95	18.50	6747.	9.561
#1	-.0019	.0031	.0003	.0012	-.0005	.0018	.0009	.0046
#2	-.0012	.0036	.0003	.0004	-.0001	.0018	.0021	.0056
#3	-.0020	.0033	.0001	.0007	-.0004	.0024	-.0028	.0052

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0046**	**-.0223**	F **211.2**	**.0217**	**.1732**	**.0312**	**.0006**	**.0009**
Stddev	.0080	.0054	.3	.0147	.0238	.0058	.0008	.0001
%RSD	175.5	24.42	.1355	67.67	13.76	18.50	120.8	10.86
#1	-.0121	-.0281	211.0	.0330	.1949	.0251	-.0001	.0008
#2	.0038	-.0174	211.6	.0270	.1768	.0366	.0007	.0010
#3	-.0054	-.0213	211.2	.0051	.1477	.0318	.0014	.0009

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0003**	**-.0006**	**-.0004**	**.0023**	W **-.0023**	**-.0033**	**.0076**
Stddev	.0007	.0004	.0001	.0002	.0005	.0001	.0026	.0011
%RSD	93.37	140.1	21.30	37.50	21.77	5.032	80.23	14.80
#1	.0007	-.0003	-.0004	-.0005	.0028	-.0024	-.0022	.0074
#2	.0000	.0001	-.0007	-.0002	.0019	-.0023	-.0014	.0088
#3	.0014	-.0007	-.0006	-.0005	.0021	-.0022	-.0062	.0065

Zoom In Zoom Out

Sample Name: FECONF Acquired: 4/24/2019 12:05:40 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0019**	**.0025**
Stddev	.0015	.0001
%RSD	75.39	5.199
#1	.0003	.0024
#2	.0032	.0025
#3	.0023	.0026

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103460.**	**6617.1**	**3833.1**	**8887.3**
Stddev	127.	32.4	5.5	12.3
%RSD	.12310	.49010	.14324	.13847
#1	103330.	6627.0	3835.4	8892.4
#2	103590.	6643.4	3837.1	8896.2
#3	103470.	6580.9	3826.8	8873.2

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 4/24/2019 12:11:10 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0000**	**-.0002**	**.0006**	F **9.959**	**.0003**	**-.0001**	**.0004**	**-.0002**
Stddev	.0001	.0001	.0002	.0002	.015	.0003	.0000	.0002	.0005
%RSD	45.51	891.9	106.7	38.05	.1451	101.2	63.50	43.73	281.1
#1	.0004	.0001	-.0003	.0008	9.942	-.0000	-.0001	.0005	-.0004
#2	.0003	.0000	-.0004	.0003	9.967	.0003	-.0000	.0004	.0004
#3	.0001	-.0001	.0000	.0007	9.968	.0006	-.0000	.0002	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0011**	**.0009**	**.0000**	**.0011**	**.0001**	**-.0012**	**-.0039**	**.0048**
Stddev	.0003	.0002	.0004	.0009	.0005	.0013	.0012	.0137	.0035
%RSD	51.82	17.37	43.09	3022.	46.46	1286.	101.0	351.3	73.54
#1	.0004	.0013	.0008	.0008	.0016	-.0014	-.0015	-.0064	.0088
#2	.0009	.0009	.0006	.0002	.0006	.0011	.0001	-.0161	.0023
#3	.0004	.0010	.0013	-.0009	.0011	.0005	-.0021	.0109	.0033

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0185**	**.0042**	**.0157**	**.0198**	**.0023**	**.0005**	**.0056**	**-.0007**	**-.0001**
Stddev	.0034	.0271	.0357	.0093	.0003	.0002	.0006	.0004	.0000
%RSD	18.49	652.8	227.2	46.91	14.46	28.76	10.65	59.19	36.39
#1	.0215	-.0271	-.0246	.0304	.0022	.0005	.0063	-.0004	-.0001
#2	.0147	.0180	.0284	.0158	.0020	.0004	.0051	-.0011	-.0001
#3	.0191	.0215	.0434	.0132	.0026	.0007	.0055	-.0005	-.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0043**	**.0053**	**.0053**	**-.0013**	**.0022**	**.0002**
Stddev	.0001	.0006	.0001	.0018	.0011	.0008	.0011
%RSD	115.7	13.62	1.059	34.63	86.12	38.76	456.0
#1	.0001	.0041	.0052	.0055	-.0003	.0024	-.0010
#2	.0002	.0038	.0053	.0034	-.0025	.0012	.0009
#3	-.0000	.0049	.0053	.0071	-.0011	.0029	.0008

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 4/24/2019 12:11:10 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105930.**	**6741.2**	**3883.7**	**9088.7**
Stddev	257.	36.4	3.8	10.0
%RSD	.24299	.53943	.09789	.10998
#1	106210.	6776.7	3887.8	9100.1
#2	105720.	6704.0	3883.0	9083.9
#3	105850.	6742.9	3880.2	9081.9

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 4/24/2019 12:16:39 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0000**	**-.0009**	**-.0004**	**.0006**	**.0001**	**.0001**	**-.0006**
Stddev	.0002	.0001	.0002	.0003	.0003	.0000	.0000	.0001	.0001
%RSD	305.0	184.9	3976.	32.40	75.27	4.758	33.54	98.08	9.517
#1	.0002	-.0002	.0001	-.0007	-.0005	.0006	.0002	.0002	-.0005
#2	.0002	.0001	-.0002	-.0012	-.0001	.0006	.0001	.0002	-.0006
#3	-.0002	-.0001	.0000	-.0008	-.0007	.0006	.0001	-.0000	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0005**	**5.208**	**.0002**	**-.0010**	**.0013**	**.0008**	**-.0017**	**.0074**
Stddev	.0004	.0001	.004	.0004	.0002	.0005	.0010	.0042	.0048
%RSD	192.3	21.90	.0798	263.6	23.63	42.40	134.9	254.2	64.81
#1	.0006	.0006	5.203	.0001	-.0011	.0006	-.0004	.0028	.0130
#2	-.0002	.0005	5.210	-.0002	-.0007	.0015	.0012	-.0022	.0044
#3	.0002	.0004	5.211	.0006	-.0011	.0016	.0015	-.0056	.0050

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0069**	**-.0273**	**.0077**	**.0171**	**.0015**	**-.0001**	**.0102**	**.0000**	**-.0001**
Stddev	.0086	.0116	.0027	.0069	.0004	.0002	.0004	.0005	.0001
%RSD	124.3	42.39	34.65	40.19	29.26	206.4	3.812	1952.	139.7
#1	.0121	-.0342	.0089	.0214	.0010	-.0000	.0099	.0005	.0000
#2	-.0030	-.0139	.0096	.0092	.0017	-.0003	.0106	-.0004	-.0000
#3	.0116	-.0337	.0046	.0208	.0017	.0000	.0100	-.0001	-.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0009**	**.0003**	**.0084**	**.0015**	**.0014**	**.0003**
Stddev	.0001	.0007	.0002	.0020	.0012	.0002	.0003
%RSD	51.64	78.33	63.36	24.32	80.62	15.12	127.8
#1	-.0003	.0007	.0004	.0074	.0014	.0012	.0000
#2	-.0001	.0003	.0004	.0107	.0027	.0015	.0006
#3	-.0003	.0016	.0001	.0070	.0003	.0016	.0001

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 4/24/2019 12:16:39 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106310.**	**6727.6**	**3947.6**	**9108.6**
Stddev	280.	34.7	2.6	11.2
%RSD	.26341	.51638	.06607	.12290
#1	106440.	6718.8	3944.9	9101.7
#2	105990.	6698.1	3947.8	9121.5
#3	106500.	6765.9	3950.1	9102.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 12:22:09 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.927**	**1.958**	**1.926**	**1.941**	**2.012**	**1.952**	**2.034**	**1.947**	**.2456**
Stddev	.002	.004	.001	.002	.004	.002	.006	.003	.0009
%RSD	.1112	.2200	.0484	.0881	.2220	.1091	.3006	.1322	.3529
#1	1.924	1.956	1.927	1.943	2.007	1.954	2.032	1.948	.2456
#2	1.928	1.956	1.927	1.940	2.013	1.949	2.029	1.944	.2446
#3	1.928	1.963	1.925	1.941	2.015	1.951	2.041	1.948	.2464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.997**	**1.964**	**1.915**	**2.007**	**1.965**	**1.923**	**1.935**	**38.05**	**38.69**
Stddev	.006	.006	.005	.002	.004	.003	.005	.05	.11
%RSD	.3013	.2835	.2797	.1189	.2077	.1511	.2371	.1249	.2941
#1	1.996	1.968	1.916	2.009	1.968	1.927	1.933	38.10	38.72
#2	1.991	1.958	1.909	2.007	1.961	1.921	1.940	38.00	38.56
#3	2.003	1.966	1.919	2.005	1.967	1.923	1.932	38.05	38.78
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.28**	**38.43**	**38.34**	**38.41**	**1.968**	**1.948**	**4.955**	**1.976**	**1.926**
Stddev	.11	.34	.13	.05	.002	.002	.008	.002	.002
%RSD	.2827	.8752	.3363	.1415	.1082	.0819	.1573	.0999	.0985
#1	39.20	38.61	38.28	38.40	1.965	1.948	4.954	1.978	1.924
#2	39.23	38.04	38.26	38.37	1.970	1.946	4.964	1.974	1.927
#3	39.41	38.63	38.49	38.47	1.968	1.950	4.948	1.977	1.927
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 12:22:09 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.980**	**1.922**	**1.980**	**1.925**	**1.959**	**1.924**	**1.939**
Stddev	.004	.002	.004	.006	.003	.002	.003
%RSD	.1802	.1129	.2004	.3268	.1382	.1251	.1288
#1	1.979	1.922	1.982	1.921	1.957	1.922	1.939
#2	1.976	1.920	1.975	1.932	1.962	1.926	1.937
#3	1.983	1.925	1.982	1.921	1.957	1.925	1.942
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**101410.**	**6709.5**	**3816.5**	**8186.2**
Stddev	428.	33.7	3.2	8.2
%RSD	.42166	.50289	.08500	.09963
#1	101610.	6678.8	3814.1	8181.0
#2	101690.	6745.7	3820.2	8195.6
#3	100910.	6704.1	3815.1	8182.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 12:27:12 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0001**	**.0002**	**-.0000**	**.0003**	**.0002**	**.0004**	**-.0011**
Stddev	.0001	.0001	.0001	.0001	.0001	.0004	.0000	.0001	.0004
%RSD	87.78	417.5	71.94	30.19	372.6	142.8	18.12	20.39	39.00
#1	.0002	.0001	-.0002	.0003	-.0002	.0005	.0002	.0004	-.0006
#2	.0000	-.0001	-.0001	.0002	-.0001	.0004	.0002	.0004	-.0014
#3	.0001	.0001	-.0000	.0002	.0001	-.0002	.0002	.0003	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0001**	**-.0004**	**.0001**	**.0004**	**.0012**	**-.0003**	**-.0013**	**-.0034**
Stddev	.0004	.0000	.0009	.0006	.0002	.0004	.0007	.0130	.0016
%RSD	79.20	7.919	231.8	562.7	53.53	32.79	262.3	962.2	47.91
#1	.0001	.0001	.0006	.0004	.0006	.0016	-.0008	-.0047	-.0018
#2	.0005	.0001	-.0007	.0005	.0005	.0008	.0006	-.0123	-.0051
#3	.0008	.0001	-.0010	-.0006	.0002	.0013	-.0007	.0130	-.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0063**	**-.0071**	**.0199**	**.0094**	**.0025**	**.0002**	**.0022**	**-.0003**	**-.0000**
Stddev	.0011	.0351	.0279	.0141	.0003	.0000	.0007	.0005	.0001
%RSD	17.08	497.3	139.9	149.8	11.87	22.73	33.56	158.3	710.9
#1	.0075	.0326	-.0105	.0146	.0025	.0002	.0027	.0002	.0000
#2	.0061	-.0198	.0261	-.0065	.0028	.0001	.0013	-.0009	-.0001
#3	.0054	-.0340	.0441	.0201	.0022	.0002	.0025	-.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 12:27:12 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0004**	**.0004**	**.0010**	**-.0000**	**.0014**	**.0024**
Stddev	.0003	.0005	.0001	.0028	.0002	.0011	.0012
%RSD	121.3	125.3	20.00	292.1	396.7	75.97	49.46
#1	-.0006	.0011	.0005	.0031	-.0001	.0019	.0025
#2	.0001	.0002	.0004	-.0022	.0002	.0022	.0034
#3	-.0003	.0001	.0003	.0021	-.0002	.0002	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106220.**	**6703.5**	**3955.4**	**9120.2**
Stddev	156.	48.3	2.2	5.4
%RSD	.14669	.72042	.05617	.05897
#1	106350.	6693.8	3957.9	9118.1
#2	106280.	6756.0	3954.0	9126.3
#3	106050.	6660.8	3954.2	9116.2

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 12:32:45 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0010**	**.0011**	**.0031**	**.0021**	F **.0000**	**.0035**	**.0043**
Stddev	.0001	.0001	.0001	.0001	.0004	.0001	.0001	.0001
%RSD	1.882	11.01	8.986	3.495	17.30	142.3	2.299	2.748
#1	.0045	.0010	.0010	.0032	.0025	.0001	.0035	.0043
#2	.0047	.0012	.0012	.0031	.0022	.0001	.0036	.0045
#3	.0045	.0009	.0011	.0030	.0017	-.0000	.0035	.0043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0010**	**.0022**	**.0117**	**.0033**	F **.0027**	F **.0009**	**.0058**	F **-.0004**
Stddev	.0002	.0003	.0002	.0002	.0005	.0003	.0008	.0006
%RSD	17.08	12.93	1.354	7.212	20.40	30.07	14.51	137.7
#1	-.0012	.0020	.0118	.0034	.0029	.0012	.0065	-.0002
#2	-.0008	.0026	.0117	.0035	.0020	.0008	.0060	-.0011
#3	-.0010	.0021	.0115	.0030	.0030	.0007	.0048	-.0000
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail
Value	.0020				.0020	.0025		.0030
Range	-30.00%				20.00%	-30.00%		-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1067**	**1.114**	**-.0002**	**.0954**	**2.210**	**1.108**	F **.0015**	**.0000**
Stddev	.0049	.006	.0009	.0195	.041	.006	.0001	.0002
%RSD	4.580	.5627	522.3	20.48	1.835	.5630	6.633	1614.
#1	.1047	1.120	-.0012	.0826	2.173	1.101	.0014	-.0002
#2	.1123	1.116	.0005	.1179	2.254	1.111	.0014	.0000
#3	.1031	1.108	.0002	.0857	2.203	1.112	.0016	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None
Value							.0100	
Range							-30.00%	

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 12:32:45 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**-.0001**	**-.0002**	**-.0001**	F **.0009**	F **.0002**	**.0045**	F **.0005**
Stddev	.0006	.0002	.0001	.0001	.0008	.0001	.0028	.0007
%RSD	15.90	206.5	52.93	174.4	84.46	52.27	63.61	145.2
#1	.0044	-.0004	-.0002	.0001	.0013	.0001	.0012	.0001
#2	.0039	-.0001	-.0003	-.0001	.0000	.0003	.0060	.0000
#3	.0032	.0001	-.0001	-.0001	.0014	.0003	.0062	.0013
Check ?	None	None	None	None	Chk Fail	Chk Fail	Chk Pass	Chk Fail
Value					.0040	.0040		.0040
Range					-30.00%	-30.00%		-30.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **.0012**	F **.0022**
Stddev	.0010	.0005
%RSD	80.32	22.46
#1	.0022	.0017
#2	.0002	.0023
#3	.0013	.0027
Check ?	Chk Fail	Chk Fail
Value	.0040	.0040
Range	-30.00%	-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106080.**	**6747.1**	**3943.8**	**9048.4**
Stddev	373.	19.0	3.1	6.5
%RSD	.35146	.28091	.07822	.07136
#1	105760.	6725.8	3944.6	9051.5
#2	105980.	6762.1	3940.4	9040.9
#3	106490.	6753.5	3946.4	9052.7

Zoom In Zoom Out

Sample Name: MP14408-MB1 7 Acquired: 4/24/2019 12:38:16 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**-.0000**	**.0002**	**-.0002**	**.0007**	**.0001**	**-.0002**	**-.0009**
Stddev	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0002	.0002
%RSD	218.9	183.6	333.7	35.22	97.86	32.95	57.11	143.0	20.81
#1	-.0001	-.0001	.0001	.0003	-.0004	.0008	.0001	.0001	-.0009
#2	-.0001	.0001	-.0000	.0002	-.0003	.0009	.0002	-.0002	-.0007
#3	.0001	-.0002	-.0001	.0001	.0000	.0005	.0001	-.0003	-.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0018**	**-.0007**	**.0001**	**.0004**	**.0008**	**.0013**	**-.0063**	**.0042**
Stddev	.0003	.0001	.0011	.0010	.0002	.0010	.0009	.0059	.0034
%RSD	386.0	4.723	159.0	932.8	42.95	119.6	65.92	92.90	79.30
#1	.0001	.0018	-.0016	.0009	.0004	.0016	.0019	-.0048	.0062
#2	.0003	.0017	-.0009	-.0010	.0002	-.0003	.0017	-.0013	.0062
#3	-.0002	.0019	.0005	.0005	.0005	.0011	.0003	-.0128	.0004

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**-.0056**	**-.0091**	**.0165**	**.0019**	**-.0000**	**.0079**	**-.0003**	**-.0001**
Stddev	.0069	.0120	.0100	.0123	.0002	.0002	.0010	.0001	.0000
%RSD	183.3	215.2	109.6	74.16	10.72	504.1	12.46	52.08	11.19
#1	.0056	.0074	-.0159	.0199	.0020	-.0002	.0078	-.0004	-.0001
#2	-.0039	-.0080	.0024	.0030	.0017	.0001	.0090	-.0004	-.0001
#3	.0096	-.0162	-.0137	.0268	.0021	.0000	.0070	-.0001	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0008**	**.0003**	**.0035**	**-.0000**	**-.0004**	**.0029**
Stddev	.0001	.0001	.0002	.0013	.0007	.0004	.0005
%RSD	38.18	9.896	64.69	36.46	2292.	79.41	16.16
#1	-.0004	.0009	.0002	.0030	-.0006	-.0007	.0031
#2	-.0005	.0009	.0001	.0049	-.0001	-.0006	.0024
#3	-.0002	.0007	.0005	.0025	.0007	-.0000	.0032

Zoom In Zoom Out

Sample Name: MP14408-MB1 7 Acquired: 4/24/2019 12:38:16 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106210.**	**6847.0**	**3955.0**	**9136.9**
Stddev	46.	46.9	3.6	8.8
%RSD	.04303	.68560	.08981	.09601
#1	106170.	6805.4	3950.9	9126.8
#2	106200.	6837.8	3957.0	9142.3
#3	106260.	6897.9	3957.1	9141.6

Zoom In Zoom Out

Sample Name: MP14408-B1CONF Acquired: 4/24/2019 12:43:48 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.880**	**1.923**	**1.866**	**1.868**	**1.950**	**1.908**	**1.973**	**1.873**
Stddev	.003	.002	.004	.002	.003	.002	.001	.000
%RSD	.1433	.0965	.2434	.1159	.1531	.1009	.0265	.0199
#1	1.882	1.923	1.871	1.868	1.948	1.909	1.974	1.873
#2	1.881	1.924	1.864	1.866	1.953	1.910	1.973	1.872
#3	1.877	1.921	1.863	1.870	1.948	1.906	1.973	1.873

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2572**	**1.939**	**1.901**	**1.927**	**1.959**	**1.901**	**1.857**	**1.972**
Stddev	.0004	.003	.003	.005	.004	.001	.004	.004
%RSD	.1395	.1413	.1381	.2730	.2193	.0663	.2268	.1836
#1	.2574	1.942	1.903	1.933	1.964	1.902	1.862	1.976
#2	.2568	1.936	1.902	1.927	1.957	1.902	1.854	1.971
#3	.2574	1.939	1.898	1.923	1.956	1.900	1.856	1.969

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.26**	**24.55**	**25.12**	**24.37**	**24.50**	**24.49**	**1.891**	**1.991**
Stddev	.03	.01	.03	.12	.05	.01	.003	.002
%RSD	.1201	.0528	.1346	.4859	.1909	.0375	.1510	.1031
#1	24.25	24.57	25.15	24.51	24.53	24.50	1.894	1.993
#2	24.24	24.54	25.12	24.34	24.53	24.49	1.891	1.990
#3	24.30	24.54	25.08	24.27	24.45	24.48	1.888	1.989

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1347**	**2.029**	**1.879**	**2.012**	**1.921**	**2.007**	F **-.0949**	**.0030**
Stddev	.0010	.004	.004	.001	.005	.003	.0034	.0004
%RSD	.7088	.2117	.2102	.0470	.2600	.1339	3.550	14.35
#1	.1346	2.031	1.883	2.013	1.926	2.010	-.0937	.0025
#2	.1357	2.031	1.879	2.011	1.919	2.006	-.0923	.0033
#3	.1338	2.024	1.875	2.011	1.917	2.005	-.0987	.0032

Zoom In Zoom Out

Sample Name: MP14408-B1CONF Acquired: 4/24/2019 12:43:48 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0000**	**1.867**
Stddev	.0006	.004
%RSD	3050.	.1978
#1	-.0005	1.870
#2	.0006	1.868
#3	-.0002	1.863

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103370.**	**6737.1**	**3856.8**	**8412.3**
Stddev	63.	12.3	5.7	3.7
%RSD	.06130	.18324	.14881	.04397
#1	103370.	6751.4	3850.7	8408.0
#2	103430.	6730.2	3857.9	8414.8
#3	103300.	6729.8	3862.0	8414.0

Zoom In Zoom Out

Sample Name: MP14408-S1 Acquired: 4/24/2019 12:48:52 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.987**	**1.921**	**1.879**	**1.870**	**1.936**	**1.926**	**2.367**	**1.870**	**.2499**
Stddev	.002	.003	.003	.002	.003	.004	.003	.002	.0006
%RSD	.0900	.1546	.1640	.1093	.1505	.1818	.1441	.0804	.2313
#1	1.987	1.918	1.882	1.873	1.933	1.922	2.366	1.869	.2500
#2	1.989	1.921	1.876	1.869	1.938	1.927	2.371	1.868	.2505
#3	1.986	1.924	1.879	1.869	1.938	1.929	2.365	1.871	.2493

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.937**	**1.893**	**1.941**	**1.958**	**1.896**	**1.871**	**1.985**	**23.66**	**77.10**
Stddev	.002	.004	.004	.004	.002	.003	.002	.05	.18
%RSD	.1163	.1908	.2268	.1920	.0959	.1555	.0991	.2148	.2372
#1	1.937	1.896	1.945	1.962	1.896	1.872	1.985	23.71	77.03
#2	1.940	1.889	1.939	1.959	1.894	1.867	1.983	23.66	76.96
#3	1.935	1.893	1.937	1.954	1.898	1.872	1.987	23.61	77.31

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.25**	**30.39**	**26.27**	**27.66**	**1.953**	**1.979**	**7.079**	**1.990**	**1.986**
Stddev	.03	.17	.05	.01	.004	.003	.013	.006	.004
%RSD	.1205	.5561	.2025	.0288	.1992	.1595	.1785	.3001	.1739
#1	24.24	30.27	26.21	27.65	1.956	1.982	7.090	1.993	1.984
#2	24.28	30.32	26.27	27.66	1.949	1.975	7.065	1.983	1.990
#3	24.22	30.59	26.32	27.66	1.956	1.979	7.081	1.994	1.984

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.006**	**1.942**	**2.009**	**3.685**	**.0029**	**.0013**	**1.923**
Stddev	.001	.003	.001	.008	.0006	.0005	.002
%RSD	.0590	.1385	.0496	.2218	19.79	38.92	.1035
#1	2.007	1.945	2.008	3.691	.0023	.0017	1.925
#2	2.007	1.939	2.010	3.675	.0035	.0015	1.921
#3	2.005	1.942	2.008	3.687	.0030	.0007	1.923

Zoom In Zoom Out

Sample Name: MP14408-S1 Acquired: 4/24/2019 12:48:52 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102490.**	**6793.6**	**3816.8**	**8217.3**
Stddev	137.	30.1	8.9	12.7
%RSD	.13413	.44340	.23232	.15449
#1	102520.	6810.6	3806.7	8203.1
#2	102330.	6811.4	3823.4	8221.3
#3	102600.	6758.8	3820.3	8227.5

Zoom In Zoom Out

Sample Name: MP14408-S2 Acquired: 4/24/2019 12:53:54 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.990**	**1.928**	**1.882**	**1.878**	**1.952**	**1.933**	**2.383**	**1.877**	**.2549**
Stddev	.001	.001	.001	.003	.005	.003	.005	.003	.0004
%RSD	.0458	.0260	.0483	.1345	.2740	.1426	.2279	.1735	.1634
#1	1.989	1.928	1.883	1.878	1.958	1.935	2.389	1.878	.2549
#2	1.990	1.927	1.882	1.881	1.950	1.935	2.378	1.880	.2553
#3	1.991	1.928	1.882	1.876	1.948	1.930	2.381	1.874	.2545

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.947**	**1.898**	**1.923**	**1.961**	**1.904**	**1.876**	**1.965**	**23.91**	**77.25**
Stddev	.003	.006	.003	.002	.005	.003	.003	.01	.10
%RSD	.1518	.3150	.1565	.1130	.2797	.1731	.1556	.0396	.1347
#1	1.950	1.899	1.924	1.963	1.907	1.879	1.966	23.92	77.36
#2	1.944	1.904	1.919	1.961	1.907	1.873	1.962	23.91	77.15
#3	1.947	1.892	1.925	1.959	1.898	1.877	1.968	23.90	77.25

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.55**	**30.63**	**26.58**	**27.94**	**1.958**	**1.961**	**7.044**	**1.974**	**1.988**
Stddev	.03	.10	.05	.06	.003	.001	.005	.005	.001
%RSD	.1269	.3184	.1973	.2159	.1661	.0395	.0726	.2610	.0521
#1	24.59	30.65	26.61	28.01	1.959	1.960	7.047	1.975	1.989
#2	24.53	30.52	26.61	27.90	1.954	1.962	7.038	1.979	1.989
#3	24.54	30.71	26.52	27.90	1.960	1.960	7.047	1.969	1.987

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.991**	**1.923**	**1.992**	**3.677**	**.0034**	**.0015**	**1.930**
Stddev	.004	.003	.003	.008	.0005	.0016	.001
%RSD	.1948	.1598	.1294	.2184	13.94	107.1	.0702
#1	1.996	1.925	1.995	3.686	.0039	.0030	1.931
#2	1.989	1.919	1.991	3.673	.0029	-.0002	1.929
#3	1.988	1.924	1.991	3.671	.0035	.0018	1.929

Zoom In Zoom Out

Sample Name: MP14408-S2 Acquired: 4/24/2019 12:53:54 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102010.**	**6776.2**	**3825.3**	**8230.4**
Stddev	261.	19.6	2.1	6.9
%RSD	.25576	.28897	.05553	.08333
#1	101760.	6758.8	3824.1	8229.1
#2	102280.	6772.4	3824.1	8224.3
#3	102000.	6797.4	3827.7	8237.8

Zoom In Zoom Out

Sample Name: MP14408-D1 Acquired: 4/24/2019 12:58:56 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1147**	**.0000**	**.0007**	**.0009**	**.0013**	**.0054**	**.4293**	**.0009**	**-.0007**
Stddev	.0005	.0001	.0001	.0003	.0002	.0002	.0010	.0005	.0003
%RSD	.4184	15660.	7.774	34.27	17.51	4.375	.2270	57.62	40.00
#1	.1147	-.0001	.0008	.0012	.0011	.0057	.4303	.0003	-.0010
#2	.1152	.0000	.0007	.0006	.0012	.0052	.4283	.0011	-.0007
#3	.1142	.0000	.0007	.0010	.0016	.0054	.4295	.0013	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0329**	**.0025**	**.0007**	**.0010**	**-.0002**	**.0005**	**-.0085**	**54.59**
Stddev	.0002	.0002	.0008	.0004	.0006	.0012	.0010	.0012	.09
%RSD	33.04	.4615	32.68	51.94	67.06	494.8	210.1	13.66	.1613
#1	.0007	.0329	.0019	.0005	.0013	-.0012	-.0007	-.0094	54.69
#2	.0010	.0328	.0034	.0006	.0002	-.0006	.0009	-.0090	54.53
#3	.0005	.0331	.0021	.0012	.0014	.0011	.0013	-.0072	54.55

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0886**	**7.210**	**2.479**	**3.930**	**.0522**	**.0032**	**7.073**	**-.0011**	**.1207**
Stddev	.0070	.022	.059	.006	.0006	.0002	.011	.0007	.0002
%RSD	7.844	.3065	2.381	.1522	1.140	5.781	.1544	61.28	.1531
#1	.0962	7.234	2.541	3.937	.0518	.0031	7.085	-.0005	.1209
#2	.0871	7.190	2.471	3.928	.0528	.0030	7.070	-.0009	.1206
#3	.0826	7.205	2.424	3.926	.0519	.0034	7.064	-.0019	.1205

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0090**	**-.0001**	**3.819**	**-.0002**	**.0008**	**.0363**
Stddev	.0003	.0006	.0001	.003	.0007	.0020	.0007
%RSD	28.32	6.815	158.0	.0766	428.0	244.2	2.009
#1	-.0011	.0096	.0001	3.822	-.0010	-.0004	.0371
#2	-.0007	.0091	-.0002	3.817	.0003	.0031	.0363
#3	-.0012	.0084	-.0002	3.817	.0002	-.0003	.0356

Zoom In Zoom Out

Sample Name: MP14408-D1 Acquired: 4/24/2019 12:58:56 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**104400.**	**6840.6**	**3882.0**	**8712.1**
Stddev	200.	21.0	1.4	2.7
%RSD	.19194	.30662	.03720	.03047
#1	104250.	6816.8	3883.5	8713.2
#2	104630.	6856.2	3881.8	8709.1
#3	104320.	6848.9	3880.7	8714.0

Zoom In Zoom Out

Sample Name: JC86595-4 Acquired: 4/24/2019 13:04:23 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPECTRA

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1127**	**.0001**	**.0007**	**.0010**	**.0011**	**.0050**	**.4221**	**.0007**	**-.0005**
Stddev	.0002	.0001	.0001	.0000	.0005	.0004	.0007	.0003	.0002
%RSD	.1867	88.69	17.06	3.678	50.98	7.501	.1558	40.40	51.35
#1	.1129	-.0000	.0007	.0010	.0017	.0051	.4218	.0004	-.0005
#2	.1127	.0001	.0007	.0009	.0009	.0052	.4228	.0010	-.0007
#3	.1124	.0002	.0005	.0010	.0006	.0045	.4216	.0008	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0321**	**.0015**	**.0002**	**.0007**	**-.0006**	**.0004**	**-.0179**	**53.61**
Stddev	.0001	.0000	.0002	.0001	.0007	.0008	.0008	.0015	.11
%RSD	17.61	.1163	13.31	52.79	96.44	130.4	179.3	8.483	.2098
#1	.0007	.0321	.0014	.0002	-.0001	.0003	-.0003	-.0185	53.71
#2	.0006	.0321	.0017	.0001	.0010	-.0013	.0012	-.0162	53.49
#3	.0009	.0321	.0014	.0003	.0011	-.0008	.0004	-.0191	53.62

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0722**	**7.060**	**2.426**	**3.854**	**.0499**	**.0030**	**6.955**	**-.0018**	**.1184**
Stddev	.0020	.038	.018	.017	.0006	.0000	.011	.0003	.0005
%RSD	2.723	.5356	.7614	.4320	1.235	.4981	.1612	17.71	.4065
#1	.0710	7.086	2.428	3.856	.0497	.0030	6.967	-.0021	.1179
#2	.0745	7.017	2.406	3.837	.0505	.0030	6.944	-.0015	.1185
#3	.0712	7.078	2.443	3.870	.0493	.0029	6.955	-.0016	.1188

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**.0080**	**.0005**	**3.757**	**.0005**	**.0009**	**.0363**
Stddev	.0004	.0008	.0002	.007	.0007	.0008	.0015
%RSD	31.71	10.06	41.76	.1895	132.9	89.32	4.086
#1	-.0017	.0074	.0004	3.749	.0012	.0011	.0380
#2	-.0009	.0089	.0003	3.758	.0003	.0015	.0358
#3	-.0011	.0077	.0007	3.764	-.0000	.0000	.0352

Zoom In Zoom Out

Sample Name: JC86595-4 Acquired: 4/24/2019 13:04:23 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPECTRA

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**104260.**	**6840.0**	**3873.3**	**8695.0**
Stddev	141.	15.0	2.0	5.3
%RSD	.13566	.21888	.05077	.06132
#1	104370.	6822.7	3871.0	8692.5
#2	104110.	6847.7	3874.6	8691.4
#3	104320.	6849.5	3874.2	8701.1

Zoom In Zoom Out

Sample Name: MP14408-SD1 Acquired: 4/24/2019 13:09:50 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1152**	**-.0001**	**.0002**	**.0009**	**.0004**	**.0061**	**.4416**	**.0004**	**-.0055**
Stddev	.0012	.0001	.0005	.0006	.0017	.0004	.0012	.0005	.0009
%RSD	1.048	102.9	269.6	72.02	464.7	5.898	.2631	143.9	17.12
#1	.1138	.0000	.0006	.0011	.0003	.0057	.4427	.0008	-.0049
#2	.1159	-.0002	.0003	.0001	-.0013	.0064	.4418	-.0002	-.0049
#3	.1158	-.0002	-.0004	.0013	.0021	.0062	.4404	.0005	-.0065

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0399**	**-.0010**	**.0011**	**.0045**	**-.0019**	**.0019**	**-.0200**	**55.41**
Stddev	.0012	.0005	.0042	.0010	.0019	.0077	.0036	.0860	.11
%RSD	82.78	1.320	425.5	96.51	40.97	409.9	186.6	429.7	.1965
#1	.0026	.0403	.0026	.0020	.0036	-.0061	.0004	.0692	55.50
#2	.0017	.0393	.0001	.0013	.0067	-.0066	.0060	-.0269	55.29
#3	.0002	.0402	-.0056	-.0000	.0034	.0070	-.0006	-.1024	55.43

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0733**	**7.259**	**2.524**	**3.932**	**.0561**	**.0024**	**7.111**	**-.0020**	**.1210**
Stddev	.0229	.193	.075	.052	.0027	.0004	.010	.0006	.0004
%RSD	31.30	2.663	2.973	1.333	4.865	17.67	.1400	29.96	.3350
#1	.0988	7.039	2.439	3.983	.0568	.0029	7.123	-.0015	.1215
#2	.0666	7.335	2.555	3.934	.0584	.0021	7.107	-.0019	.1209
#3	.0544	7.402	2.579	3.879	.0531	.0023	7.104	-.0026	.1207

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0034**	**.0116**	**.0010**	**3.787**	**-.0009**	**.0003**	**.0481**
Stddev	.0016	.0021	.0007	.003	.0017	.0060	.0008
%RSD	47.90	18.40	71.31	.0810	177.2	2261.	1.750
#1	-.0022	.0092	.0018	3.788	-.0026	.0072	.0488
#2	-.0053	.0131	.0008	3.783	.0007	-.0039	.0472
#3	-.0028	.0125	.0004	3.789	-.0009	-.0025	.0483

Zoom In Zoom Out

Sample Name: MP14408-SD1 Acquired: 4/24/2019 13:09:50 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105720.**	**6797.8**	**3951.3**	**9068.1**
Stddev	323.	32.6	1.4	1.4
%RSD	.30532	.47925	.03560	.01565
#1	105370.	6834.7	3949.8	9069.3
#2	105780.	6785.2	3951.7	9068.4
#3	106010.	6773.3	3952.5	9066.5

Zoom In Zoom Out

Sample Name: MP14419-B1 7 Acquired: 4/24/2019 13:15:17 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.864**	**1.918**	**1.857**	**1.871**	**1.955**	**1.905**	**1.983**	**1.868**
Stddev	.003	.003	.030	.028	.009	.004	.009	.028
%RSD	.1567	.1637	1.628	1.482	.4509	.1992	.4511	1.473
#1	1.861	1.915	1.872	1.887	1.964	1.904	1.993	1.884
#2	1.867	1.921	1.877	1.886	1.953	1.910	1.980	1.884
#3	1.864	1.919	1.822	1.839	1.947	1.903	1.975	1.836

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2538**	**1.930**	**1.912**	**1.898**	**1.966**	**1.909**	**1.873**	**1.933**
Stddev	.0008	.008	.026	.026	.033	.029	.028	.030
%RSD	.3095	.4354	1.366	1.379	1.685	1.537	1.509	1.579
#1	.2542	1.939	1.926	1.907	1.985	1.927	1.888	1.949
#2	.2543	1.928	1.928	1.918	1.986	1.925	1.891	1.953
#3	.2529	1.923	1.881	1.868	1.928	1.875	1.841	1.898

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.40**	**23.79**	**24.29**	**23.66**	**23.76**	**35.26**	**1.859**	**1.909**
Stddev	.01	.06	.01	.27	.01	.06	.028	.029
%RSD	.0305	.2415	.0436	1.125	.0513	.1831	1.529	1.535
#1	23.39	23.73	24.28	23.37	23.75	35.20	1.875	1.927
#2	23.39	23.85	24.29	23.88	23.77	35.33	1.877	1.926
#3	23.40	23.80	24.30	23.74	23.77	35.24	1.827	1.875

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0503**	**1.997**	**1.863**	**1.970**	**1.312**	**1.975**	F **-.0502**	**.0059**
Stddev	.0002	.029	.003	.006	.011	.007	.0022	.0015
%RSD	.3307	1.427	.1760	.3191	.8617	.3317	4.406	25.44
#1	.0503	2.015	1.861	1.976	1.313	1.981	-.0513	.0075
#2	.0505	2.012	1.867	1.968	1.323	1.977	-.0517	.0047
#3	.0501	1.964	1.861	1.964	1.300	1.968	-.0477	.0054

Zoom In Zoom Out

Sample Name: MP14419-B1 7 Acquired: 4/24/2019 13:15:17 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0003**	**1.890**
Stddev	.0008	.028
%RSD	265.4	1.471
#1	-.0005	1.900
#2	-.0010	1.912
#3	.0006	1.859

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103370.**	**6771.7**	**3907.1**	**8486.0**
Stddev	481.	28.9	46.2	95.7
%RSD	.46565	.42612	1.1815	1.1277
#1	102820.	6803.5	3880.3	8428.5
#2	103600.	6747.3	3880.5	8433.1
#3	103690.	6764.2	3960.4	8596.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 13:20:21 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 1

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.895**	**1.933**	**1.903**	**1.930**	**2.002**	**1.942**	**2.021**	**1.927**	**.2440**
Stddev	.002	.003	.002	.005	.002	.003	.002	.002	.0002
%RSD	.0934	.1764	.0904	.2594	.0977	.1525	.0803	.1236	.0884
#1	1.893	1.929	1.901	1.936	2.000	1.945	2.022	1.930	.2442
#2	1.895	1.933	1.904	1.927	2.001	1.941	2.019	1.927	.2440
#3	1.897	1.936	1.902	1.928	2.004	1.939	2.021	1.925	.2438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.983**	**1.951**	**1.899**	**1.988**	**1.958**	**1.910**	**1.922**	**37.53**	**38.30**
Stddev	.002	.003	.001	.003	.003	.004	.002	.07	.02
%RSD	.0901	.1667	.0592	.1296	.1475	.1817	.1198	.1958	.0546
#1	1.985	1.954	1.898	1.988	1.960	1.908	1.920	37.62	38.30
#2	1.981	1.947	1.899	1.990	1.959	1.914	1.924	37.48	38.28
#3	1.983	1.951	1.900	1.985	1.954	1.909	1.920	37.51	38.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.65**	**37.88**	**38.02**	**38.00**	**1.949**	**1.928**	**4.909**	**1.962**	**1.895**
Stddev	.13	.13	.15	.09	.002	.001	.006	.002	.003
%RSD	.3309	.3362	.3875	.2383	.0948	.0746	.1236	.0892	.1631
#1	38.53	37.78	37.89	37.98	1.948	1.929	4.904	1.962	1.892
#2	38.64	37.84	38.01	37.92	1.952	1.930	4.916	1.964	1.895
#3	38.79	38.02	38.18	38.10	1.948	1.927	4.907	1.961	1.898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 13:20:21 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 1

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.962**	**1.921**	**1.967**	**1.910**	**1.942**	**1.904**	**1.925**
Stddev	.001	.003	.001	.002	.004	.001	.005
%RSD	.0384	.1425	.0543	.0866	.2095	.0421	.2788
#1	1.962	1.924	1.969	1.909	1.938	1.903	1.926
#2	1.961	1.919	1.967	1.912	1.946	1.905	1.930
#3	1.963	1.919	1.967	1.910	1.943	1.903	1.920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102250.**	**6776.3**	**3858.0**	**8256.8**
Stddev	76.	30.0	2.4	11.3
%RSD	.07438	.44222	.06169	.13657
#1	102340.	6801.2	3855.9	8244.4
#2	102200.	6784.5	3860.6	8266.4
#3	102210.	6743.0	3857.6	8259.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 13:25:24 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0002**	**.0000**	**.0002**	**-.0001**	**.0002**	**.0001**	**.0002**	**-.0011**
Stddev	.0003	.0001	.0001	.0002	.0005	.0003	.0000	.0002	.0003
%RSD	94.76	38.77	386.6	146.4	352.5	129.8	24.24	74.33	28.51
#1	.0006	.0001	.0001	.0000	-.0004	-.0000	.0001	.0000	-.0011
#2	.0001	.0001	.0000	.0004	.0004	.0006	.0001	.0004	-.0015
#3	.0003	.0002	-.0001	.0000	-.0004	.0002	.0001	.0003	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0002**	**-.0001**	**.0005**	**.0004**	**.0016**	**.0004**	**-.0039**	**-.0005**
Stddev	.0002	.0001	.0005	.0002	.0002	.0017	.0005	.0047	.0038
%RSD	77.27	71.71	353.6	39.06	45.43	105.9	129.8	120.1	707.4
#1	.0001	.0003	-.0006	.0004	.0003	.0035	.0004	-.0056	-.0017
#2	.0005	.0002	-.0001	.0007	.0002	.0004	.0010	-.0074	.0037
#3	.0003	.0000	.0003	.0003	.0005	.0008	-.0001	.0014	-.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059**	**-.0080**	**.0470**	**.0104**	**.0027**	**.0006**	**.0008**	**-.0003**	**.0000**
Stddev	.0022	.0229	.0227	.0092	.0001	.0000	.0006	.0005	.0000
%RSD	37.42	285.0	48.37	88.38	4.259	4.214	69.30	150.5	1120.
#1	.0074	.0059	.0713	.0148	.0028	.0006	.0006	.0002	-.0000
#2	.0034	-.0345	.0436	-.0002	.0027	.0006	.0004	-.0008	.0000
#3	.0068	.0045	.0262	.0166	.0026	.0006	.0015	-.0004	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 13:25:24 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	F **.0095**	**.0003**	**.0025**	**.0011**	**.0003**	**.0021**
Stddev	.0003	.0012	.0001	.0005	.0002	.0008	.0007
%RSD	85.69	12.64	32.68	20.28	21.71	292.1	34.90
#1	-.0007	.0108	.0004	.0022	.0013	.0004	.0020
#2	-.0001	.0085	.0002	.0022	.0008	.0011	.0029
#3	-.0003	.0091	.0003	.0031	.0013	-.0006	.0015
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0063					
Low Limit		-.0063					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106980.**	**6776.7**	**3999.5**	**9210.8**
Stddev	194.	41.2	4.1	9.1
%RSD	.18138	.60854	.10327	.09906
#1	106760.	6744.5	3996.1	9211.8
#2	107040.	6823.2	3998.4	9201.3
#3	107140.	6762.6	4004.1	9219.4

Zoom In Zoom Out

Sample Name: MP14419-MB1 7 Acquired: 4/24/2019 13:30:56 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPECTRA

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0002**	**-.0001**	**.0002**	**.0008**	**.0011**	**.0003**	**.0005**	**-.0012**
Stddev	.0005	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
%RSD	209.5	17.17	67.86	60.78	11.88	12.65	26.81	31.52	10.50
#1	-.0001	.0002	-.0002	.0001	.0008	.0011	.0003	.0006	-.0011
#2	.0008	.0001	-.0001	.0003	.0009	.0012	.0002	.0005	-.0011
#3	-.0000	.0001	-.0000	.0003	.0008	.0009	.0004	.0003	-.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0068**	**.0002**	**.0018**	**.0005**	**.0004**	**-.0001**	**.0074**	**.0459**
Stddev	.0001	.0001	.0005	.0001	.0002	.0009	.0009	.0092	.0027
%RSD	49.74	1.056	183.2	7.713	31.37	206.6	1218.	125.0	5.946
#1	.0001	.0068	.0007	.0018	.0006	-.0000	-.0002	.0048	.0476
#2	.0003	.0069	.0002	.0019	.0007	.0014	.0009	.0177	.0474
#3	.0004	.0067	-.0002	.0016	.0003	-.0001	-.0009	-.0003	.0428

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087**	**.0055**	**.0822**	**10.97**	**.0042**	**.0004**	**.0136**	**.0170**	**.0003**
Stddev	.0061	.0331	.0110	.02	.0002	.0001	.0010	.0007	.0001
%RSD	69.83	604.6	13.39	.1695	4.184	20.02	7.151	4.331	33.30
#1	.0111	-.0071	.0945	10.95	.0041	.0005	.0144	.0168	.0004
#2	.0018	-.0195	.0734	10.97	.0041	.0003	.0138	.0164	.0002
#3	.0133	.0431	.0787	10.99	.0044	.0005	.0125	.0178	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0036**	**.0004**	**.0100**	**.0021**	**.0022**	**.0193**
Stddev	.0003	.0003	.0000	.0026	.0009	.0020	.0004
%RSD	441.6	7.598	6.836	26.10	44.51	91.33	1.840
#1	.0000	.0037	.0004	.0070	.0024	.0046	.0192
#2	-.0002	.0033	.0004	.0112	.0010	.0011	.0190
#3	.0003	.0038	.0004	.0118	.0028	.0010	.0197

Zoom In Zoom Out

Sample Name: MP14419-MB1 7 Acquired: 4/24/2019 13:30:56 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPECTRA

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105910.**	**6856.6**	**3980.0**	**9072.7**
Stddev	164.	46.9	5.5	9.2
%RSD	.15505	.68443	.13793	.10130
#1	105870.	6820.8	3985.2	9083.2
#2	106100.	6839.4	3974.3	9069.1
#3	105780.	6909.8	3980.6	9065.9

Zoom In Zoom Out

Sample Name: MP14419-S1 Acquired: 4/24/2019 13:36:26 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.865**	**1.909**	**1.874**	**1.886**	**1.963**	**1.908**	**1.985**	**1.883**
Stddev	.004	.007	.001	.002	.007	.001	.002	.003
%RSD	.2011	.3789	.0573	.0821	.3652	.0616	.1043	.1486
#1	1.865	1.904	1.873	1.887	1.966	1.907	1.985	1.884
#2	1.869	1.917	1.873	1.888	1.969	1.909	1.987	1.885
#3	1.862	1.906	1.875	1.885	1.955	1.907	1.983	1.879

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2528**	**1.932**	**2.091**	**1.916**	**1.978**	**1.924**	**1.891**	**1.948**
Stddev	.0005	.001	.004	.003	.004	.004	.005	.002
%RSD	.2123	.0326	.2100	.1330	.1803	.1962	.2553	.0941
#1	.2534	1.931	2.094	1.913	1.975	1.926	1.887	1.946
#2	.2523	1.932	2.093	1.916	1.982	1.925	1.890	1.947
#3	.2527	1.931	2.086	1.918	1.976	1.919	1.896	1.950

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.35**	**24.06**	**24.12**	**23.42**	**23.86**	**38.58**	**1.880**	**1.934**
Stddev	.06	.07	.08	.14	.02	.03	.004	.001
%RSD	.2395	.2960	.3395	.6128	.1021	.0882	.1904	.0704
#1	23.31	24.13	24.11	23.27	23.84	38.60	1.878	1.933
#2	23.42	24.07	24.21	23.45	23.89	38.59	1.878	1.934
#3	23.34	23.98	24.05	23.55	23.85	38.54	1.884	1.935

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0497**	**2.010**	**1.861**	**1.971**	**1.312**	**1.978**	W **-.0190**	**.0048**
Stddev	.0001	.003	.005	.001	.007	.002	.0005	.0009
%RSD	.2467	.1529	.2770	.0666	.5226	.1073	2.875	19.31
#1	.0498	2.009	1.858	1.970	1.304	1.978	-.0188	.0051
#2	.0497	2.013	1.867	1.972	1.317	1.980	-.0196	.0038
#3	.0496	2.007	1.857	1.970	1.315	1.976	-.0186	.0056

Zoom In Zoom Out

Sample Name: MP14419-S1 Acquired: 4/24/2019 13:36:26 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0010**	**1.976**
Stddev	.0009	.002
%RSD	96.45	.1165
#1	.0019	1.974
#2	.0000	1.976
#3	.0010	1.979

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103610.**	**6838.2**	**3882.1**	**8435.2**
Stddev	351.	10.0	2.6	3.6
%RSD	.33878	.14667	.06701	.04230
#1	103600.	6848.3	3881.3	8432.1
#2	103270.	6828.3	3885.0	8434.6
#3	103970.	6837.9	3880.0	8439.1

Zoom In Zoom Out

Sample Name: MP14419-S2 Acquired: 4/24/2019 13:41:29 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.850**	**1.895**	**1.859**	**1.875**	**1.952**	**1.899**	**1.972**	**1.869**
Stddev	.004	.007	.001	.003	.006	.001	.001	.003
%RSD	.2111	.3673	.0297	.1361	.3040	.0478	.0478	.1693
#1	1.853	1.903	1.858	1.874	1.958	1.898	1.972	1.869
#2	1.845	1.889	1.859	1.878	1.947	1.900	1.972	1.872
#3	1.850	1.895	1.859	1.872	1.952	1.899	1.971	1.866

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2514**	**1.923**	**2.073**	**1.901**	**1.962**	**1.908**	**1.878**	**1.937**
Stddev	.0002	.001	.001	.003	.002	.003	.003	.000
%RSD	.0968	.0684	.0591	.1442	.0749	.1560	.1320	.0155
#1	.2516	1.924	2.072	1.902	1.962	1.905	1.876	1.937
#2	.2511	1.925	2.074	1.904	1.964	1.911	1.877	1.937
#3	.2515	1.922	2.073	1.898	1.961	1.908	1.881	1.937

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.17**	**23.87**	**23.96**	**23.32**	**23.69**	**38.27**	**1.869**	**1.922**
Stddev	.08	.10	.08	.15	.06	.12	.002	.001
%RSD	.3433	.4105	.3372	.6360	.2415	.3180	.0782	.0319
#1	23.26	23.96	24.03	23.40	23.75	38.41	1.870	1.922
#2	23.11	23.77	23.87	23.15	23.63	38.17	1.870	1.923
#3	23.13	23.89	23.98	23.40	23.70	38.24	1.868	1.922

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0505**	**1.997**	**1.845**	**1.956**	**1.388**	**1.963**	W **-.0243**	**.0048**
Stddev	.0005	.002	.004	.002	.004	.001	.0005	.0005
%RSD	1.089	.0879	.2439	.0892	.3259	.0289	1.977	11.35
#1	.0507	1.995	1.850	1.957	1.384	1.963	-.0245	.0054
#2	.0509	1.997	1.841	1.956	1.387	1.964	-.0246	.0047
#3	.0499	1.999	1.845	1.954	1.393	1.963	-.0238	.0044

Zoom In Zoom Out

Sample Name: MP14419-S2 Acquired: 4/24/2019 13:41:29 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0011**	**1.962**
Stddev	.0012	.002
%RSD	107.1	.0764
#1	.0002	1.963
#2	.0007	1.963
#3	.0025	1.960

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**103660.**	**6843.3**	**3888.3**	**8446.0**
Stddev	190.	52.4	3.0	8.1
%RSD	.18356	.76554	.07733	.09580
#1	103440.	6800.8	3888.8	8446.7
#2	103800.	6901.8	3885.0	8437.6
#3	103730.	6827.2	3891.0	8453.7

Zoom In Zoom Out

Sample Name: MP14419-D1 Acquired: 4/24/2019 13:46:33 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0001**	**-.0001**	**.0002**	**.0006**	**.0015**	**.0016**	**.0006**	**-.0009**
Stddev	.0000	.0002	.0001	.0001	.0003	.0001	.0000	.0001	.0003
%RSD	3.289	173.9	86.03	53.07	46.58	8.494	1.406	17.91	28.60
#1	.0010	.0002	-.0002	.0001	.0008	.0013	.0016	.0005	-.0012
#2	.0010	.0002	-.0001	.0003	.0003	.0015	.0016	.0006	-.0007
#3	.0010	-.0001	-.0000	.0003	.0006	.0015	.0016	.0007	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.1774**	**.0001**	**.0005**	**.0009**	**-.0002**	**-.0003**	**-.0037**	**.4006**
Stddev	.0003	.0004	.0007	.0006	.0005	.0007	.0005	.0068	.0039
%RSD	22.96	.2362	819.1	113.1	50.72	385.4	204.0	186.3	.9689
#1	.0014	.1778	-.0002	.0011	.0004	-.0009	.0000	-.0100	.3964
#2	.0013	.1772	.0009	.0006	.0013	.0003	-.0009	-.0046	.4040
#3	.0009	.1771	-.0004	-.0001	.0011	.0001	.0000	.0036	.4013

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261**	**-.0175**	**.2128**	**15.14**	**.0120**	**.0113**	**.0180**	**.0226**	**.0012**
Stddev	.0035	.0212	.0329	.03	.0003	.0001	.0004	.0006	.0001
%RSD	13.34	121.2	15.43	.1886	2.844	1.234	2.223	2.526	6.184
#1	.0298	-.0417	.2444	15.12	.0124	.0114	.0178	.0226	.0013
#2	.0255	-.0082	.2153	15.17	.0119	.0111	.0184	.0232	.0012
#3	.0229	-.0025	.1788	15.12	.0118	.0113	.0177	.0221	.0012

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0292**	**.0012**	**.0456**	**.0008**	**.0006**	**.0916**
Stddev	.0003	.0028	.0002	.0014	.0005	.0013	.0005
%RSD	116.7	9.418	15.33	2.996	58.85	214.3	.5834
#1	-.0000	.0315	.0012	.0457	.0013	-.0008	.0922
#2	.0005	.0300	.0013	.0442	.0004	.0016	.0916
#3	.0002	.0262	.0010	.0469	.0007	.0010	.0911

Zoom In Zoom Out

Sample Name: MP14419-D1 Acquired: 4/24/2019 13:46:33 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106770.**	**6892.9**	**3979.7**	**9055.4**
Stddev	63.	37.6	4.3	9.3
%RSD	.05920	.54492	.10904	.10250
#1	106750.	6936.1	3984.0	9066.1
#2	106840.	6875.4	3979.8	9051.1
#3	106720.	6867.3	3975.4	9049.1

Zoom In Zoom Out

Sample Name: TD37733-1 Acquired: 4/24/2019 13:52:02 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0000**	**-.0002**	**.0001**	**.0005**	**.0016**	**.0015**	**.0005**	**-.0012**
Stddev	.0001	.0001	.0002	.0002	.0001	.0000	.0001	.0002	.0003
%RSD	9.900	617.8	69.66	192.3	25.74	1.734	3.538	38.01	22.98
#1	.0012	.0001	-.0001	.0002	.0004	.0016	.0015	.0006	-.0013
#2	.0012	.0000	-.0004	.0002	.0006	.0016	.0016	.0006	-.0013
#3	.0010	-.0001	-.0001	-.0001	.0006	.0016	.0016	.0003	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.1870**	**-.0004**	**-.0005**	**.0006**	**.0014**	**.0002**	**-.0054**	**.4489**
Stddev	.0001	.0005	.0008	.0000	.0009	.0013	.0006	.0054	.0057
%RSD	13.75	.2609	211.2	7.577	145.0	95.74	368.9	100.4	1.270
#1	.0005	.1875	-.0010	-.0005	.0016	.0026	-.0004	-.0114	.4521
#2	.0004	.1869	-.0007	-.0006	-.0002	.0015	.0008	-.0011	.4423
#3	.0004	.1865	.0005	-.0005	.0004	-.0000	.0001	-.0036	.4523

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0154**	**.0053**	**.1722**	**15.17**	**.0116**	**.0108**	**.0173**	**.0207**	**.0010**
Stddev	.0083	.0110	.0183	.01	.0003	.0001	.0007	.0003	.0000
%RSD	53.72	208.6	10.60	.0569	2.222	.8455	3.930	1.280	3.788
#1	.0100	-.0066	.1933	15.16	.0118	.0109	.0180	.0210	.0010
#2	.0249	.0074	.1625	15.18	.0117	.0107	.0168	.0206	.0010
#3	.0113	.0151	.1609	15.17	.0113	.0107	.0169	.0205	.0011

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0144**	**.0003**	**.0501**	**.0016**	**.0002**	**.0917**
Stddev	.0001	.0009	.0001	.0007	.0011	.0013	.0001
%RSD	43.76	6.480	33.25	1.308	66.34	629.4	.1277
#1	-.0001	.0152	.0002	.0496	.0004	-.0010	.0916
#2	-.0002	.0147	.0003	.0499	.0026	.0017	.0919
#3	-.0003	.0134	.0004	.0509	.0019	-.0000	.0917

Zoom In Zoom Out

Sample Name: TD37733-1 Acquired: 4/24/2019 13:52:02 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106550.**	**6933.0**	**3983.4**	**9066.2**
Stddev	59.	13.9	2.2	10.2
%RSD	.05499	.20117	.05583	.11203
#1	106520.	6929.2	3984.3	9062.9
#2	106620.	6948.4	3985.0	9058.2
#3	106520.	6921.3	3980.8	9077.6

Zoom In Zoom Out

Sample Name: MP14419-SD1 Acquired: 4/24/2019 13:57:32 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0005**	**-.0007**	**.0004**	**-.0008**	**.0012**	**.0018**	**.0012**	**-.0054**
Stddev	.0012	.0005	.0006	.0008	.0004	.0003	.0002	.0006	.0012
%RSD	216.1	106.9	94.16	187.5	50.46	27.45	9.719	47.29	21.55
#1	.0012	-.0010	-.0014	.0000	-.0012	.0012	.0019	.0007	-.0053
#2	-.0008	.0000	-.0006	-.0001	-.0008	.0016	.0019	.0011	-.0066
#3	.0012	-.0005	-.0001	.0013	-.0004	.0009	.0016	.0018	-.0043

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.1871**	**-.0021**	**.0006**	**.0012**	**.0025**	**.0042**	**-.0447**	**.5082**
Stddev	.0011	.0004	.0030	.0032	.0014	.0071	.0007	.0376	.0108
%RSD	75.92	.2141	139.8	531.2	114.6	289.5	17.86	84.03	2.117
#1	.0016	.1869	-.0045	.0029	.0010	.0010	.0050	-.0018	.4988
#2	.0024	.1869	-.0031	-.0031	-.0001	-.0038	.0040	-.0604	.5058
#3	.0003	.1876	.0012	.0019	.0026	.0102	.0035	-.0720	.5199

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**.0943**	**.1915**	**15.29**	**.0183**	**.0110**	**.0284**	**.0181**	**.0007**
Stddev	.0341	.1392	.1209	.02	.0006	.0007	.0063	.0012	.0003
%RSD	948.3	147.6	63.11	.1347	3.380	6.038	22.16	6.688	42.30
#1	-.0336	.1729	.1131	15.30	.0176	.0115	.0265	.0172	.0005
#2	.0332	-.0664	.1308	15.29	.0189	.0102	.0233	.0176	.0011
#3	.0113	.1765	.3307	15.26	.0183	.0112	.0355	.0195	.0006

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0539**	**.0004**	**.0604**	**.0044**	**.0095**	**.0980**
Stddev	.0009	.0028	.0002	.0157	.0053	.0049	.0031
%RSD	86.93	5.216	40.74	25.99	120.1	51.79	3.113
#1	-.0006	.0555	.0003	.0771	.0051	.0150	.1016
#2	-.0020	.0555	.0003	.0459	-.0012	.0078	.0963
#3	-.0004	.0506	.0006	.0582	.0092	.0056	.0963

Zoom In Zoom Out

Sample Name: MP14419-SD1 Acquired: 4/24/2019 13:57:32 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**107090.**	**6907.7**	**4007.5**	**9197.3**
Stddev	268.	18.6	6.4	17.0
%RSD	.25032	.26908	.15951	.18521
#1	106780.	6886.9	4002.1	9179.4
#2	107260.	6913.2	4005.8	9199.3
#3	107240.	6922.8	4014.5	9213.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 14:03:05 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 2

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.864**	**1.899**	**1.881**	**1.908**	**1.994**	**1.914**	**2.001**	**1.904**	**.2394**
Stddev	.004	.001	.002	.002	.005	.005	.003	.002	.0005
%RSD	.1923	.0532	.0913	.0866	.2445	.2864	.1371	.0921	.1986
#1	1.868	1.898	1.883	1.908	1.998	1.916	2.001	1.906	.2391
#2	1.860	1.899	1.881	1.909	1.995	1.918	2.004	1.905	.2399
#3	1.864	1.900	1.880	1.906	1.988	1.907	1.998	1.903	.2390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.956**	**1.929**	**1.880**	**1.963**	**1.935**	**1.886**	**1.903**	**37.12**	**37.87**
Stddev	.003	.003	.001	.002	.003	.000	.003	.11	.06
%RSD	.1459	.1555	.0512	.1158	.1543	.0218	.1471	.2890	.1590
#1	1.956	1.932	1.880	1.964	1.935	1.887	1.906	37.23	37.89
#2	1.960	1.930	1.881	1.961	1.933	1.886	1.902	37.02	37.91
#3	1.954	1.926	1.879	1.965	1.938	1.886	1.900	37.10	37.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.97**	**37.40**	**37.41**	**37.49**	**1.928**	**1.908**	**4.862**	**1.941**	**1.861**
Stddev	.09	.24	.02	.04	.001	.002	.004	.004	.003
%RSD	.2256	.6291	.0608	.1039	.0741	.1069	.0817	.1866	.1520
#1	37.91	37.23	37.43	37.53	1.929	1.910	4.866	1.945	1.864
#2	38.07	37.67	37.39	37.45	1.927	1.909	4.860	1.938	1.858
#3	37.95	37.30	37.42	37.49	1.928	1.906	4.859	1.940	1.861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 14:03:05 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 2

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.943**	**1.887**	**1.943**	**1.894**	**1.927**	**1.879**	**1.902**
Stddev	.003	.003	.003	.000	.002	.009	.003
%RSD	.1467	.1744	.1591	.0237	.1077	.4733	.1303
#1	1.943	1.891	1.944	1.893	1.929	1.888	1.904
#2	1.946	1.886	1.945	1.893	1.926	1.876	1.902
#3	1.941	1.885	1.939	1.894	1.925	1.871	1.899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102670.**	**6788.7**	**3882.9**	**8312.6**
Stddev	90.	29.9	3.1	1.6
%RSD	.08733	.44037	.07866	.01938
#1	102710.	6822.5	3879.8	8310.8
#2	102560.	6765.8	3883.0	8312.9
#3	102730.	6777.7	3885.9	8314.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 14:08:08 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	F **.0002**	**-.0001**	**.0000**	**-.0001**	**.0002**	**.0002**	**.0003**	**-.0013**
Stddev	.0001	.0000	.0000	.0002	.0005	.0000	.0001	.0002	.0002
%RSD	48.94	21.04	54.45	407.6	405.3	6.051	35.57	60.19	18.86
#1	.0004	.0002	-.0001	.0001	-.0001	.0002	.0002	.0005	-.0016
#2	.0001	.0001	-.0001	.0002	.0003	.0002	.0003	.0004	-.0011
#3	.0002	.0002	-.0000	-.0001	-.0006	.0002	.0001	.0001	-.0012
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0002							
Low Limit		-.0002							

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0002**	**-.0002**	**.0006**	**.0004**	**.0012**	**.0005**	**-.0024**	**-.0025**
Stddev	.0003	.0001	.0008	.0005	.0007	.0011	.0010	.0050	.0005
%RSD	42.91	28.29	449.4	87.78	201.9	91.42	217.4	207.4	20.33
#1	.0005	.0003	-.0009	.0003	.0007	.0010	.0011	.0033	-.0020
#2	.0005	.0001	.0007	.0012	.0009	.0025	-.0007	-.0063	-.0030
#3	.0009	.0002	-.0004	.0003	-.0005	.0003	.0009	-.0042	-.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**-.0072**	**.0233**	**.0060**	**.0022**	**.0002**	**.0009**	**-.0006**	**.0000**
Stddev	.0039	.0133	.0071	.0061	.0001	.0002	.0006	.0004	.0000
%RSD	83.30	184.2	30.67	102.6	5.023	99.00	65.45	57.81	86.42
#1	.0002	.0080	.0313	.0025	.0023	.0003	.0009	-.0004	.0001
#2	.0075	-.0134	.0209	.0023	.0022	-.0000	.0016	-.0004	.0000
#3	.0062	-.0162	.0176	.0131	.0021	.0004	.0004	-.0010	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 14:08:08 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0061**	**.0003**	**.0018**	**.0013**	**.0006**	**.0028**
Stddev	.0000	.0005	.0001	.0007	.0005	.0013	.0007
%RSD	18.03	7.906	31.65	40.36	36.81	229.4	26.17
#1	-.0003	.0059	.0004	.0012	.0010	.0008	.0025
#2	-.0002	.0067	.0004	.0016	.0010	-.0008	.0022
#3	-.0003	.0058	.0002	.0026	.0018	.0017	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106890.**	**6849.7**	**4030.0**	**9269.8**
Stddev	645.	48.0	4.4	4.9
%RSD	.60309	.70029	.10883	.05334
#1	106160.	6886.7	4034.0	9269.7
#2	107380.	6866.9	4030.9	9274.9
#3	107130.	6795.5	4025.3	9265.0

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/24/2019 14:13:41 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1923**	**.0019**	**.0028**	**.0475**	**.0106**	**.0094**	**.0159**	**.0095**	**.0043**
Stddev	.0002	.0001	.0000	.0001	.0005	.0001	.0001	.0003	.0003
%RSD	.1128	4.619	.2712	.3058	4.251	1.190	.6578	3.144	7.639
#1	.1924	.0018	.0028	.0475	.0106	.0093	.0160	.0096	.0040
#2	.1920	.0020	.0028	.0476	.0111	.0094	.0158	.0098	.0046
#3	.1924	.0019	.0028	.0473	.0102	.0095	.0160	.0092	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0513**	**.0206**	**.0072**	**.0090**	**.0028**	**.0086**	**.0060**	**.1792**	**5.005**
Stddev	.0004	.0001	.0011	.0004	.0005	.0008	.0008	.0133	.026
%RSD	.8525	.5754	15.72	4.685	17.16	9.615	13.13	7.423	.5177
#1	.0509	.0205	.0078	.0095	.0029	.0094	.0068	.1926	5.002
#2	.0513	.0207	.0059	.0089	.0023	.0087	.0052	.1791	5.033
#3	.0518	.0207	.0078	.0086	.0033	.0077	.0061	.1660	4.981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1033**	**4.923**	**4.899**	**4.912**	**.0983**	**.0205**	**.2045**	**.0112**	**.0093**
Stddev	.0020	.040	.017	.013	.0005	.0003	.0010	.0006	.0001
%RSD	1.976	.8025	.3397	.2726	.4996	1.526	.4669	4.936	1.157
#1	.1016	4.954	4.888	4.911	.0988	.0206	.2056	.0118	.0094
#2	.1056	4.936	4.918	4.898	.0982	.0202	.2039	.0109	.0092
#3	.1027	4.878	4.891	4.925	.0979	.0208	.2040	.0108	.0092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRI Acquired: 4/24/2019 14:13:41 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0579**	**.0100**	**.0496**	**.0210**	**.0536**	**.0484**
Stddev	.0002	.0008	.0001	.0021	.0012	.0009	.0010
%RSD	2.482	1.441	1.443	4.221	5.557	1.654	2.098
#1	.0098	.0579	.0101	.0491	.0196	.0534	.0482
#2	.0095	.0587	.0098	.0519	.0215	.0546	.0495
#3	.0094	.0571	.0101	.0478	.0218	.0528	.0475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**104390.**	**6744.1**	**3927.3**	**8904.1**
Stddev	465.	30.4	3.5	8.9
%RSD	.44542	.45041	.08903	.10043
#1	104070.	6741.9	3927.4	8912.3
#2	104180.	6714.9	3923.8	8894.6
#3	104920.	6775.5	3930.8	8905.5

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 14:19:09 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0042**	**.0010**	**.0010**	**.0031**	**.0024**	F **-.0001**	**.0035**	**.0042**
Stddev	.0000	.0001	.0002	.0001	.0002	.0002	.0001	.0001
%RSD	1.144	9.904	21.33	2.697	6.694	457.7	1.778	1.704
#1	.0042	.0009	.0009	.0030	.0023	.0001	.0036	.0041
#2	.0042	.0010	.0012	.0032	.0023	-.0003	.0035	.0041
#3	.0042	.0010	.0008	.0032	.0026	.0000	.0034	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0010**	**.0026**	**.0116**	**.0027**	**.0024**	F **.0005**	**.0057**	F **.0004**
Stddev	.0002	.0004	.0001	.0005	.0004	.0006	.0006	.0007
%RSD	16.64	15.95	.4894	16.91	15.39	114.1	10.54	167.8
#1	-.0008	.0022	.0117	.0033	.0025	.0005	.0055	.0007
#2	-.0011	.0026	.0116	.0026	.0020	.0011	.0064	.0009
#3	-.0010	.0030	.0116	.0024	.0027	-.0001	.0053	-.0004
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value	.0020					.0025		.0030
Range	-30.00%					-30.00%		-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1018**	**1.094**	**.0018**	**.1020**	**2.162**	**1.090**	F **.0012**	**.0000**
Stddev	.0061	.003	.0017	.0435	.021	.006	.0004	.0001
%RSD	6.024	.2394	93.03	42.63	.9899	.5566	29.81	469.2
#1	.0974	1.097	.0026	.1505	2.146	1.097	.0008	.0001
#2	.1088	1.095	-.0001	.0665	2.186	1.085	.0015	-.0001
#3	.0991	1.091	.0029	.0891	2.153	1.089	.0012	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None
Value							.0100	
Range							-30.00%	

Zoom In Zoom Out

Sample Name: CRID Acquired: 4/24/2019 14:19:09 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**-.0001**	**-.0001**	**-.0005**	**.0037**	F **.0002**	**.0033**	F **.0008**
Stddev	.0006	.0003	.0000	.0003	.0006	.0001	.0011	.0006
%RSD	17.13	315.5	26.01	52.25	15.59	70.79	34.54	79.95
#1	.0044	-.0003	-.0001	-.0008	.0044	.0003	.0037	.0012
#2	.0034	.0003	-.0001	-.0003	.0033	.0001	.0020	.0001
#3	.0033	-.0003	-.0001	-.0005	.0035	.0001	.0041	.0011
Check ?	None	None	None	None	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value						.0040		.0040
Range						-30.00%		-30.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **.0006**	F **.0027**
Stddev	.0004	.0012
%RSD	72.81	43.03
#1	.0010	.0014
#2	.0001	.0032
#3	.0006	.0037
Check ?	Chk Fail	Chk Fail
Value	.0040	.0040
Range	-30.00%	-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108080.**	**6889.7**	**4039.2**	**9260.1**
Stddev	333.	61.9	5.4	9.7
%RSD	.30790	.89786	.13284	.10516
#1	108400.	6961.1	4033.0	9252.4
#2	107740.	6854.3	4043.0	9256.7
#3	108100.	6853.6	4041.5	9271.0

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/24/2019 14:24:41 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0004**	**-.0005**	**-.0006**	**.0007**	**.0026**	**-.0006**	**.0007**	**-.0037**
Stddev	.0002	.0001	.0003	.0001	.0004	.0001	.0001	.0000	.0004
%RSD	82.49	26.95	58.33	16.96	48.62	3.524	12.72	4.717	11.79
#1	-.0005	.0003	-.0008	-.0007	.0011	.0027	-.0005	.0007	-.0033
#2	-.0002	.0005	-.0004	-.0005	.0004	.0025	-.0006	.0008	-.0041
#3	-.0001	.0004	-.0003	-.0006	.0007	.0026	-.0006	.0007	-.0037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**-.0008**	**.0027**	**-.0011**	**-.0025**	**-.0033**	**.0026**	**477.3**	**355.6**
Stddev	.0004	.0001	.0014	.0007	.0019	.0015	.0021	.4	.2
%RSD	15.24	8.494	52.83	68.34	74.17	43.99	80.68	.0742	.0541
#1	.0028	-.0009	.0020	-.0016	-.0040	-.0050	.0050	477.6	355.8
#2	.0023	-.0008	.0018	-.0014	-.0031	-.0021	.0018	477.5	355.7
#3	.0031	-.0008	.0043	-.0002	-.0004	-.0029	.0010	476.9	355.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**174.4**	**461.8**	**-.3556**	**.0153**	**-.0027**	**-.0011**	**-.0122**	**-.0017**	**-.0028**
Stddev	.3	.8	.0102	.0076	.0012	.0005	.0011	.0013	.0001
%RSD	.1694	.1828	2.860	49.50	44.35	45.30	9.072	73.22	2.591
#1	174.2	461.0	-.3442	.0232	-.0023	-.0007	-.0116	-.0015	-.0028
#2	174.3	461.7	-.3636	.0081	-.0017	-.0016	-.0135	-.0006	-.0028
#3	174.8	462.7	-.3591	.0146	-.0040	-.0009	-.0115	-.0031	-.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 4/24/2019 14:24:41 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0081**	**-.0029**	**-.0213**	**.0051**	**-.0105**	**.0020**
Stddev	.0003	.0023	.0001	.0033	.0013	.0015	.0011
%RSD	32.67	27.82	1.735	15.25	25.35	13.98	52.96
#1	-.0012	.0065	-.0029	-.0185	.0037	-.0121	.0013
#2	-.0008	.0107	-.0029	-.0249	.0054	-.0102	.0015
#3	-.0007	.0072	-.0030	-.0206	.0062	-.0092	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**95217.**	**6627.3**	**3588.3**	**7305.9**
Stddev	171.	27.1	.9	4.0
%RSD	.17921	.40881	.02466	.05481
#1	95298.	6649.8	3588.6	7307.8
#2	95331.	6635.0	3589.0	7301.2
#3	95021.	6597.3	3587.3	7308.5

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/24/2019 14:30:03 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4689**	**.4622**	**.9405**	**.4593**	**.4719**	**.4890**	**.4824**	**.9135**	**1.064**
Stddev	.0008	.0029	.0015	.0005	.0003	.0013	.0011	.0024	.004
%RSD	.1772	.6270	.1550	.1187	.0534	.2726	.2369	.2661	.3877
#1	.4691	.4641	.9420	.4595	.4720	.4903	.4837	.9160	1.066
#2	.4696	.4635	.9391	.4597	.4716	.4876	.4816	.9111	1.059
#3	.4680	.4588	.9404	.4587	.4721	.4889	.4819	.9134	1.066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4787**	**.8865**	**.9904**	**.9011**	**.9090**	**.9723**	**1.005**	**475.9**	**355.7**
Stddev	.0012	.0023	.0040	.0016	.0027	.0048	.002	.6	1.1
%RSD	.2425	.2631	.4013	.1815	.3018	.4927	.1686	.1263	.2962
#1	.4799	.8884	.9949	.9027	.9117	.9776	1.006	476.5	356.9
#2	.4786	.8872	.9892	.9010	.9089	.9683	1.006	475.3	355.5
#3	.4776	.8839	.9872	.8995	.9062	.9708	1.003	475.8	354.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**180.6**	**469.4**	**-.3885**	**.0267**	**.4425**	**.4501**	**.4744**	**.4402**	**.4663**
Stddev	.5	2.6	.0112	.0093	.0022	.0007	.0010	.0016	.0004
%RSD	.2972	.5566	2.872	34.83	.5016	.1614	.2184	.3581	.0871
#1	181.0	471.3	-.3760	.0243	.4450	.4509	.4756	.4405	.4665
#2	180.8	470.5	-.3920	.0369	.4418	.4499	.4741	.4416	.4665
#3	180.0	466.4	-.3975	.0188	.4408	.4495	.4737	.4385	.4658
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 4/24/2019 14:30:03 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4820**	**.4539**	**.4681**	**.4554**	**.4804**	**.4881**	**.4794**
Stddev	.0007	.0014	.0006	.0036	.0024	.0008	.0016
%RSD	.1503	.2994	.1266	.7810	.4987	.1658	.3358
#1	.4826	.4553	.4687	.4521	.4804	.4889	.4795
#2	.4812	.4526	.4675	.4550	.4780	.4873	.4778
#3	.4821	.4538	.4682	.4591	.4827	.4881	.4810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**95125.**	**6636.4**	**3595.5**	**7338.0**
Stddev	223.	51.7	5.8	8.5
%RSD	.23455	.77961	.16034	.11521
#1	95000.	6597.6	3590.0	7328.4
#2	95382.	6616.4	3595.1	7341.3
#3	94991.	6695.1	3601.5	7344.3

Zoom In Zoom Out

Sample Name: MP14400-MB1CONF Acquired: 4/24/2019 14:35:04 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**-.0000**	**.0002**	**.0010**	**.0010**	**.0008**	**.0013**	**-.0012**
Stddev	.0001	.0000	.0000	.0001	.0002	.0001	.0000	.0002	.0002
%RSD	24.46	37.78	71.06	78.82	22.11	10.43	3.253	14.27	19.82
#1	.0003	.0001	-.0000	.0002	.0009	.0009	.0008	.0014	-.0014
#2	.0005	.0001	-.0000	.0000	.0008	.0011	.0007	.0011	-.0013
#3	.0004	.0001	-.0001	.0002	.0012	.0009	.0008	.0014	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0119**	**-.0000**	**.0008**	**.0012**	**.0016**	**-.0006**	**.0489**	**.1551**
Stddev	.0001	.0002	.0008	.0007	.0005	.0007	.0013	.0080	.0033
%RSD	37.60	1.297	1990.	89.73	38.29	41.62	220.0	16.47	2.113
#1	.0003	.0119	-.0003	.0012	.0017	.0017	.0008	.0579	.1583
#2	.0003	.0120	-.0007	.0013	.0007	.0009	-.0008	.0460	.1551
#3	.0005	.0117	.0008	-.0000	.0012	.0021	-.0018	.0426	.1518

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0501**	**.0293**	**.0098**	**.0826**	**.0021**	**.0002**	**.0095**	**.0172**	**.0003**
Stddev	.0040	.0120	.0217	.0032	.0002	.0000	.0008	.0002	.0001
%RSD	8.039	41.01	221.4	3.853	10.81	13.37	8.554	.9394	36.07
#1	.0546	.0159	-.0077	.0860	.0019	.0003	.0086	.0172	.0003
#2	.0489	.0330	.0342	.0797	.0020	.0002	.0100	.0170	.0004
#3	.0468	.0391	.0030	.0820	.0024	.0002	.0100	.0174	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0026**	**.0015**	**.0149**	**.0013**	**.0006**	**.0202**
Stddev	.0000	.0005	.0001	.0010	.0002	.0010	.0007
%RSD	1652.	19.80	8.071	6.958	13.07	182.6	3.402
#1	.0000	.0025	.0015	.0139	.0011	-.0004	.0197
#2	-.0000	.0021	.0013	.0159	.0015	.0017	.0209
#3	-.0000	.0031	.0016	.0147	.0013	.0004	.0199

Zoom In Zoom Out

Sample Name: MP14400-MB1CONF Acquired: 4/24/2019 14:35:04 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**108840.**	**7029.3**	**4061.1**	**9395.4**
Stddev	394.	9.4	5.2	6.2
%RSD	.36200	.13390	.12892	.06637
#1	109080.	7039.8	4066.9	9395.9
#2	108390.	7021.5	4059.5	9401.4
#3	109060.	7026.8	4056.8	9388.9

Zoom In Zoom Out

Sample Name: MP14400-B1CONF Acquired: 4/24/2019 14:40:33 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.729**	**1.767**	**1.741**	**1.743**	**1.849**	**1.769**	**1.852**	**1.741**
Stddev	.004	.003	.002	.001	.002	.002	.001	.000
%RSD	.2241	.1641	.1290	.0733	.1176	.1244	.0466	.0241
#1	1.731	1.767	1.741	1.742	1.847	1.771	1.853	1.742
#2	1.732	1.770	1.744	1.744	1.851	1.770	1.851	1.742
#3	1.725	1.765	1.739	1.742	1.849	1.767	1.852	1.741

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2358**	**1.795**	**1.810**	**1.764**	**1.838**	**1.789**	**1.736**	**1.794**
Stddev	.0007	.001	.004	.004	.007	.001	.001	.002
%RSD	.2886	.0322	.1946	.2264	.3705	.0543	.0636	.1156
#1	.2366	1.796	1.807	1.765	1.845	1.790	1.737	1.792
#2	.2357	1.796	1.810	1.767	1.833	1.789	1.735	1.796
#3	.2352	1.795	1.814	1.759	1.835	1.788	1.737	1.793

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.96**	**22.45**	**22.55**	**21.96**	**22.12**	**22.18**	**1.730**	**1.786**
Stddev	.07	.11	.00	.08	.08	.07	.001	.001
%RSD	.3159	.4933	.0136	.3509	.3554	.3375	.0601	.0546
#1	21.96	22.50	22.55	21.89	22.06	22.20	1.730	1.787
#2	22.03	22.51	22.55	22.04	22.21	22.24	1.732	1.785
#3	21.89	22.32	22.55	21.95	22.09	22.10	1.730	1.787

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0744**	**1.867**	**1.723**	**1.837**	**1.194**	**1.835**	W **-.0394**	**.0045**
Stddev	.0009	.002	.003	.002	.006	.001	.0010	.0008
%RSD	1.170	.1246	.1467	.1044	.4718	.0260	2.563	17.65
#1	.0738	1.866	1.723	1.839	1.188	1.835	-.0403	.0036
#2	.0740	1.870	1.726	1.837	1.196	1.835	-.0383	.0052
#3	.0754	1.866	1.721	1.835	1.199	1.834	-.0396	.0047

Zoom In Zoom Out

Sample Name: MP14400-B1CONF Acquired: 4/24/2019 14:40:33 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0001**	**1.741**
Stddev	.0009	.005
%RSD	1645.	.2807
#1	.0011	1.746
#2	-.0003	1.742
#3	-.0006	1.736

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**104640.**	**6855.3**	**3948.8**	**8628.5**
Stddev	233.	28.2	2.3	7.3
%RSD	.22242	.41170	.05780	.08429
#1	104850.	6879.5	3949.0	8624.6
#2	104390.	6824.3	3951.0	8636.9
#3	104690.	6862.3	3946.4	8624.0

Zoom In Zoom Out

Sample Name: JC86406-1 7 Acquired: 4/24/2019 14:45:36 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5270**	**.0064**	**-.0013**	**.0420**	**.4425**	**.1180**	**.7431**	**.1131**
Stddev	.0011	.0001	.0003	.0003	.0024	.0008	.0020	.0008
%RSD	.2033	1.939	26.00	.6277	.5408	.7027	.2645	.7096
#1	.5262	.0064	-.0015	.0423	.4412	.1185	.7408	.1125
#2	.5266	.0065	-.0009	.0420	.4452	.1184	.7446	.1140
#3	.5282	.0063	-.0015	.0417	.4410	.1170	.7438	.1128

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **-.0076**	**.5675**	**.3760**	**.1028**	**.0004**	**.1201**	**-.0054**	**.0075**
Stddev	.0002	.0015	.0006	.0018	.0008	.0013	.0014	.0017
%RSD	2.360	.2603	.1534	1.718	175.1	1.048	26.89	22.23
#1	-.0078	.5659	.3763	.1031	-.0004	.1187	-.0041	.0082
#2	-.0076	.5688	.3753	.1009	.0007	.1211	-.0070	.0087
#3	-.0075	.5679	.3763	.1043	.0010	.1205	-.0051	.0056

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**301.1**	**17.13**	**328.2**	**11.59**	**9.382**	**.9914**	**.0300**	**.0123**
Stddev	1.0	.06	1.0	.17	.024	.0188	.0010	.0007
%RSD	.3220	.3723	.2967	1.474	.2594	1.900	3.296	5.321
#1	300.8	17.08	327.6	11.43	9.383	.9922	.0307	.0131
#2	300.3	17.11	327.8	11.57	9.406	.9721	.0303	.0120
#3	302.2	17.20	329.4	11.77	9.358	1.010	.0289	.0118

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.076**	**.0257**	**.1712**	**2.266**	**.0466**	**.1460**	**.5370**	**-.0008**
Stddev	.013	.0007	.0006	.005	.0018	.0008	.0015	.0012
%RSD	.6050	2.857	.3263	.2155	3.906	.5193	.2777	149.7
#1	2.090	.0260	.1709	2.269	.0484	.1451	.5357	-.0013
#2	2.074	.0262	.1708	2.268	.0465	.1464	.5366	-.0016
#3	2.065	.0248	.1718	2.260	.0448	.1465	.5386	.0006

Zoom In Zoom Out

Sample Name: JC86406-1 7 Acquired: 4/24/2019 14:45:36 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1807**	**2.190**
Stddev	.0037	.006
%RSD	2.069	.2711
#1	.1785	2.185
#2	.1785	2.190
#3	.1850	2.197

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**105820.**	**7075.2**	**4053.6**	**8664.0**
Stddev	267.	13.2	5.3	6.1
%RSD	.25276	.18690	.13084	.07043
#1	106010.	7068.8	4059.5	8671.0
#2	105510.	7090.4	4049.1	8661.5
#3	105940.	7066.5	4052.2	8659.5

Zoom In Zoom Out

Sample Name: JC86600-2 Acquired: 4/24/2019 14:50:53 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: DUE

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8044**	**.0090**	**.0001**	**.1368**	**.2024**	**.3390**	**30.35**	**.2546**	**-.0038**
Stddev	.0008	.0005	.0008	.0014	.0043	.0018	.07	.0009	.0014
%RSD	.0935	5.248	1229.	1.015	2.118	.5345	.2381	.3445	37.92
#1	.8040	.0085	.0003	.1377	.2020	.3371	30.42	.2546	-.0034
#2	.8040	.0091	-.0008	.1376	.1984	.3407	30.36	.2555	-.0026
#3	.8053	.0094	.0007	.1352	.2069	.3391	30.28	.2537	-.0054

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2562**	**.9523**	**.1195**	**-.0022**	**.3702**	**-.0027**	**.0037**	**192.0**	**60.51**
Stddev	.0027	.0037	.0019	.0051	.0038	.0076	.0048	.2	.03
%RSD	1.073	.3937	1.622	226.4	1.027	284.2	128.8	.1280	.0446
#1	.2594	.9500	.1173	-.0048	.3740	-.0048	-.0006	191.8	60.49
#2	.2550	.9567	.1208	-.0055	.3664	.0058	.0029	192.2	60.50
#3	.2543	.9504	.1204	.0036	.3701	-.0090	.0089	191.9	60.54

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**298.3**	**94.82**	**12.57**	**4.894**	**.0313**	**.0404**	**2.325**	**.0256**	**.1086**
Stddev	1.2	.32	.08	.039	.0032	.0002	.039	.0011	.0001
%RSD	.4179	.3336	.6413	.7871	10.22	.5964	1.675	4.194	.0630
#1	299.5	95.07	12.48	4.899	.0276	.0406	2.363	.0252	.1086
#2	298.4	94.92	12.64	4.929	.0333	.0402	2.327	.0268	.1087
#3	297.0	94.46	12.60	4.853	.0330	.0403	2.286	.0248	.1086

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5126**	**.0540**	**.0241**	**1.597**	**.0038**	**.2909**	**7.011**
Stddev	.0029	.0018	.0017	.013	.0029	.0033	.010
%RSD	.5709	3.242	7.188	.8095	76.88	1.137	.1411
#1	.5156	.0560	.0238	1.607	.0042	.2873	7.019
#2	.5124	.0527	.0260	1.603	.0064	.2919	7.000
#3	.5098	.0533	.0226	1.583	.0007	.2937	7.013

Zoom In Zoom Out

Sample Name: JC86600-2 Acquired: 4/24/2019 14:50:53 Type: Unk
Method: SGS 3(v317) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: DUE

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**106440.**	**6960.7**	**4031.2**	**8826.5**
Stddev	80.	12.9	5.1	14.0
%RSD	.07531	.18588	.12591	.15897
#1	106350.	6946.0	4028.3	8826.2
#2	106500.	6970.4	4028.2	8812.7
#3	106480.	6965.7	4037.0	8840.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 14:56:13 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 3

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.844**	**1.888**	**1.859**	**1.906**	**1.986**	**1.908**	**1.995**	**1.890**	**.2385**
Stddev	.003	.002	.001	.003	.004	.003	.003	.004	.0006
%RSD	.1555	.1109	.0675	.1796	.1898	.1765	.1697	.1839	.2333
#1	1.847	1.890	1.860	1.910	1.982	1.905	1.992	1.894	.2379
#2	1.841	1.886	1.859	1.904	1.988	1.912	1.995	1.888	.2388
#3	1.843	1.888	1.857	1.904	1.989	1.906	1.999	1.888	.2388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.953**	**1.924**	**1.869**	**1.948**	**1.928**	**1.868**	**1.887**	**36.58**	**37.54**
Stddev	.004	.003	.004	.001	.005	.002	.006	.10	.06
%RSD	.2327	.1376	.2307	.0520	.2843	.1258	.3161	.2832	.1653
#1	1.948	1.927	1.867	1.948	1.934	1.870	1.892	36.70	37.61
#2	1.955	1.923	1.874	1.949	1.928	1.865	1.890	36.53	37.50
#3	1.956	1.922	1.866	1.947	1.923	1.868	1.880	36.52	37.51
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.77**	**37.20**	**37.19**	**37.13**	**1.916**	**1.898**	**4.815**	**1.927**	**1.841**
Stddev	.08	.07	.09	.09	.001	.002	.007	.002	.002
%RSD	.2104	.1750	.2358	.2310	.0605	.0961	.1421	.0837	.0964
#1	37.86	37.16	37.28	37.22	1.917	1.900	4.822	1.927	1.843
#2	37.74	37.27	37.10	37.05	1.917	1.897	4.815	1.926	1.840
#3	37.71	37.16	37.20	37.12	1.915	1.896	4.809	1.929	1.841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 4/24/2019 14:56:13 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: 3

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.930**	**1.874**	**1.938**	**1.868**	**1.910**	**1.863**	**1.870**
Stddev	.003	.005	.004	.004	.002	.002	.002
%RSD	.1663	.2563	.2207	.2015	.0970	.1215	.0993
#1	1.927	1.868	1.933	1.871	1.909	1.865	1.872
#2	1.933	1.877	1.941	1.868	1.912	1.860	1.870
#3	1.930	1.877	1.940	1.864	1.908	1.863	1.868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**102700.**	**6818.8**	**3901.2**	**8334.7**
Stddev	51.	13.5	2.8	7.4
%RSD	.05004	.19772	.07240	.08907
#1	102760.	6803.4	3900.3	8329.5
#2	102680.	6824.1	3904.4	8343.2
#3	102660.	6828.8	3899.0	8331.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 4/24/2019 15:01:15 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0001**	**.0001**	**.0000**	**-.0000**	**.0002**	**.0002**	**-.0018**
Stddev	.0002	.0001	.0002	.0001	.0001	.0004	.0001	.0002	.0001
%RSD	190.1	65.03	191.5	141.7	682.5	1389.	32.79	106.0	3.468
#1	.0000	.0001	.0000	-.0000	-.0001	-.0005	.0002	.0002	-.0018
#2	-.0000	.0000	-.0000	.0001	.0002	.0001	.0002	.0003	-.0018
#3	.0004	.0002	-.0003	.0003	.0000	.0002	.0001	-.0000	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0003**	**-.0007**	**.0007**	**-.0001**	**-.0006**	**-.0000**	**-.0024**	**-.0022**
Stddev	.0001	.0000	.0004	.0005	.0010	.0012	.0012	.0077	.0013
%RSD	25.69	12.28	56.61	77.70	1426.	187.6	4148.	325.8	60.06
#1	.0005	.0003	-.0009	.0010	.0009	-.0015	.0007	.0055	-.0036
#2	.0004	.0003	-.0002	.0001	-.0001	.0007	-.0014	-.0028	-.0017
#3	.0007	.0003	-.0010	.0010	-.0011	-.0011	.0006	-.0098	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055**	**-.0089**	**.0315**	**.0028**	**.0022**	**.0003**	**.0009**	**-.0001**	**.0001**
Stddev	.0043	.0253	.0258	.0070	.0003	.0001	.0003	.0001	.0001
%RSD	78.74	285.2	81.96	254.1	15.92	44.20	33.04	145.7	50.17
#1	.0063	-.0212	.0152	.0105	.0026	.0003	.0007	-.0002	.0001
#2	.0093	.0202	.0180	-.0031	.0019	.0002	.0008	.0000	.0002
#3	.0008	-.0256	.0613	.0009	.0020	.0004	.0012	-.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In
Zoom Out

Sample Name: CCB Acquired: 4/24/2019 15:01:15 Type: QC
Method: SGS 3(v317) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0056**	**.0002**	**.0012**	**.0012**	**.0012**	**.0037**
Stddev	.0002	.0005	.0000	.0005	.0010	.0007	.0005
%RSD	99.76	9.170	21.02	44.25	81.84	57.87	12.39
#1	-.0003	.0052	.0002	.0007	.0023	.0019	.0039
#2	-.0000	.0061	.0002	.0018	.0004	.0012	.0032
#3	-.0001	.0054	.0002	.0012	.0010	.0005	.0040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**107390.**	**6879.8**	**4045.2**	**9297.6**
Stddev	334.	61.4	8.6	15.4
%RSD	.31070	.89239	.21141	.16564
#1	107570.	6921.3	4038.9	9292.3
#2	107000.	6809.3	4041.7	9285.6
#3	107590.	6908.8	4054.9	9315.0

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	☒	3	Mg	0.000001	0.000000	No
			Al	0.000002	0.000000	No
			Zr	0.000727	0.000000	No
Be 313.042 {108}	☒	9	V	0.000221	0.000000	No
			Mo	-0.000030	0.000000	No
			Ti	-0.000580	0.000000	No
			Mn	-0.000018	0.000000	No
			Ni	0.000001	0.000000	No
			Ca	-0.000000	0.000000	No
			Cu	0.000014	0.000000	No
			Zn	-0.000010	0.000000	No
			Fe	-0.000002	0.000000	No
Cd 228.802 {448}	☒	13	As	0.003460	0.000000	No
			Ni	-0.001200	0.000000	No
			Fe	-0.000010	0.000000	No
			V	0.000110	0.000000	No
			Ba	0.000054	0.000000	No
			Co	-0.000709	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	0.000014	0.000000	No
			Cr	0.000007	0.000000	No
			Cu	0.000024	0.000000	No
			Al	0.000000	0.000000	No
			Mo	0.000004	0.000000	No
			W	0.000000	0.000000	No
Co 228.616 {448}	☒	9	Fe	-0.000001	0.000000	No
			Cr	-0.000046	0.000000	No
			Mo	-0.001750	0.000000	No
			Ni	0.000084	0.000000	No
			Ti	0.002220	0.000000	No
			W	0.000160	0.000000	No
			Cd	-0.000188	0.000000	No
			Ca	0.000000	0.000000	No
			As	0.000150	0.000000	No
Cr 267.716 {126}	☒	11	Mn	0.000474	0.000000	No
			Mo	0.000033	0.000000	No
			Fe	-0.000009	0.000000	No
			Cd	-0.000050	0.000000	No
			Al	-0.000000	0.000000	No
			Ca	0.000002	0.000000	No
			Mg	0.000001	0.000000	No
			Ti	0.000050	0.000000	No
			Ba	0.000013	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
Cu 324.754 {104}2	☒	17	Cr	0.000000	0.000000	No
			V	-0.000408	0.000000	No
			Mo	0.000572	0.000000	No
			Ti	-0.000330	0.000000	No
			Fe	-0.000127	0.000000	No
			Al	0.000000	0.000000	No
			Sn	-0.000097	0.000000	No
			Co	-0.000980	0.000000	No
			Zr	0.000100	0.000000	No
			Si	-0.000002	0.000000	No
			Mn	-0.000072	0.000000	No
			Se	0.000050	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ag	0.000166	0.000000	No
			Sb	0.000024	0.000000	No
			Pb	0.000040	0.000000	No
			Be	-0.000031	0.000000	No
			W	0.000000	0.000000	No
Mn 257.610 {131}	☒	6	Fe	-0.000094	0.000000	No
			Si	0.000044	0.000000	No
			Ba	0.000012	0.000000	No
			Ni	0.000028	0.000000	No
			Mo	0.000000	0.000000	No
			Cr	-0.000114	0.000000	No
Ni 231.604 {446}	☒	11	Fe	0.000030	0.000000	No
			Zn	-0.000021	0.000000	No
			Be	-0.000112	0.000000	No
			Co	-0.000360	0.000000	No
			Tl	0.000209	0.000000	No
			V	-0.000032	0.000000	No
			Cu	0.000100	0.000000	No
			Cr	-0.000014	0.000000	No
			Si	-0.000030	0.000000	No
			Sn	0.000079	0.000000	No
			W	0.000830	0.000000	No
Ag 328.068 {103}	☒	15	Mn	-0.000009	0.000000	No
			Mo	-0.000154	0.000000	No
			Ti	-0.000213	0.000000	No
			Fe	-0.000305	0.000000	No
			V	-0.000662	0.000000	No
			Zn	0.000170	0.000000	No
			Ca	-0.000004	0.000000	No
			Al	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Ba	-0.000189	0.000000	No
			Cr	-0.000038	0.000000	No
			Zr	0.005170	0.000000	No
			Sn	-0.000100	0.000000	No
			W	0.000000	0.000000	No
			K	-0.000080	0.000000	No
V 292.402 {115}	☒	7	Ti	0.000776	0.000000	No
			Mo	-0.013400	0.000000	No
			Fe	0.000010	0.000000	No
			Sr	0.000000	0.000000	No
			Cr	-0.002590	0.000000	No
			Mn	-0.002844	0.000000	No
			W	0.000050	0.000000	No
Zn 206.200 {464}	☒	15	Cr	-0.000874	0.000000	No
			Mo	-0.000228	0.000000	No
			Fe	0.000010	0.000000	No
			Al	0.000000	0.000000	No
			Si	0.000065	0.000000	No
			Ba	-0.000060	0.000000	No
			Ca	0.000004	0.000000	No
			Sr	0.000017	0.000000	No
			Sn	0.000069	0.000000	No
			Cu	0.000056	0.000000	No
			As	-0.000050	0.000000	No
			Be	0.000071	0.000000	No
			Bi	-0.000400	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				W	0.000000	0.000000	No
				Ti	0.000030	0.000000	No
	As 189.042 {478}	☒	23	Al	-0.000001	0.000000	No
				Fe	-0.000143	0.000000	No
				Ca	0.000001	0.000000	No
				Mn	-0.000010	0.000000	No
				Mo	0.002863	0.000000	No
				Cr	0.000590	0.000000	No
				V	0.000052	0.000000	No
				Co	-0.000029	0.000000	No
				W	0.000000	0.000000	No
				Sn	-0.000123	0.000000	No
				Cd	-0.000194	0.000000	No
				Tl	0.000385	0.000000	No
				Be	-0.000017	0.000000	No
				Mg	0.000002	0.000000	No
				Si	0.000007	0.000000	No
				Zn	0.000070	0.000000	No
				Sr	-0.000080	0.000000	No
				Zr	0.000074	0.000000	No
				Ti	0.000009	0.000000	No
				Cu	0.000077	0.000000	No
				K	0.000000	0.000000	No
				B	-0.000030	0.000000	No
				S	0.000005	0.000000	No
	Tl 190.856 {477}	☒	24	Cr	0.000289	0.000000	No
				Mo	-0.002500	0.000000	No
				Al	-0.000004	0.000000	No
				Fe	-0.000052	0.000000	No
				V	-0.017200	0.000000	No
				Mn	0.001620	0.000000	No
				Si	-0.000016	0.000000	No
				Ca	-0.000003	0.000000	No
				Ti	-0.003000	0.000000	No
				Mg	-0.000000	0.000000	No
				Co	0.004840	0.000000	No
				Sr	-0.000222	0.000000	No
				B	0.000120	0.000000	No
				Ba	0.000110	0.000000	No
				Zn	0.000025	0.000000	No
				As	0.000015	0.000000	No
				Ni	0.000051	0.000000	No
				Cu	-0.000032	0.000000	No
				W	0.000000	0.000000	No
				Sn	-0.000080	0.000000	No
				Se	0.000040	0.000000	No
				S	0.000010	0.000000	No
				K	0.000000	0.000000	No
				P	0.000000	0.000000	No
	Pb 220.353 {453}	☒	23	Al	-0.000126	0.000000	No
				Fe	0.000030	0.000000	No
				Ca	-0.000007	0.000000	No
				Mn	0.000145	0.000000	No
				Zn	-0.000036	0.000000	No
				Mo	-0.000670	0.000000	No
				Cu	0.000410	0.000000	No
				V	0.000013	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Co	0.000116	0.000000	No
			Ti	0.000060	0.000000	No
			Si	0.000116	0.000000	No
			Ba	-0.000012	0.000000	No
			Sb	0.000006	0.000000	No
			Sr	-0.000050	0.000000	No
			W	0.000000	0.000000	No
			Mg	0.000007	0.000000	No
			Cd	0.000476	0.000000	No
			Zr	-0.000300	0.000000	No
			Ni	0.000320	0.000000	No
			S	-0.000010	0.000000	No
			Se	0.000036	0.000000	No
			As	0.000200	0.000000	No
			Cr	-0.000150	0.000000	No
Se 196.090 {472}	☒	22	Al	0.000001	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	0.000651	0.000000	No
			Mo	0.000277	0.000000	No
			Fe	-0.000169	0.000000	No
			Co	-0.000729	0.000000	No
			V	0.000207	0.000000	No
			Sr	-0.000008	0.000000	No
			Cu	-0.000113	0.000000	No
			W	0.020000	0.000000	No
			Si	0.000157	0.000000	No
			Tl	0.000180	0.000000	No
			Be	-0.000143	0.000000	No
			Zn	-0.000250	0.000000	No
			B	-0.000141	0.000000	No
			Ti	0.000016	0.000000	No
			Cd	0.000090	0.000000	No
			Zr	-0.000280	0.000000	No
			Ba	0.000180	0.000000	No
			Mg	-0.000002	0.000000	No
			Cr	-0.000039	0.000000	No
			S	-0.000012	0.000000	No
Sb 206.833 {463}	☒	15	Fe	-0.000008	0.000000	No
			Al	-0.000011	0.000000	No
			Ca	-0.000006	0.000000	No
			Ni	-0.001077	0.000000	No
			Cr	0.020270	0.000000	No
			V	-0.001909	0.000000	No
			Zn	-0.000200	0.000000	No
			Mo	-0.000830	0.000000	No
			Ti	0.001000	0.000000	No
			Sn	-0.015200	0.000000	No
			Mg	0.000004	0.000000	No
			Zr	-0.000627	0.000000	No
			Sr	0.000209	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000000	0.000000	No
Al 396.152 { 85}	☒	5	Si	0.000913	0.000000	No
			Ca	0.000078	0.000000	No
			Mo	0.046534	0.000000	No
			Zr	-0.006000	0.000000	No
			Ti	-0.000017	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ca 317.933 {106}	☒	13	Fe	0.000130	0.000000	No
			W	0.003960	0.000000	No
			Tl	0.004950	0.000000	No
			Be	0.001840	0.000000	No
			Ba	0.003500	0.000000	No
			Cu	-0.001800	0.000000	No
			Cd	0.003700	0.000000	No
			Ni	0.001513	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.002000	0.000000	No
			Co	0.000540	0.000000	No
			Cr	0.000640	0.000000	No
			Al	0.000026	0.000000	No
Fe 259.940 {130}	☒	13	Co	0.000004	0.000000	No
			Si	-0.000100	0.000000	No
			Tl	-0.002590	0.000000	No
			Se	-0.000050	0.000000	No
			Cr	-0.000566	0.000000	No
			Mn	-0.001433	0.000000	No
			V	-0.000064	0.000000	No
			Cu	0.000953	0.000000	No
			K	-0.000200	0.000000	No
			Zn	0.000046	0.000000	No
			Ti	-0.000631	0.000000	No
			Ca	0.000020	0.000000	No
			Ba	0.001000	0.000000	No
Mg 279.079 {121}	☒	1	Mo	-0.020780	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000340	0.000000	No
			Al	0.000301	0.000000	No
			Ca	0.000448	0.000000	No
			Mn	0.001430	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Na	0.000300	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.010000	0.000000	No
			Mg	0.000400	0.000000	No
Na 589.592 { 57}	☒	5	K	0.000038	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000055	0.000000	No
			Al	0.000040	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.037210	0.000000	No
Mo 202.030 {467}	☒	5	Fe	-0.000010	0.000000	No
			Mg	-0.000001	0.000000	No
			Ca	0.000003	0.000000	No
			W	0.000000	0.000000	No
			V	-0.000230	0.000000	No
Si 212.412 {459}	☒	14	Sr	0.000366	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	0.028950	0.000000	No
			Ti	0.006320	0.000000	No
			Al	0.000012	0.000000	No
			Cd	0.001043	0.000000	No
			Ba	0.000170	0.000000	No
			Fe	0.000040	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Sn	0.002213	0.000000	No
			Zn	0.000385	0.000000	No
			As	-0.000560	0.000000	No
			Pb	0.000471	0.000000	No
			V	0.006165	0.000000	No
			W	-0.025000	0.000000	No
Sn 189.989 {478}	☒	6	Ti	-0.000621	0.000000	No
			Mo	0.000011	0.000000	No
			Fe	0.000005	0.000000	No
			Mn	0.000060	0.000000	No
			Si	0.000089	0.000000	No
			W	-0.010000	0.000000	No
Sr 407.771 { 83}	☒	2	Fe	0.000002	0.000000	No
			Ca	0.000023	0.000000	No
Ti 334.904 {101}	☒	4	Cr	-0.000084	0.000000	No
			Mo	0.001569	0.000000	No
			Si	0.000035	0.000000	No
			Ca	-0.000003	0.000000	No
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
In 230.606 {446}*	☒	None				
W 207.911 {462}	☒	25	Al	0.000002	0.000000	No
			Si	-0.000900	0.000000	No
			Fe	-0.000007	0.000000	No
			As	-0.000200	0.000000	No
			Mg	0.000000	0.000000	No
			Mn	-0.000110	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.012200	0.000000	No
			Sn	0.000078	0.000000	No
			Zr	-0.020000	0.000000	No
			B	-0.001000	0.000000	No
			Sb	-0.003000	0.000000	No
			Co	0.000041	0.000000	No
			Ni	-0.000263	0.000000	No
			Be	-0.000130	0.000000	No
			Se	-0.000080	0.000000	No
			Cu	-0.000118	0.000000	No
			Ba	-0.000090	0.000000	No
			Tl	-0.000110	0.000000	No
			Ag	0.000224	0.000000	No
Zr 339.198 { 99}	☒	9	Mo	0.000323	0.000000	No
			Ti	-0.000010	0.000000	No
			Fe	-0.000060	0.000000	No
			Si	0.000070	0.000000	No
			Bi	0.000295	0.000000	No
			Cr	-0.000900	0.000000	No
			V	0.000200	0.000000	No
			W	0.019000	0.000000	No
			Sn	-0.000400	0.000000	No
S 182.034 {485}	☒	11	Ca	0.000001	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Mo	-0.000040	0.000000	No
				Al	-0.000110	0.000000	No
				Fe	-0.000023	0.000000	No
				Mn	0.003900	0.000000	No
				W	0.000000	0.000000	No
				Zn	-0.001538	0.000000	No
				Cr	-0.000200	0.000000	No
				Mg	0.000015	0.000000	No
				Ti	0.000300	0.000000	No
				Li	0.000200	0.000000	No
	Bi 223.061 {451}	☒	9	V	-0.000680	0.000000	No
				Co	-0.002200	0.000000	No
				Ca	-0.000005	0.000000	No
				Mg	-0.000002	0.000000	No
				W	0.000000	0.000000	No
				Cu	-0.001186	0.000000	No
				Fe	0.000097	0.000000	No
				Cr	0.001500	0.000000	No
				Ti	-0.004530	0.000000	No
	Li 670.784 { 50}	☒	1	Ca	0.000051	0.000000	No
	P 177.495 {490}	☒	2	Mn	-0.005600	0.000000	No
				Ca	0.000034	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ba 455.403 { 74}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.004632	1.918555	0.000000	1.000000
Be 313.042 {108}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000268	1.600805	0.000000	1.000000
Cd 228.802 {448}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000339	0.969040	0.000000	1.000000
Co 228.616 {448}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000366	0.528112	0.000000	1.000000
Cr 267.716 {126}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000005	0.050009	0.000000	1.000000
Cu 324.754 {104}2	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.002303	0.189393	0.000000	1.000000
Mn 257.610 {131}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000011	0.295301	0.000000	1.000000
Ni 231.604 {446}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000157	0.376294	0.000000	1.000000
Ag 328.068 {103}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000439	0.094877	0.000000	1.000000
V 292.402 {115}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000004	0.099716	0.000000	1.000000
Zn 206.200 {464}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000027	1.317393	0.000000	1.000000
As 189.042 {478}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000276	0.136831	0.000000	1.000000
Tl 190.856 {477}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000195	0.067349	0.000000	1.000000
Pb 220.353 {453}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000424	0.182750	0.000000	1.000000
Se 196.090 {472}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000136	0.107050	0.000000	1.000000
Sb 206.833 {463}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000513	0.196956	0.000000	1.000000
Al 396.152 { 85}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000830	0.034635	0.000000	1.000000
Ca 317.933 {106}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.004620	0.047537	0.000000	1.000000
Fe 259.940 {130}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000060	0.017126	0.000000	1.000000
Mg 279.079 {121}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000046	0.003471	0.000000	1.000000
K 766.490 { 44}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.004880	0.033136	0.000000	1.000000
Na 589.592 { 57}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.002038	0.097838	0.000000	1.000000
B 208.959 {462}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000178	0.233209	0.000000	1.000000
Mo 202.030 {467}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000105	0.977283	0.000000	1.000000
Si 212.412 {459}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.002849	0.255706	0.000000	1.000000
Sn 189.989 {478}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000134	0.223357	0.000000	1.000000
Sr 407.771 { 83}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000821	3.626564	0.000000	1.000000
Ti 334.904 {101}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000000	0.121437	0.000000	1.000000
Y 360.073 { 94}*	4/25/2019 8:04:24	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	4/25/2019 8:04:24	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	4/25/2019 8:04:24	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	4/25/2019 8:04:24	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000800	0.490930	0.000000	1.000000
Zr 339.198 { 99}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.000173	0.316613	0.000000	1.000000
S 182.034 {485}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.001720	0.060193	0.000000	1.000000
Bi 223.061 {451}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.001070	0.237065	0.000000	1.000000
Li 670.784 { 50}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	0.000511	0.672088	0.000000	1.000000
P 177.495 {490}	4/25/2019 8:04:24	4/24/2019 10:42:33	Linear	1/Conc	-0.007017	0.143219	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ba 455.403 { 74}	1.000000	0.000000	0.000294	0.000980	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	1.000000	0.000000	0.000128	0.000428	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	1.000000	0.000000	0.000200	0.000667	OK.	1.000000	0.000000	1	0
	Co 228.616 {448}	1.000000	0.000000	0.000259	0.000862	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	1.000000	0.000000	0.000472	0.001574	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}2	1.000000	0.000000	0.000363	0.001211	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	1.000000	0.000000	0.000071	0.000238	OK.	1.000000	0.000000	1	0
	Ni 231.604 {446}	1.000000	0.000000	0.000313	0.001043	OK.	1.000000	0.000000	1	0
	Ag 328.068 {103}	1.000000	0.000000	0.000481	0.001604	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	1.000000	0.000000	0.000352	0.001172	OK.	1.000000	0.000000	1	0
	Zn 206.200 {464}	1.000000	0.000000	0.000136	0.000455	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	1.000000	0.000000	0.001144	0.003813	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	1.000000	0.000000	0.001071	0.003571	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	1.000000	0.000000	0.000980	0.003266	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	1.000000	0.000000	0.001807	0.006022	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	1.000000	0.000000	0.001257	0.004189	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	1.000000	0.000000	0.014990	0.049968	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	1.000000	0.000000	0.005015	0.016715	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	1.000000	0.000000	0.006462	0.021540	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	1.000000	0.000000	0.041626	0.138753	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	1.000000	0.000000	0.036601	0.122002	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	1.000000	0.000000	0.011118	0.037061	OK.	1.000000	0.000000	1	0
	B 208.959 {462}	1.000000	0.000000	0.000680	0.002266	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	1.000000	0.000000	0.000219	0.000730	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	1.000000	0.000000	0.000929	0.003096	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	1.000000	0.000000	0.000630	0.002099	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	1.000000	0.000000	0.000122	0.000406	OK.	1.000000	0.000000	1	0
	Ti 334.904 {101}	1.000000	0.000000	0.000355	0.001182	OK.	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 224.306 {451}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	W 207.911 {462}	1.000000	0.000000	0.000876	0.002922	OK.	1.000000	0.000000	1	0
	Zr 339.198 { 99}	1.000000	0.000000	0.000181	0.000602	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	1.000000	0.000000	0.002649	0.008828	OK.	1.000000	0.000000	1	0
	Bi 223.061 {451}	1.000000	0.000000	0.001348	0.004493	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	1.000000	0.000000	0.001783	0.005942	OK.	1.000000	0.000000	1	0
	P 177.495 {490}	1.000000	0.000000	0.001162	0.003873	OK.	1.000000	0.000000	1	0

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3C.

MA Batch #: MA46522
Analyst: EAL/LL
Date: 4/17/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Hot Block # 7 Start Time: 11:00 End Time: 11:30 Tube # 1-39 .
Start Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .
End Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .
Hot Block # _____ Start Time: _____ End Time: _____ Tube # _____ .
Start Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .
End Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc.	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N	(mg/L)		
1	MP14301-MB1	0.6001	100				MP14301	
2	MP14301-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-314-HGA1, IN. V
3	MP14301-S1	0.6731	100	2.0 ml	Y	0.1		JC86331-1, HG-19-144-314-HGA1, IN. V
4	MP14301-S2	0.6706	100	2.0 ml	Y	0.1		JC86331-1, HG-19-144-314-HGA1, IN. V
5	JC86331-1	0.6697	100					
6	JC86331-2	0.6211	100					
7	JC86331-3	0.6514	100					
8	JC86331-4	0.6147	100					
9	JC86331-5	0.6735	100					
10	JC86331-6	0.6181	100					
11	JC86331-7	0.6101	100					
12	JC86331-8	0.6555	100					
13	JC86331-9	0.6022	100					
14	JC86331-10	0.6814	100					
15	JC86331-11	0.6707	100					
16	JC86331-12	0.6257	100					
17	JC86331-13	0.6469	100					
18	MP14302-MB1	0.6001	100				MP14302	
19	MP14302-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-314-HGA1, IN. V
20	MP14302-S1	0.6082	100	2.0 ml	Y	0.1		JC86406-14, HG-19-144-314-HGA1, IN. V
21	MP14302-S2	0.6030	100	2.0 ml	Y	0.1		JC86406-14, HG-19-144-314-HGA1, IN. V
22	JC86406-14	0.6068	100					
23	JC86406-1	0.6196	100					
24	JC86406-2	0.6325	100					
25	JC86406-3	0.6861	100					
26	JC86406-4	0.6436	100					
27	JC86406-5	0.6357	100					
28	JC86406-6	0.6867	100					
29	JC86406-7	0.6037	100					
30	JC86406-8	0.6882	100					
31	JC86406-9	0.6834	100					
32	JC86406-10	0.6338	100					
33	JC86406-11	0.6352	100					
34	JC86406-12	0.6919	100					
35	JC86406-13	0.6196	100					

Form: HG-022F-02
Revision Date:08/24/15

ANALYST: [signature]
SPIKE WITNESS: [signature]
QC REVIERER: _____

DATE: 4/17/19
DATE: 4/17/19
DATE: _____

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SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3C.

MA Batch #: MA46522
Analyst: EAL/LL
Date: 4/17/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Hot Block # 7 Start Time: 11:00 End Time: 11:30 Tube # 1-39 .
Start Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .
End Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .
Hot Block # _____ Start Time: _____ End Time: _____ Tube # _____ .
Start Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .
End Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc.	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N	(mg/L)		
36	JC86406-15	0.6707	100					
37	MP14310-MB1	0.6001	100				MP14310	
38	MP14310-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-314-HGA1, IN. V
39	JC85415-19B	0.6001	100	1.0 ml	Y	0.01		HG-19-144-315-HGA2, IN. V
40			100					
41			100					
42			100					
43			100					
44			100					
45			100					
46			100					
47			100					
48			100					
49			100					
50			100					
51			100					
52			100					
53			100					
54			100					
55			100					
56			100					
57			100					
58			100					
59			100					
60			100					
61			100					
62			100					
63			100					
64			100					
65			100					
66			100					
67			100					
68			100					
69			100					
70			100					

Form: HG-022F-02
Revision Date:08/24/15

ANALYST: LL
SPIKE WITNESS: EM
QC REVIERER: _____

DATE: 4/17/19
DATE: 4/17/19
DATE: _____

11.5.1 11

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA46522
Analyst: EAL/LL
Date: 4/17/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3 C.

Hot Block # 7 Start Time: 7:30 End Time: 8:00 Tube # 1-CRI
Start Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236
End Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc.	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N	(mg/L)		
S-1	Calibration Blank	0.6	100 ml	0.0 ml	N	N/A	N/A	N/A
S-2	0.20 ug/l standard	0.6	100 ml	2.0 ml	Y	0.0100	N/A	HG-19-144-315-HGA2, IN. V
S-3	0.50 ug/l standard	0.6	100 ml	5.0 ml	Y	0.0100	N/A	HG-19-144-315-HGA2, IN. V
S-4	1.00 ug/l standard	0.6	100 ml	1.0 ml	Y	0.1000	N/A	HG-19-144-314-HGA1, IN. V
S-5	2.50 ug/l standard	0.6	100 ml	2.5 ml	Y	0.1000	N/A	HG-19-144-314-HGA1, IN. V
S-6	5.00 ug/l standard	0.6	100 ml	5.0 ml	Y	0.1000	N/A	HG-19-144-314-HGA1, IN. V
ICV	ICV (External)	0.6	100 ml	3.0 ml	Y	0.1		HG-19-144-316-HGB1, IN. V
ICB	ICB	0.6	100 ml	0.0 ml	N	N/A	N/A	
CCV	CCV	0.6	100 ml	2.5 ml	Y	0.1		HG-19-144-314-HGA1, IN. V
CCB	CCB	0.6	100 ml	0.0 ml	N	N/A	N/A	
CRI	CRI	0.6	100 ml	2.0 ml	Y	0.01		HG-19-144-315-HGA2, IN. V

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SGS

Reagent Information Log- Hg Soil

MA # 46522

Reagents	Exp. Date	Reagent # or manufacturer lot #
Conc. HydroChloric Acid	4/15/2021	Baker 217157
Conc. Nitric Acid	4/2/2021	Baker -213500
Sodium Chloride-Hydroxylamine Hydrochloride	10/15/2019	HG-19-144 307 -HGHCL
Potassium Permanganate	10/15/2019	HG-19-144 305 -HGKM2
Stannous Chloride	4/18/2019	HG-19-144 317 -HGS
STD Hg standard solution 1000 ppm	3/1/2020	Inorganic Ventures K2-HG669550
STD Hg standard solution 100 ppb	4/18/2019	HG-19-144 314 -HGA1
STD Hg standard solution 10 ppb	4/18/2019	HG-19-144 315 -HGA2
ICV Hg standard solution 1000 ppm	6/30/2021	Ultra T00601
ICV Hg standard solution 100 ppb	4/18/2019	HG-19-144 316 -HGB1
Solid Lab control/Soil LC	3/31/2020	ERA D094-540
Aqua Regia	4/18/2019	HG-19-144 318 -HGKAQ
Dilution acid	10/15/2019	HG-19-144 308 -HGD1
Digestion Tubes	N/A	Environmental Express 1808354
Teflon Chips (For Soil MB)	N/A	Chemware , Lot: 23656541

Form: GN087A80-04
Rev.Date: 06/06/17

SGS North America Inc.

Solids/Soil Metals Digestion Form

Batch Information

Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2
MP14400	4/19/2019	16:15	4/19/2019	21:15	JC86406-10	

Temperature

		Block ID	Therm. ID#	Balance ID	Temperature	Correction	Corrected Temp
1	Start	9	4156488	B-41	94	0	94
1	End	9	4156488	NA	94	0	94
2	Start						
2	End			NA			

Methods and Equipment

Dig. Method	Heating Method		Auto Pipette #	Digestion Tube Lot #	
SW846 3050B	Digestion Block		M-74	1812114	

Sample ID	Bottle ID	Final Volume (ML)	Wet Weight (G)	Reagent Groups Added	Spike Groups Added	Comments
MP14400-MB1	N/A	100	0.98	ABCD		
MP14400-B1	N/A	100	1.01	ABCD	ABCD	
MP14400-S1	1	100	1.01	ABCD	ABCD	
MP14400-S2	1	100	1.00	ABCD	ABCD	
MP14400-SD1	1	100	1.05	ABCD		
JC86406-1	1	100	0.99	ABCD		
JC86406-10	1	100	1.05	ABCD		
JC86406-11	1	100	0.98	ABCD		
JC86406-12	1	100	1.01	ABCD		
JC86406-13	1	100	0.95	ABCD		
JC86406-14	1	100	1.00	ABCD		
JC86406-15	1	100	0.99	ABCD		
JC86406-2	1	100	1.01	ABCD		
JC86406-3	1	100	1.03	ABCD		
JC86406-4	1	100	1.00	ABCD		
JC86406-5	1	100	1.00	ABCD		
JC86406-6	1	100	1.00	ABCD		
JC86406-7	1	100	0.96	ABCD		
JC86406-8	1	100	1.04	ABCD		
JC86406-9	1	100	1.03	ABCD		
JC86600-1	1	100	0.98	ABCD		
JC86600-2	1	100	1.02	ABCD		
JC86633-1	1	100	0.98	ABCD		
JC86633-2	1	100	1.00	ABCD		
JC86633-3	1	100	1.04	ABCD		

Reagents Groups

Group	Description	MLs Used
A	CONC HNO3	5
B	1:1 HNO3	10
C	H2O2	5
D	CONC HCL	10
E		
F		
G		
H		

Spike Groups

Group	Description	MLs Used
A	ACCUTEST 13A REV1	1
B	ACCUTEST 14A REV1	1
C	MINERALS 5000PPM	0.5
D	AG 20PPM	1.25
E		
F	AG 20PPM	1.25
G		
H		

Comments:

Analyst MOUSTAFR **Approved by** gulcagt **Approved on** 4/22/2019

Note: Reagent traceability for batch Start Date can be seen on the reagent traceability page for this batch.
Serial Dilution samples shown for QC purposes only.
Acceptable Temperature range is 90-95 degrees C unless otherwise noted

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP 14400 **Date:** 4/19/19

Matrix: ALL

Standard/Reagent Type	Exp. Date	Standard/Reagent ID
Spiking Solution - (ACCUTEST-13A REV1)	10/4/2019	MP-015-1153
Spiking Solution - (ACCUTEST-14A REV1)	10/4/2019	MP-015-1154
Spiking Solution - 5000 mg/l Minerals	2/15/2020	N2-MEB674932 MFG: INO. VENT.
Spiking Solution - Sulfur 1000ppm	4/11/2021	LOT: 041118 MFG: ABS. GRADE
Spiking Solution - Si 1000ppm	10/31/2019	N2-SI668066 MFG: INO. VENT.
Spiking Solution - Bi 1000ppm	1/16/2020	N2-BI669548 MFG: INO. VENT.
Spiking Solution - Se 20ppm	10/10/2019	MP-015-1156
Spiking Solution - Li 1000ppm	1/24/2020	N2-LI665824 MFG: INO. VENT.
Spiking Solution- Ag 20 ppm	10/16/2019	MP-015-1158
Spiking Solution - (ACCUTEST-13B REV1)	10/10/2019	MP-015-1157
Spiking Solution - (ACCUTEST-14B REV1)	7/3/2019	MP-015-1126
Spiking Solution - 1000ppm Minerals	6/4/2019	MP-015-1117
Spiking Solution- P		
Nitric Acid	4/19/2021	LOT: 213500 MFG: J.T. BAKER
Nitric Acid (1:1)	10/18/2019	MP-018-42-183 1:1 HNO3
Hydrochloric Acid	4/19/2021	LOT: 221681 MFG: J.T. BAKER
Hydrochloric Acid (1:1)	10/16/2019	MP-018-42-181 1:1 HCL
Hydrogen Peroxide	4/18/2021	LOT: 188006 MFG: FISHER
Soil Lab Control/Soil LC	3/31/2020	LOT: D094-540 MFG: ERA
Teflon Chips(For Soil MB and Blank Spike)	N/A	LOT: 24242815 MFG: SAINT-GOBAIN
Digestion Tubes	N/A	LOT: 1812114 MFG: ENV. EXPRESS
pH Paper	6/15/2021	LOT: 217518 MFG: HYDRION
Filter paper Q8	N/A	LOT: 16917460 MFG: FISHER
Filter paper 0.45µm	N/A	LOT: F8MA26136E MFG: FISHER

Spike witnessed By: BP

Validated By:

Validated On:

Metals Prep Reagent
1/17/18

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Date 4/24/19 Analyst RP MP # 14400

Post spike for ICP Method 6010D

QC sample #

Spiking solution	Elements	Spike added (Y/N)	Vendor	Intermediate Lot #	Exp. Date	Conc. (mg/l)	Amt of Spike added (ml)	Digestate sample volume (ml)	Final Digestate volume in ml (Spike+ Sample)	Final Conc at the instrument (mg/l)
Mixed ICP intermediate Metals Solution (ACCUTEST-13A-REV1)	Ba,Be,B Cd,Cr,Co,Cu,Pb, Mn,Ni,P,Se,Sr,TL, V,Zn	Yes	Inhouse	MP-015-1119	6/7/19	200	0.2	19.25	20	2
Mixed ICP intermediate Metals Solution (ACCUTEST-14A-REV1)	Sb,As,Mo,Sn,Ti, W,Zr	Yes	Inhouse	MP-015-1120	6/7/19	200	0.2			2
Ag Spike Intermediate	Ag	Yes	Inhouse	MP-015-1116	5/28/19	20	0.25			0.25
Metals Mix	Ca,Al,Fe,Mg,K, Na	Yes	Inorganic Ventures	N2-MEB 67-2948	11/27/19	5000	0.1			25
S spike	S					200	0.2			2
Bi Spike	Bi					200	0.2			2
Li Spike	Li					200	0.2			2
Si spike	Si					1000	0.1			5

Form: DAYT-MET-0095-01-FORM
Rev. Date : 7/10/2018

Reviewed by:

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide	GP20864/GN94535	0.24	0.0	mg/kg	2	2.02	101.0	90-110%

Associated Samples:
Batch GP20864: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP20864/GN94535	JC86406-10	mg/kg	0.14 U	0.0	0.0	0-49%
Solids, Percent	GN94285	JC86406-1	%	87	86.1	1.0	0-5%

Associated Samples:
Batch GN94285: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15
Batch GP20864: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Cyanide	GP20864/GN94535	JC86406-10	mg/kg	0.14 U	2.32	2.3	99.3	75-125%
Cyanide	GP20864/GN94535	JC86406-11	mg/kg	0.59	2.86	1.6	35.4N(a)	75-125%

Associated Samples:
Batch GP20864: JC86406-1, JC86406-2, JC86406-3, JC86406-4, JC86406-5, JC86406-6, JC86406-7, JC86406-8, JC86406-9, JC86406-10, JC86406-11, JC86406-12, JC86406-13, JC86406-14, JC86406-15
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E042519W1.CN Date Analyzed: 04/25/19 Methods: SW846 9012B/LACHAT, SW846 CHAP7/9012 B, SW846 CH
Analyst: KI Run ID: GN94535
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:16	GN94535-STD1	1		STDA
14:18	GN94535-STD2	1		STDB
14:19	GN94535-STD3	1		STDC
14:20	GN94535-STD4	1		STDD
14:22	GN94535-STD5	1		STDE
14:23	GN94535-STD6	1		STDF
14:24	GN94535-STD7	1		STDG
14:26	GN94535-ICV1	1		
14:27	GN94535-ICB1	1		
14:29	GN94535-CCV1	1		
14:30	GN94535-CCB1	1		
14:31	GP20870-MB1	1		
14:33	GP20870-B1	1		
14:34	GP20870-D1	1		
14:35	ZZZZZZ	1		
14:37	JC86907-1A	1		(sample used for QC only; not part of login JC86406)
14:38	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:41	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:45	GN94535-CCV2	1		
14:46	GN94535-CCB2	1		
14:48	ZZZZZZ	1		
14:49	GP20872-MB1	1		
14:50	GP20872-B1	1		
14:52	GP20872-D1	1		
14:53	JC86774-1	1		(sample used for QC only; not part of login JC86406)
14:54	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	GP20753-MB2	1		
14:58	GP20753-B2	1		
15:00	GP20753-D1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E042519W1.CN Date Analyzed: 04/25/19 Methods: SW846 9012B/LACHAT, SW846 CHAP7/9012 B, SW846 CH
Analyst: KI Run ID: GN94535
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:01	GN94535-CCV3	1		
15:03	GN94535-CCB3	1		
15:04	JC86553-1	1		(sample used for QC only; not part of login JC86406)
15:05	GP20864-MB1	1		
15:07	GP20864-B1	1		
15:08	GP20864-S1	1		
15:09	GP20864-S2	1		
15:11	GP20864-D1	1		
15:12	JC86406-10	1		
15:13	JC86406-11	1		
15:15	JC86406-12	1		
15:16	JC86406-13	1		
15:18	GN94535-CCV4	1		
15:19	GN94535-CCB4	1		
15:20	JC86406-14	1		
15:22	JC86406-15	1		
15:23	JC86406-1	1		
15:24	JC86406-2	1		
15:26	JC86406-3	1		
15:27	JC86406-4	1		
15:28	JC86406-5	1		
15:30	JC86406-6	1		
15:31	JC86406-7	1		
15:32	JC86406-8	1		
15:34	GN94535-CCV5	1		
15:35	GN94535-CCB5	1		
15:37	JC86406-9	1		
15:38	ZZZZZZ	1		
15:39	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:43	ZZZZZZ	1		
15:46	GN94535-CCV6	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E042519W1.CN Date Analyzed: 04/25/19 Methods: SW846 9012B/LACHAT, SW846 CHAP7/9012 B, SW846 CH
Analyst: KI Run ID: GN94535
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:48	GN94535-CCB6	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC86406
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E042519W1.CN Date Analyzed: 04/25/19 Methods: SW846 9012B/LACHAT, SW846 CHAP7/9012 B, SW846 CH
Run ID: GN94535 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN94535-ICV1	Cyanide	0.317	0.010	0.0050	.3	105.7	90-110
GN94535-ICB1	Cyanide	-0.00759	0.010	0.0050			
GN94535-CCV1	Cyanide	0.399	0.010	0.0050	.4	99.8	90-110
GN94535-CCB1	Cyanide	0.0050 U	0.010	0.0050			
GN94535-CCV2	Cyanide	0.401	0.010	0.0050	.4	100.3	90-110
GN94535-CCB2	Cyanide	-0.00543	0.010	0.0050			
GN94535-CCV3	Cyanide	0.403	0.010	0.0050	.4	100.8	90-110
GN94535-CCB3	Cyanide	-0.00524	0.010	0.0050			
GN94535-CCV4	Cyanide	0.406	0.010	0.0050	.4	101.5	90-110
GN94535-CCB4	Cyanide	-0.00770	0.010	0.0050			
GN94535-CCV5	Cyanide	0.402	0.010	0.0050	.4	100.5	90-110
GN94535-CCB5	Cyanide	-0.00691	0.010	0.0050			
GN94535-CCV6	Cyanide	0.401	0.010	0.0050	.4	100.3	90-110
GN94535-CCB6	Cyanide	-0.00654	0.010	0.0050			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC86406-1 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-108(2-4)

Wet Weight (Total)	29.5	g
Tare Weight	21.01	g
Dry Weight (Total)	28.4	g
Solids, Percent	87	%

Sample: JC86406-2 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-108(8-10)

Wet Weight (Total)	34.97	g
Tare Weight	25.83	g
Dry Weight (Total)	33.17	g
Solids, Percent	80.3	%

Sample: JC86406-3 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-108(15-17)

Wet Weight (Total)	36.68	g
Tare Weight	27.82	g
Dry Weight (Total)	32.85	g
Solids, Percent	56.8	%

Sample: JC86406-4 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED M
ClientID: SO-DUP-0415

Wet Weight (Total)	29.74	g
Tare Weight	20.86	g
Dry Weight (Total)	28.64	g
Solids, Percent	87.6	%

Sample: JC86406-5 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: PCTP-17R(5-6)

Wet Weight (Total)	34.8	g
Tare Weight	26.59	g
Dry Weight (Total)	33.79	g
Solids, Percent	87.7	%

Sample: JC86406-6 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: PCTP-17R(7-9)

Wet Weight (Total)	26.01	g
Tare Weight	17.06	g
Dry Weight (Total)	25.03	g
Solids, Percent	89.1	%

Percent Solids Raw Data Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC86406-7 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: PCTP-17R(9-11)

Wet Weight (Total)	30.56	g
Tare Weight	22.53	g
Dry Weight (Total)	27.23	g
Solids, Percent	58.5	%

Sample: JC86406-8 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: PCTP-17R(18-20)

Wet Weight (Total)	34.83	g
Tare Weight	25.86	g
Dry Weight (Total)	30.53	g
Solids, Percent	52.1	%

Sample: JC86406-9 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: PCTP-17R(24-25)

Wet Weight (Total)	36.52	g
Tare Weight	27.74	g
Dry Weight (Total)	32.37	g
Solids, Percent	52.7	%

Sample: JC86406-10 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED M
ClientID: S-114(2-4)

Wet Weight (Total)	30.1	g
Tare Weight	20.89	g
Dry Weight (Total)	28.53	g
Solids, Percent	83	%

Sample: JC86406-11 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-114(8-10)

Wet Weight (Total)	25.09	g
Tare Weight	16.21	g
Dry Weight (Total)	22.19	g
Solids, Percent	67.3	%

Sample: JC86406-12 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-114(14-15)

Wet Weight (Total)	35.42	g
Tare Weight	27.39	g
Dry Weight (Total)	33.18	g
Solids, Percent	72.1	%

Percent Solids Raw Data Summary

Job Number: JC86406
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC86406-13 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-114(23-25)

Wet Weight (Total)	35.78	g
Tare Weight	27.65	g
Dry Weight (Total)	32.46	g
Solids, Percent	59.2	%

Sample: JC86406-14 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-109(2-4)

Wet Weight (Total)	26.2	g
Tare Weight	17.58	g
Dry Weight (Total)	25.17	g
Solids, Percent	88.1	%

Sample: JC86406-15 **Analyzed:** 18-APR-19 by BG **Method:** SM2540 G 18TH ED MOD
ClientID: S-109(8-10)

Wet Weight (Total)	34.34	g
Tare Weight	25.18	g
Dry Weight (Total)	32.62	g
Solids, Percent	81.2	%

General Chemistry

Raw Data

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E042519W1.CN
Analyst: KI

Date Analyzed: 04/25/19
Run ID: GN94535

Methods: SW846 9012B/LACHAT, SW846 CHAP7/9012 B, SW8

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: KI Date 4/25/19

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 4/25/19

GN94535

e042519w1.cn

Author: Chemistry

Date : 4/25/2019

Original Run Filename: OM_4-25-2019_02-15-35PM.OMN Created: 4/25/2019 2:15:35 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_4-25-2019_02-15-35PM.OMN Last Modified: 4/25/2019 3:50:26 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	
STDA	1	1	0.800	4/25/2019@2:16:44 PM		
STDB	1	2	0.600	4/25/2019@2:18:07 PM		
STDC	1	3	0.400	4/25/2019@2:19:29 PM		
STDD	1	4	0.100	4/25/2019@2:20:51 PM		
STDE	1	5	0.0200	4/25/2019@2:22:13 PM		
STDF	1	6	0.0100	4/25/2019@2:23:35 PM		
STDG	1	7	0.00	4/25/2019@2:24:56 PM		
ICV	1	8	0.317	4/25/2019@2:26:18 PM		
	Known Conc:		0.300			105.7
	Calibration:		Table/Fig. : 1			
ICB	1	9	-7.59e-3	4/25/2019@2:27:40 PM		
	Known Conc:		0.00			
CCV	1	S9	0.399	4/25/2019@2:29:01 PM		
	Known Conc:		0.400			99.75
CCB	1	S10	-4.40e-3	4/25/2019@2:30:23 PM		
	Known Conc:		0.00			
GP20870-MB1	1	10	-7.05e-3	4/25/2019@2:31:44 PM		
GP20870-B1	1	11	0.0896	4/25/2019@2:33:06 PM		4.48
GP20870-D1	1	12	-6.75e-3	4/25/2019@2:34:27 PM		
JC86793-1	1	13	-7.03e-3	4/25/2019@2:35:48 PM		
JC86907-1A	1	14	-5.74e-3	4/25/2019@2:37:09 PM		
JC86907-2A	1	15	-6.69e-3	4/25/2019@2:38:30 PM		
JC86907-3A	1	16	-6.58e-3	4/25/2019@2:39:52 PM		
JC86907-4A	1	17	-5.66e-3	4/25/2019@2:41:14 PM		
JC86907-5A	1	18	-4.88e-3	4/25/2019@2:42:36 PM		
JC80500-2	1	19	0.226	4/25/2019@2:43:59 PM		
CCV	1	S9	0.401	4/25/2019@2:45:20 PM		
	Known Conc:		0.400			100.25
CCB	1	S10	-5.43e-3	4/25/2019@2:46:42 PM		
	Known Conc:		0.00			
JC80500-2A	1	20	0.103	4/25/2019@2:48:04 PM		
GP20872-MB1	1	21	-6.96e-3	4/25/2019@2:49:26 PM		
GP20872-B1	1	22	0.0870	4/25/2019@2:50:48 PM		4.35
GP20872-D1	1	23	-7.26e-3	4/25/2019@2:52:09 PM		
JC86774-1	1	24	-5.93e-3	4/25/2019@2:53:31 PM		
JC80510-2	1	25	0.222	4/25/2019@2:54:52 PM		
JC80510-2A	1	26	0.102	4/25/2019@2:56:14 PM		
GP20753-MB2	1	27	1.22e-3	4/25/2019@2:57:35 PM		
GP20753-B2	1	28	0.0805	4/25/2019@2:58:56 PM		96.6
GP20753-D1	1	29	0.0976	4/25/2019@3:00:17 PM		
CCV	1	S9	0.403	4/25/2019@3:01:38 PM		
	Known Conc:		0.400			100.75
CCB	1	S10	-5.24e-3	4/25/2019@3:03:01 PM		
	Known Conc:		0.00			
JC86553-1	1	30	0.0934	4/25/2019@3:04:21 PM		
GP20864-MB1	1	31	-3.53e-3	4/25/2019@3:05:43 PM		
GP20864-B1	1	32	0.0840	4/25/2019@3:07:06 PM		100.8
GP20864-S1	1	33	0.0818	4/25/2019@3:08:28 PM		
GP20864-S2	1	34	0.0457	4/25/2019@3:09:50 PM		
GP20864-D1	1	35	1.13e-3	4/25/2019@3:11:12 PM		
JC86406-10	1	36	1.24e-3	4/25/2019@3:12:34 PM		
JC86406-11	1	37	0.0158	4/25/2019@3:13:56 PM		
JC86406-12	1	38	0.406	4/25/2019@3:15:18 PM		
JC86406-13	1	39	0.113	4/25/2019@3:16:39 PM		
CCV	1	S9	0.406	4/25/2019@3:18:01 PM		
	Known Conc:		0.400			101.5
CCB	1	S10	-7.70e-3	4/25/2019@3:19:23 PM		
	Known Conc:		0.00			
JC86406-14	1	40	0.194	4/25/2019@3:20:44 PM		
JC86406-15	1	41	0.546	4/25/2019@3:22:05 PM		

- 1 -

Author: Chemistry

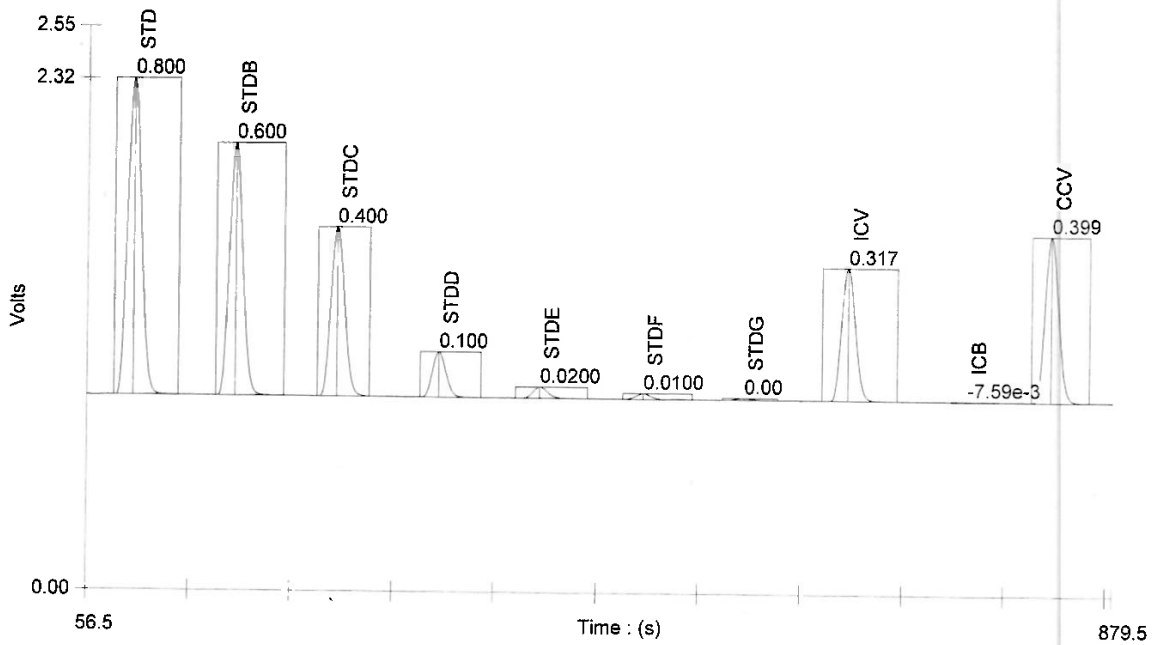
Date : 4/25/2019

JC86406-1	1	42	0.423	4/25/2019@3:23:26 PM
JC86406-2	1	43	0.120	4/25/2019@3:24:47 PM
JC86406-3	1	44	0.237	4/25/2019@3:26:08 PM
JC86406-4	1	45	0.483	4/25/2019@3:27:29 PM
JC86406-5	1	46	0.329	4/25/2019@3:28:52 PM
JC86406-6	1	47	0.0240	4/25/2019@3:30:14 PM
JC86406-7	1	48	0.223	4/25/2019@3:31:36 PM
JC86406-8	1	49	0.0735	4/25/2019@3:32:58 PM
CCV	1	S9	0.402	4/25/2019@3:34:20 PM
	Known Conc:		0.400	
CCB	1	S10	-6.91e-3	4/25/2019@3:35:42 PM
	Known Conc:		0.00	
JC86406-9	1	50	0.0376	4/25/2019@3:37:04 PM
JC86464-2	1	51	0.0129	4/25/2019@3:38:25 PM
JC86813-8	1	52	4.18e-3	4/25/2019@3:39:47 PM
JC86813-9	1	53	0.0164	4/25/2019@3:41:09 PM
JC86813-10	1	54	1.31e-3	4/25/2019@3:42:30 PM
JC86813-11	1	55	-7.00e-4	4/25/2019@3:43:52 PM
CCV	1	S9	0.401	4/25/2019@3:46:56 PM
	Known Conc:		0.400	
CCB	1	S10	-6.54e-3	4/25/2019@3:48:18 PM
	Known Conc:		0.00	

100.5

100.25

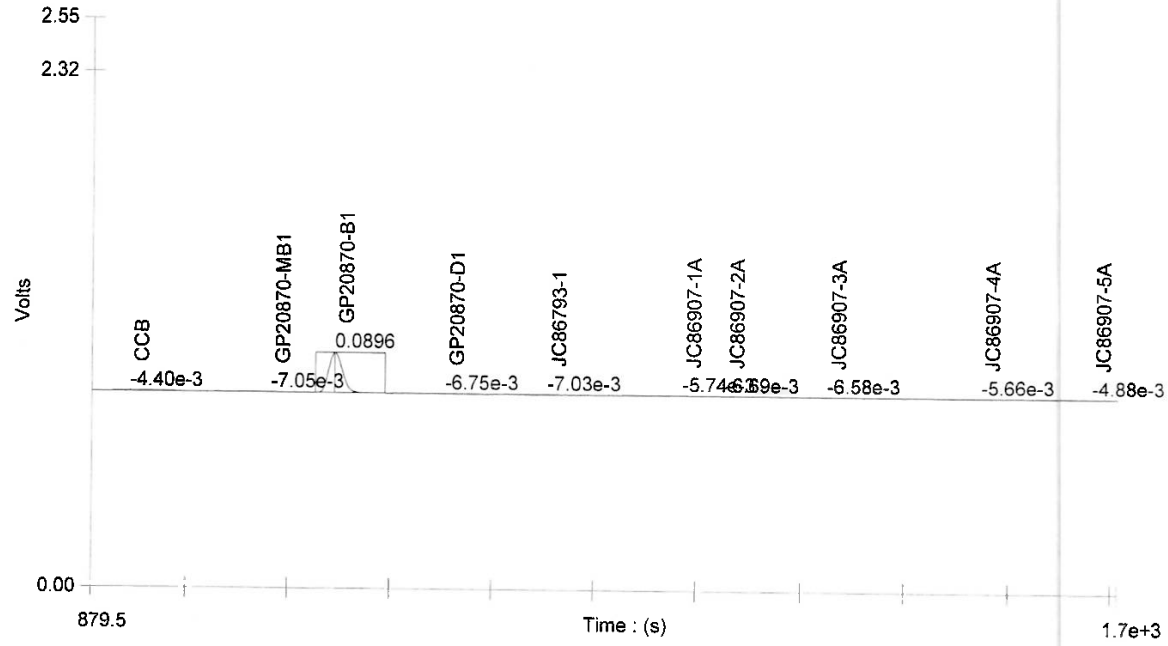
Channel 1 - Set: 1 / 7



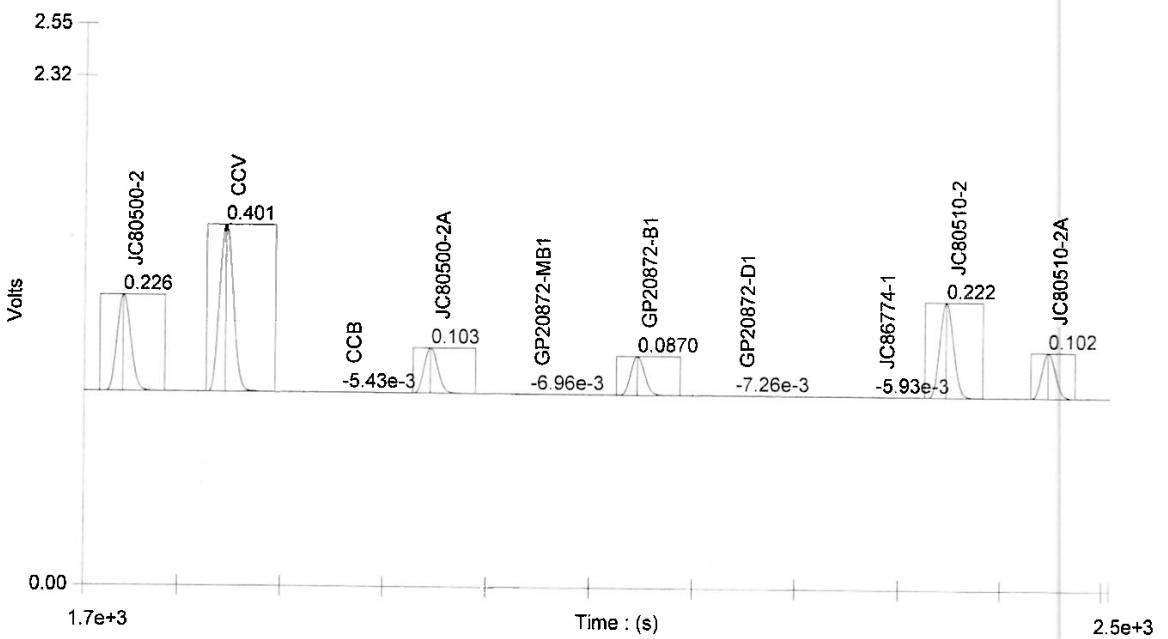
Author: Chemistry

Date : 4/25/2019

Channel 1 - Set: 2 / 7



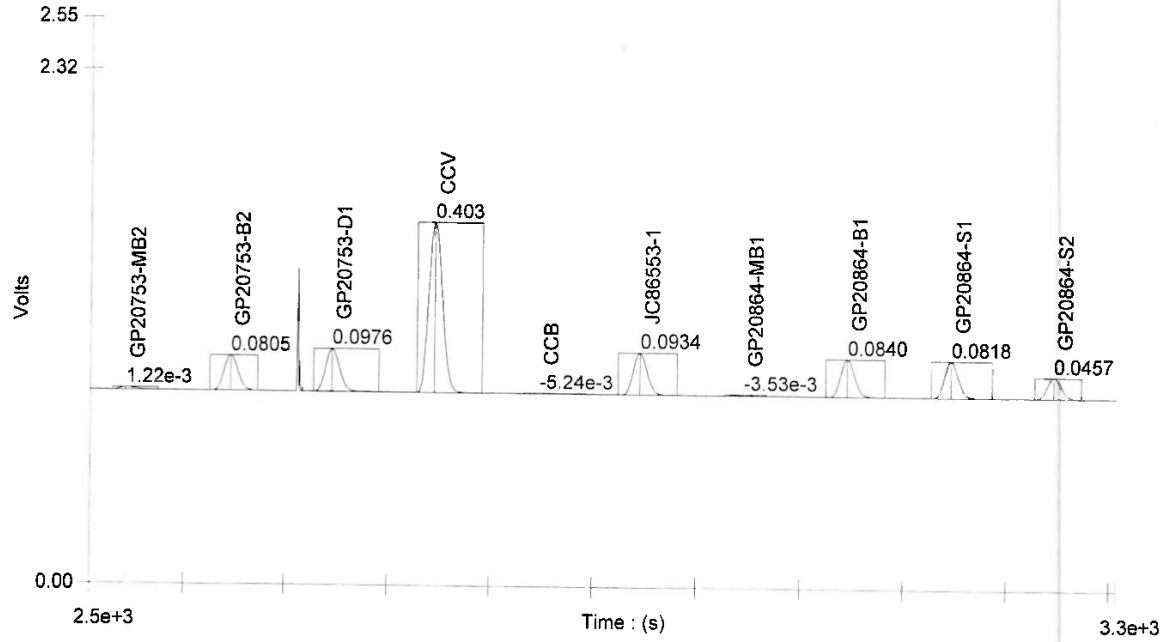
Channel 1 - Set: 3 / 7



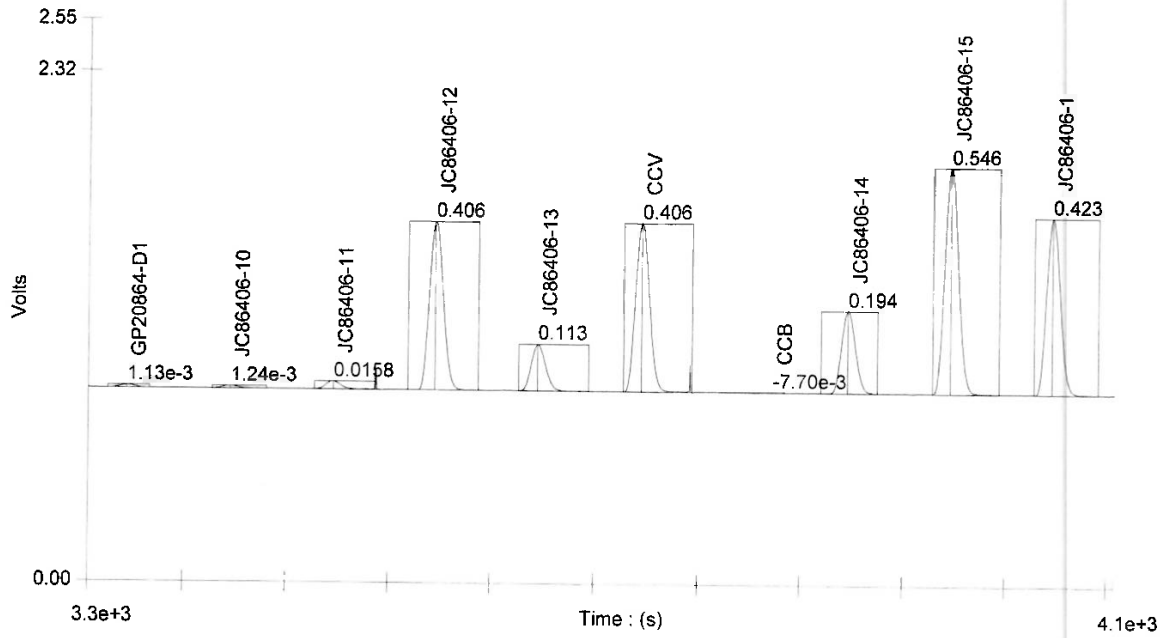
Author: Chemistry

Date : 4/25/2019

Channel 1 - Set: 4 / 7



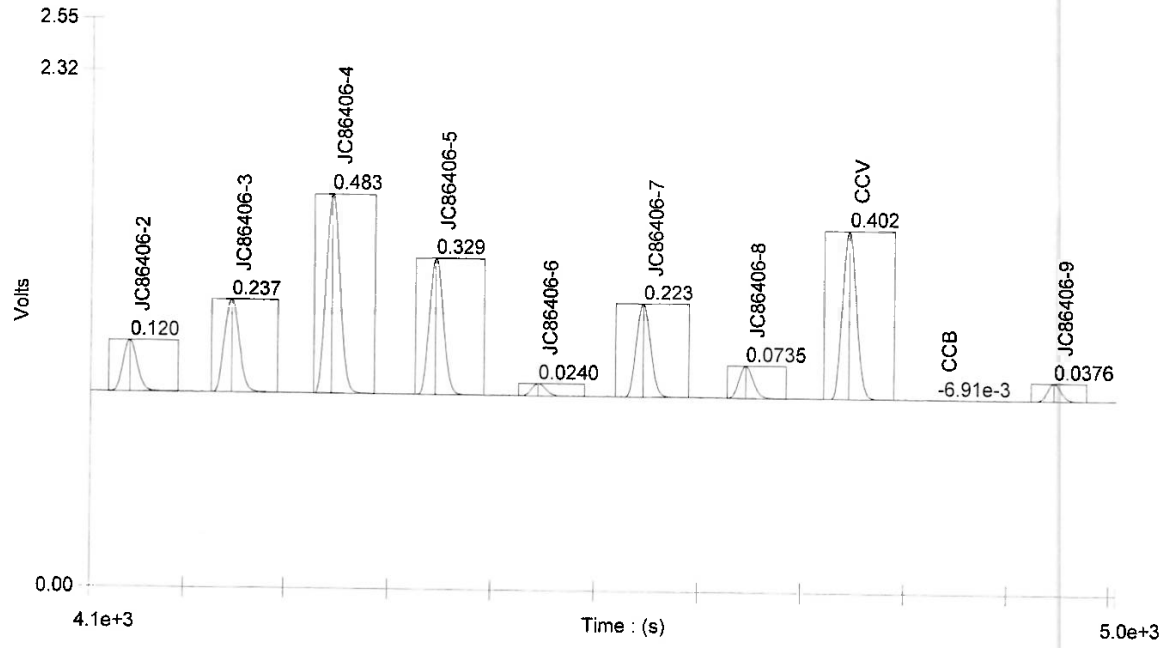
Channel 1 - Set: 5 / 7



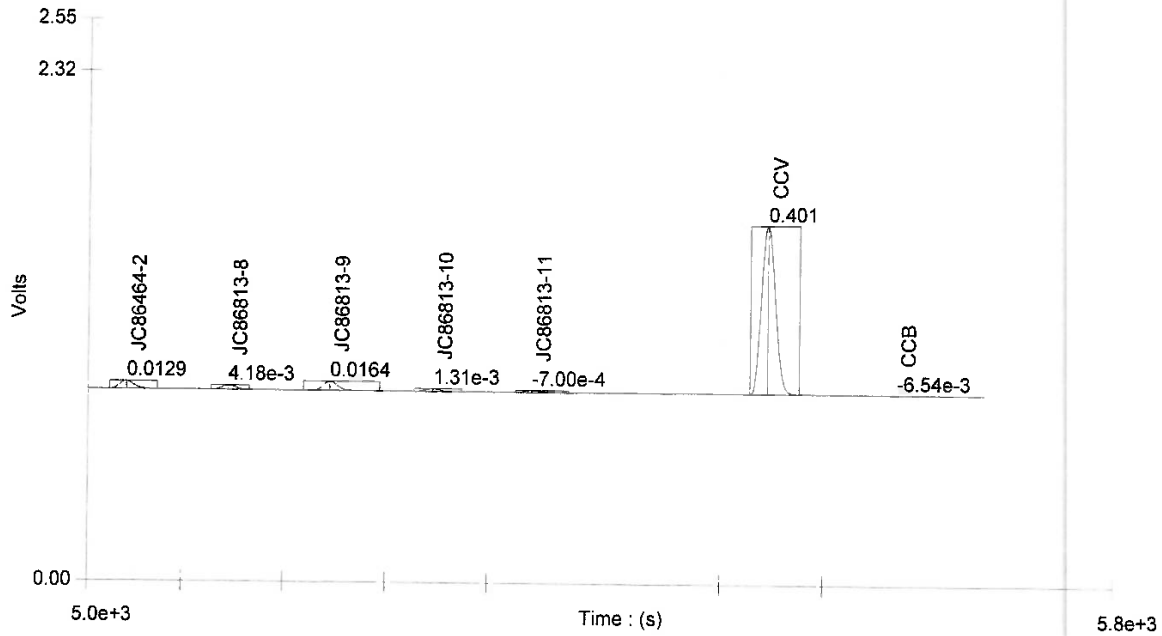
Author: Chemistry

Date : 4/25/2019

Channel 1 - Set: 6 / 7



Channel 1 - Set: 7 / 7



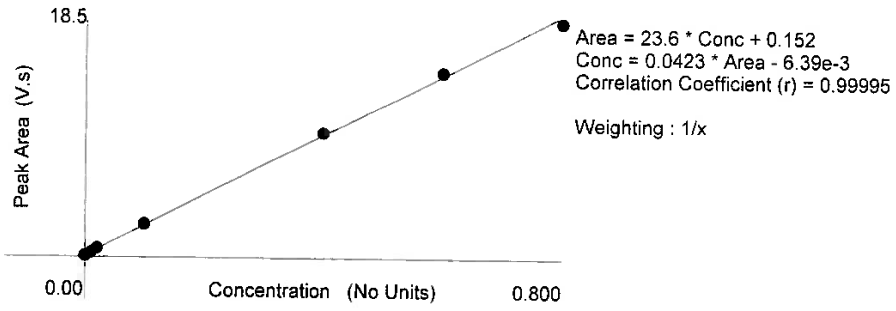
Author: Chemistry

Date : 4/25/2019

Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.5	1.44	0.0	3.0	0.775	4/25/2019	2:16:44 PM
2	0.600	1	14.6	1.15	0.0	-1.8	0.611	4/25/2019	2:18:07 PM
3	0.400	1	9.77	0.775	0.0	-1.8	0.407	4/25/2019	2:19:29 PM
4	0.100	1	2.60	0.206	0.0	-3.4	0.104	4/25/2019	2:20:51 PM
5	0.0200	1	0.700	0.0511	0.0	-12.1	0.0232	4/25/2019	2:22:13 PM
6	0.0100	1	0.369	0.0263	0.0	4.9	9.21e-3	4/25/2019	2:23:35 PM
7	0.00	1	0.123	7.76e-3			-1.20e-3	4/25/2019	2:24:56 PM

Figure : 1 (CN)



SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN94535

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric Acid Reagent	GNE2-57177-CN	8/7/2019
Chloramine-T	GNE4-57835-CN	4/30/2019
Phosphate Buffer Solution, 1.0 M	GNE3-57668-CN	9/28/2019
0.25 N Sodium Hydroxide Carrier Solution	GNE2-57210-CN	8/11/2019

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-27
Rev. Date: 7/19/06

SGS

CREAC | SREAC

GP20870 | GP20871

REACTIVITY DISTILLATION LOG (SOILS)

Method: SW846 Chapter 7

Batch ID: _____

Autopipette ID: Clarv A

Balance ID: B-27

Bottle #	Sample ID	Initial Volume (g)	Final Volume (ml)	Start Time	End Time	Date	QC ID	Product (SREAC, CREAC, or both)	Check when spike added	Spike Amounts and Comments including Spike Lots	Analyst
	MB1	10.00	500	9:30	10:00	4/28/19	GP -MB	BOTH			BSM
	B1	10.00	↓	↓	↓	↓	GP -B	CREAC	✓	10ml of 100ppm	↓
	B1	10.00					GP -B	SREAC	✓	10ml of 537ppm	
	S1 JC86907-1A	10.03					GP -S	SREAC	✓	10ml of 537 ppm	
	D1 ↓	10.00					GP -D	BOTH			
~	JC86793-1	9.97						↓			
1	JC86907-1A	10.00									
1	-2A	10.00									
1	-3A	10.03									
1	-4A	9.96									
1	-5A	10.01									
	JC80491-2	10.00									
	-2A	10.00									
	JC80500-2	10.00									
	-2A	10.00						SREAC			
								↓			
								CREAC			
								↓			

Comments: Creac Spike: 20 ml of 1000ppm cyanide stock diluted up to 200ml w/ 0.25N NaOH
Sreac Spike: 2.0g of Sodium Sulfide Nonahydrate diluted up to 500ml w/ DI H20

QC Reviewer: _____ Date: _____

Form: GN282-01b
Rev Date: 02/28/13

SGS

LOD and LOQ Scheduling

LOD Sample ID: JC80500-2A

Product:	CREAC	Matrix:	SO
LOD Concentration:	5	Units:	mg/kg
LOD Prep:	0.5 ml of 100ppm CN STD		
Manufacturer/Lot:	GNE3-57465-CN	Expiration Date:	9/11/19
GN ID:		Analysis Date:	4/25/19
Result/Units:	0.103 mg/L	Recovery:	2.06
Within range of 50 to 150%? **			

LOQ (RL) Sample ID: JC80500-2

Product:	CREAC	Matrix:	SO
LOQ Concentration:	10	Units:	mg/kg
LOQ Prep:	1.0 ml of 100ppm CN STD		
Manufacturer/Lot:	GNE3-57465-CN	Expiration Date:	9/11/19
GN ID:	GN94535	Analysis Date:	4/25/19
Result/Units:	0.226 mg/L	Recovery:	2.26
Within range of 70 to 130%? **			

** if outside of range, notify supervisory team immediately to reschedule

Analyst:

QC Review: Date:

Date:

Form: GN271-02
Rev. Date: 3/2/18

SGS

LOD and LOQ Scheduling

LOD Sample ID: JC80491-2A

Product: SREAC Matrix: SO

LOD Concentration: 80 Units: ug/kg

LOD Prep: 1.48 ml of 537 ppm

Manufacturer/Lot: Fisher #16566 Expiration Date: 4/22/20

GN ID: Analysis Date:

Result/Units: Recovery:

Within range of 50 to 150%? **

LOQ (RL) Sample ID: JC80491-2

Product: SREAC Matrix: SO

LOQ Concentration: 100 Units: ug/kg

LOQ Prep: 1.86 ml of 537ppm

Manufacturer/Lot: Fisher #16566 Expiration Date: 4/22/20

GN ID: Analysis Date:

Result/Units: Recovery:

Within range of 70 to 130%? **

** if outside of range, notify supervisory team immediately to reschedule

Analyst: Date:

QC Review: Date:

Form: GN271-02
Rev. Date: 3/2/18

SGS

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers: GP20870, GP20871

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE3-57465-CN	9/11/2019	4/19/2019
Sulfide Spike Solution	FISHER # 161566	4/22/2022	NA
Sulfuric Acid, 0.010 N	GNE3-57515-REAC	9/18/2019	NA
Sodium Hydroxide, 0.25 N	GNE3-57516-REAC	9/18/2019	NA
Sodium Hydroxide, 0.25 N	GNE3-57516-REAC	9/18/2019	NA

Form: GN087A-64
Rev. Date: 3/12/04

SGS

REACTIVITY DISTILLATION LOG (WATERS)

Method: SW846 Chapter 7

OREAC / SREAC

GP20872 / GP20873

Batch ID: _____

Autopipette ID: C/A/S A

Balance ID: N/A

Bottle #	Sample ID	Initial Volume (ml)	Final Volume (ml)	Start Time	End Time	Date	QC ID	Product (SREAC, CREAC, or both)	Check when spike added	Spike Amounts and Comments including Spike Lots	Analyst
	MB1	10	500	10:30	11:00	4/25/19	GP -MB1	BOTH			BM
	B1	↓	↓	↓	↓	↓	GP -B1	CREAC	✓	10mL of 100ppm	↓
	B1						GP -B1	SREAC	✓	10mL of 537ppm	
	S1 JC86774-1						GP -S1	SREAC	✓	10mL of 537ppm	
	D1 ↓						GP -D1	BOTH			
8	JC86774-1							↓			
	JC80510-2							CREAC			
	↓ -2A							↓			

Comments: Creac Spike: 20 ml of 1000ppm cyanide stock diluted up to 200ml w/ 0.25N NaOH

Sreac Spike: 2.0g of Sodium Sulfide Nonahydrate diluted up to 500ml w/ DI H20

QC Reviewer: _____ Date: _____

Form: GN282-01a

Rev: Date: 02/28/13

SGS

LOD and LOQ Scheduling

LOD Sample ID: VC80510-2A

Product: CREAC
Matrix: AQ
LOD Concentration: 5
Units: mg/L
LOD Prep: 0.5 ml of 100ppm CN STD
Manufacturer/Lot: GNE3-57465-CN
GN ID:
Result/Units: 0.102 mg/L
Within range of 50 to 150%? **
Expiration Date: 9/11/19
Analysis Date: 4/25/19
Recovery: 2.04

LOQ (RL) Sample ID: VC80510-2

Product:
Matrix: AQ
LOQ Concentration: 10
Units: mg/L
LOQ Prep: 1.0 ml of 100ppm CN STD
Manufacturer/Lot: GNE3-57465-CN
GN ID: GN94535
Result/Units: 0.222 mg/L
Within range of 70 to 130%? **
Expiration Date: 9/11/19
Analysis Date: 4/25/19
Recovery: 2.22

** if outside of range, notify supervisory team immediately to reschedule

Analyst:
QC Review:
Date:
Date:

Form: GN271-02
Rev. Date: 3/2/18

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SGS

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers: GP20872, GP20873

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE3-57465-CN	9/11/2019	4/19/2019
Sulfide Spike Solution	FISHER # 161566	4/22/2022	NA
Sulfuric Acid, 0.010 N	GNE3-57515-REAC	9/18/2019	NA
Sodium Hydroxide, 0.25 N	GNE3-57516-REAC	9/18/2019	NA
Sodium Hydroxide, 0.25 N	GNE3-57516-REAC	9/18/2019	NA

Form: GN087A-64
Rev. Date: 3/12/04

SGS

Batch ID: _____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION) GP20953

Autopipette ID: 43

Method: SW8469012B M

Balance ID: B-27

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
1	2	MB2	12+W	-	✓	0.25	6	120	11:05	11:35	4/25/19	GP -MB1			RR
		B2				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	-	
												GP -S1	0.10 ml of 5.0 mg/l		
		D JC86537				0.25						GP -S2	0.10 ml of 5.0 mg/l		
		JC86537				0.25						GP -D1			

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer: _____ Date: _____

Form: GN0012-05

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP 20783

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-56761-CN	6/21/2019
Magnesium Chloride Solution	gne12-56762-cn	6/21/2019
Sulfamic Acid	RICCA 1705K24	
Sulfuric Ac id	FISHER 7664-93-9	11/6/2022
Sodium Hydroxide 1.25N/0.25N	GNE4-57812-CN	10/19/2019
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Micro Distillation tubes	ENV-815190-9044-2	NA
.95 NaOH	GNE4-57813-CN	10/19/2019
Cyanide Stock Solution A - spiking/standards	GNE3-57465-CN	9/11/2019
Cyanide Stock Solution B- externals	GNE1-56947-CN	7/19/2019
Lead Acetate Test Paper	FISHER : 12/8/2016	12/8/2021
pH-paper - range 12.5 to 14	HYDRION : 210114B	3/20/2020
pH paper - range 1 to 12	HYDRION : 223016	9/15/2019
Benzalrthodanine	ricca 1805f04	5/1/2019

Reason codes for data corrections: 1-reviewer error correction; 2 s

Form: GN087A-28
Rev. Date: 03/19/13

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SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP 20753

Intermediate Standard Description	Stock used to prepare standard	Standardization Date	Stock concentration in mg/l	Stock volume used in ml (a)	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. of Intermediate (mg/l)	Expiration Date (c)	Analyst	Date
5 PPM intermediate	GNE3-57465-CN	4/19/19	996	1.000	42	.25 N NaOH	200	5.00	4/26/19	BM	4/19/2019
5 PPM ext.	GNE1-56947-CN	4/19/19	996	1	42	.25 N NaOH	200	5.00	4/26/19	BM	4/19/2019

Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	4/26/19	BM	4/19/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	4/26/19	BM	4/19/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	4/26/19	BM	4/19/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	4/26/19	BM	4/19/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	4/26/19	BM	4/19/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	4/26/19	BM	4/19/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	4/26/19	BM	4/19/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	4/26/19	BM	4/19/2019
						0					

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maxiumum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.

Form: GN193-02
Rev. Date: 1/6/2014

SGS

Batch ID: _____

Autopipette ID: 43

Balance ID: B-27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

GP20864

Method: SW8469012B M

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	3	MB1	12.00	—	—	0.25	6	120	9:45	10:15	4/25/19	GP -MB1			RE
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	—	
1		SJC86406-10				0.26						GP -S1	0.10 ml of 5.0 mg/l	—	
1		S2 ↓ -11				0.25						GP -S2	0.10 ml of 5.0 mg/l	—	
1		D1 JC86406-10				0.25						GP -D1			
1		SK JC86406-10				0.25									
1		-11				0.24									
1		-12				0.25									
1		-13				0.25									
1		-14				0.24									
		-15				0.23									
		-1				0.27									
		-2				0.27									
		-3				0.26									
		-4				0.26									
		-5				0.27									
		-6				0.28									
		-7				0.24									
		-8				0.26									
		-9				0.28									
1		JC86464-2				0.25									
		JC86813-8				0.29									
		-9				0.25									
		-10				0.27									
		-11				0.28									

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments: _____

QC Reviewer: _____ Date: _____

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP 20864

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-56761-CN	6/21/2019
Magnesium Chloride Solution	gne12-56762-cn	6/21/2019
Sulfamic Acid	RICCA 1705K24	
Sulfuric Ac id	FISHER 7664-93-9	11/6/2022
Sodium Hydroxide 1.25N/0.25N	GNE4-57812-CN	10/19/2019
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Micro Distillation tubes	ENV-815190-9044-2	NA
.95 NaOH	GNE4-57813-CN	10/19/2019
Cyanide Stock Solution A - spiking/standards	GNE3-57465-CN	9/11/2019
Cyanide Stock Solution B- externals	GNE1-56947-CN	7/19/2019
Lead Acetate Test Paper	FISHER : 12/8/2016	12/8/2021
pH paper - range 12.5 to 14	HYDRION : 210114B	3/20/2020
pH paper - range 1 to 12	HYDRION : 223016	9/15/2019
Benzalrthodanine	ricca 1805f04	5/1/2019

Reason codes for data corrections: 1-reviewer error correction; 2 s

Form: GN087A-28
Rev. Date: 03/19/13

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SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP20864

Intermediate Standard Description	Stock used to prepare standard	Standardization Date	Stock concentration in mg/l	Stock volume used in ml (a)	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. of Intermediate (mg/l)	Expiration Date (c)	Analyst	Date
5 PPM intermediate	GNE3-57465-CN	4/19/19	996	1.000	42	.25 N NaOH	200	5.00	4/26/19	BM	4/19/2019
5 PPM ext.	GNE1-56947-CN	4/19/19	996	1	42	.25 N NaOH	200	5.00	4/26/19	BM	4/19/2019

Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	4/26/19	BM	4/19/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	4/26/19	BM	4/19/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	4/26/19	BM	4/19/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	4/26/19	BM	4/19/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	4/26/19	BM	4/19/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	4/26/19	BM	4/19/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	4/26/19	BM	4/19/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	4/26/19	BM	4/19/2019
						0					

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maxiumum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.

Form: GN193-02
Rev. Date:1/6/2014